

June 16, 2023

Mr. Shaun Bollers
New York State Department of Environmental Conservation (NYSDEC) Region 2
Division of Environmental Remediation
625 Broadway
Albany, NY 12207

**RE: Third Quarter Groundwater Monitoring Report
27-01 Jackson Avenue
Long Island City, New York
NYSDEC Order on Consent No. S241209
Langan Project No.: 170472002**

Dear Mr. Bollers:

In accordance with the January 23, 2020 Off-Site In-Situ Treatment Remedial Design Plan (RDP) and the December 12, 2022 NYSDEC-approved Off-Site Site Management Plan (OSMP), Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) conducted groundwater sampling within the public right-of-way and sidewalks adjacent to the 27-01 Jackson Avenue site located in the Long Island City neighborhood of Queens, New York (Brownfield Cleanup Program [BCP] Site No. C241209). The south- and west-adjoining sidewalks are subject to the April 20, 2022 Order on Consent and Administrative Settlement (CO), Index No. S241209-08-09 and hereinafter referred to as the "CO site". A site location map is provided as Figure 1. This was the third quarterly sampling event completed following implementation of the off-site in-situ groundwater treatment program between October 20 and November 11, 2021.

Project Background

The CO site is an approximately 2,750-square-foot area that spans sections of the Jackson Avenue and 43rd Avenue sidewalks adjoining the BCP site located at 27-01 Jackson Avenue in the Long Island City neighborhood of Queens, New York (identified as Block 432, Lot 21 on the Queens County Tax Map). A site layout plan is presented on Figure 2.

Light non-aqueous phase liquid (LNAPL), and petroleum-impacted soil, groundwater, and soil vapor were identified on- and off-site during a Remedial Investigation (RI) and supplemental sampling events performed between October 2018 and July 2020. To address the impacts, NYSDEC approved the RDP and the Remedial Action Work Plan (RAWP) on January 23, 2020 and January 9, 2021, respectively. A Track 1 remedy was achieved at the BCP site and a certificate of completion (COC) was issued on December 23, 2022. Pursuant to the RAWP, a CO was executed on April 20, 2022, which requires compliance with the NYSDEC-approved

December 12, 2022 OSMP. The intent of the CO is to monitor off-site conditions in groundwater following off-site groundwater treatment and on-site dewatering. The OSMP addresses the means for implementing, monitoring, and reporting on the Engineering and Institutional Controls (ECs/ICs) that are required by the CO for the off-site areas adjacent to the BCP site.

In-Situ Groundwater Treatment

An off-site in-situ groundwater treatment program was implemented to treat remaining petroleum-related VOCs beneath the CO site, which were initially identified during the RI. Targeted petroleum-related VOCs included benzene, toluene, ethylbenzene, and xylenes (BTEX), and their breakdown products. Impacted groundwater was treated using an activated carbon solution (PetroFix™) via direct-push injection points located in a rough grid pattern to spread chemicals evenly within the off-site, south- and west-adjointing sidewalks comprising the CO site.

The injection program was carried out by Clean Harbors of Norwell, Massachusetts and Aquifer Drilling and Testing (ADT) of Mineola, New York, under the oversight of Langan, between October 20 and November 11, 2021. Injection point locations are shown on Figure 3. At each injection point, a hollow steel injection rod was advanced to depths ranging from about 15 to 30 feet bgs. Injections were made using a “bottom-up” approach, beginning at the deepest 2-foot interval, and raised from the bottom depth in 2-foot intervals to approximately 15 feet bgs. Approximately 14,400 pounds of Petrofix® and 720 pounds of electron acceptor blend were applied via direct-push drill rig between October 20 and November 11, 2021. Between 664 and 976 pounds of Petrofix® were applied to each point.

Performance Monitoring Methodology

The RDP and OSMP included baseline sampling and quarterly post-injection groundwater monitoring to evaluate the efficacy of the CO site remedy. Baseline groundwater sampling was conducted from existing monitoring wells MW-3 and MW-4 and temporary monitoring wells MW-1 and MW-2 on October 7 and 19, 2021. Monitoring wells MW-3 and MW-4 were compromised during installation of the support of excavation, and the four monitoring wells were reinstalled for post-remediation groundwater monitoring on August 22, 2022 and October 13 and 14, 2022. Post-injection monitoring well locations are shown on Figure 4.

Post-injection groundwater monitoring was not conducted between November 2021 and October 2022 due to remediation efforts and active dewatering at the BCP site. Three post-injection quarterly sampling events have been completed at the CO site in October 2022, January 2023, and April 2023.

Well Purging and Sampling

Monitoring well sampling was conducted on April 26, 2023. Before sampling, each well was purged using the low-flow method developed by the USEPA (“Low-Flow [Minimal Drawdown] Ground-Water Sampling Procedures,” EPA/540/S-95/504, April 1996) and accepted by the NYSDEC. Purging was performed using a peristaltic pump fitted with dedicated tubing at all wells. During purging, the turbidity, pH, temperature, conductivity, oxidation-reduction potential

(ORP), and dissolved oxygen (DO) were monitored using a Horiba U-52 water quality meter with a flow-through cell. Purged groundwater was containerized in 55-gallon drums during each event. The daily field report is included in Attachment A. The groundwater quality parameters were recorded on the Well Purging and Sampling Logs provided in Attachment B.

As a general rule, groundwater was purged until water quality parameters stabilized or after one hour of purging. Groundwater quality parameters stabilized in MW-1, MW-3, and MW-4 prior to sampling, and a groundwater sample was collected from MW-2 after one hour of purging.

After purging each well, a groundwater sample was collected directly from the pump discharge line using USEPA low-flow techniques. For quality assurance and quality control, one field blank sample and one duplicate sample were collected. A trip blank was included in each shipment for quality control during transport. All samples were analyzed for Part 375/Target Compound List (TCL) VOCs via USEPA SW-846 method 8260C by Alpha Analytical Laboratories, a NYSDOH Environmental Laboratory Approval Program (ELAP)-accredited laboratory in Westborough, Massachusetts.

The laboratory analytical results for the baseline sampling event, the previous quarterly sampling events, and the April 2023 sampling event are summarized in Table 1 and illustrated on Figure 4. The laboratory analytical report from the April 2023 sampling event is provided as Attachment C. Groundwater analytical results were compared to the NYSDEC Title 6 of the Official Compilation of New York Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical & Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA drinking water (herein collectively referenced as the NYSDEC SGVs). Analytical results from the first quarterly sampling event are discussed in the NYSDEC-approved December 2022 Final Engineering Report (FER), and analytical results from subsequent quarters are discussed in their respective quarterly monitoring reports.

April 2023 Performance Monitoring Analytical Results

Analytical results from the April 2023 performance monitoring are summarized as follows:

- MW-1: VOCs were not detected above the NYSDEC SGVs.
- MW-2: 1,2,4-Trimethylbenzene, ethylbenzene, isopropylbenzene, m,p-xylene, and total xylenes were detected above the NYSDEC SGVs. The concentration of total xylenes has a "J" qualifier, indicating that the analyte was detected but the numerical value is an approximation. In comparison to baseline analytical results, total VOC and total BTEX concentrations have decreased by 99%.
- MW-3: VOCs were not detected above the NYSDEC SGVs.
- MW-4: VOCs were not detected above the NYSDEC SGVs.

VOCs were not detected above the NYSDEC SGVs in MW-1, MW-3 and MW-4 during the April 2023 monitoring event. Total VOC and total BTEX concentrations have decreased by 99% in

MW-2 when compared to baseline concentrations. When compared to the second quarterly sampling event, analyte concentrations detected above the NYSDEC SGVs in MW-2 are similar and within the same order of magnitude. Although residual petroleum impacts remain, continued degradation is anticipated. Based on the post-remedy sampling results thus far, the off-site remedy appears to have been effective.

Analytical data is shown on Figure 4 and result trends are shown on Figure 5.

Data Validation

Copies of the Analytical Services Protocol (ASP) Category B laboratory reports were submitted to Langan's data validation department for review in accordance with the USEPA validation guidelines for organic and inorganic data. The data were found to be 100% acceptable. The Data Usability Summary Report (DUSR) is included in Attachment D.

Closure

Targeted petroleum-related VOC concentrations exceeded the NYSDEC SGVs in MW-2, but have been reduced by two orders of magnitude relative to baseline concentrations; therefore, consistent reduction has been observed. VOCs were not detected above the NYSDEC SGVs in MW-1, MW-3 and MW-4 during the April 2023 monitoring event. Based on the April 2023 sampling and previous sampling event results, the off-site remedy appears to have been effective in all post-remedy monitoring wells. We recommend continued monitoring to document achievement of asymptotic conditions, and further reduction trends in contaminant degradation.

Should you have any questions, please call the undersigned at 212-479-5427.

Sincerely,

**Langan Engineering, Environmental, Surveying
Landscape Architecture and Geology, D.P.C.**

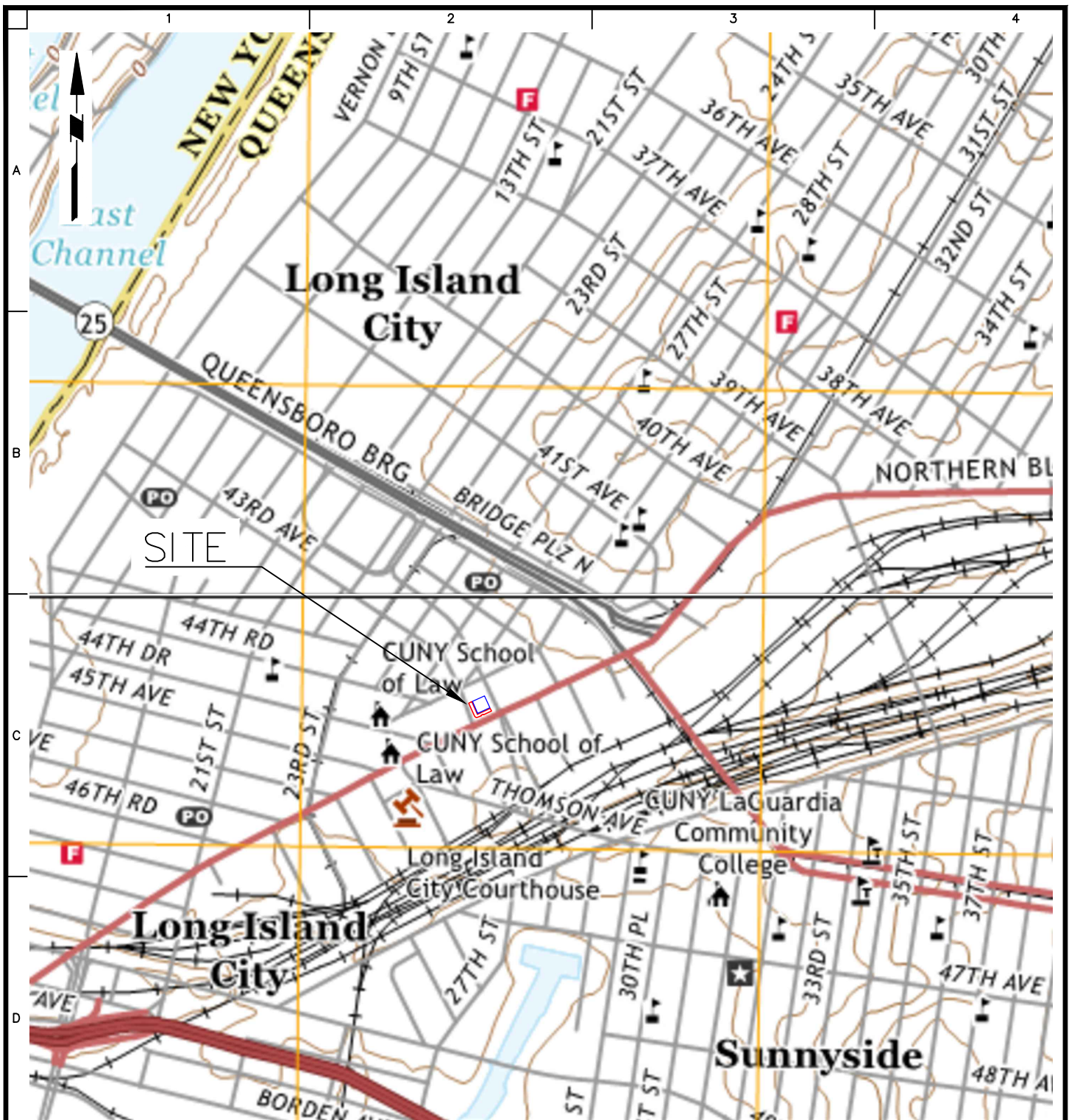


Jason Hayes, P.E.
Principal/Vice President

Enclosures:

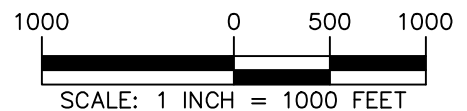
Figure 1	Site Location Map
Figure 2	Site Layout Plan
Figure 3	In-Situ Groundwater Treatment Injection Plan
Figure 4	Groundwater Sample Analytical Results
Figure 5	Groundwater Sample Analytical Results Trends
Table 1	Groundwater Sample Analytical Results
Attachment A	Daily Site Observation Reports
Attachment B	Well Purging and Sampling Logs
Attachment C	Laboratory Analytical Report
Attachment D	Data Usability Summary Report

FIGURES



LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE BOUNDARY OF BROWNFIELD CLEANUP PROGRAM
SITE NO. C241209



NOTE: BASE MAP IS REFERENCED FROM THE UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5 MINUTE SERIES CENTRAL PARK AND BROOKLYN QUADRANGLE MAPS, DATED 2019.

LANGAN

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New York, NY 10001

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Project

**27-01 JACKSON
AVENUE**

BLOCK No. 4321, LOT No. 21

QUEENS

NEW YORK

Figure Title

**SITE LOCATION
MAP**

Project No.

170472002

Date

06/01/2022

Drawn By

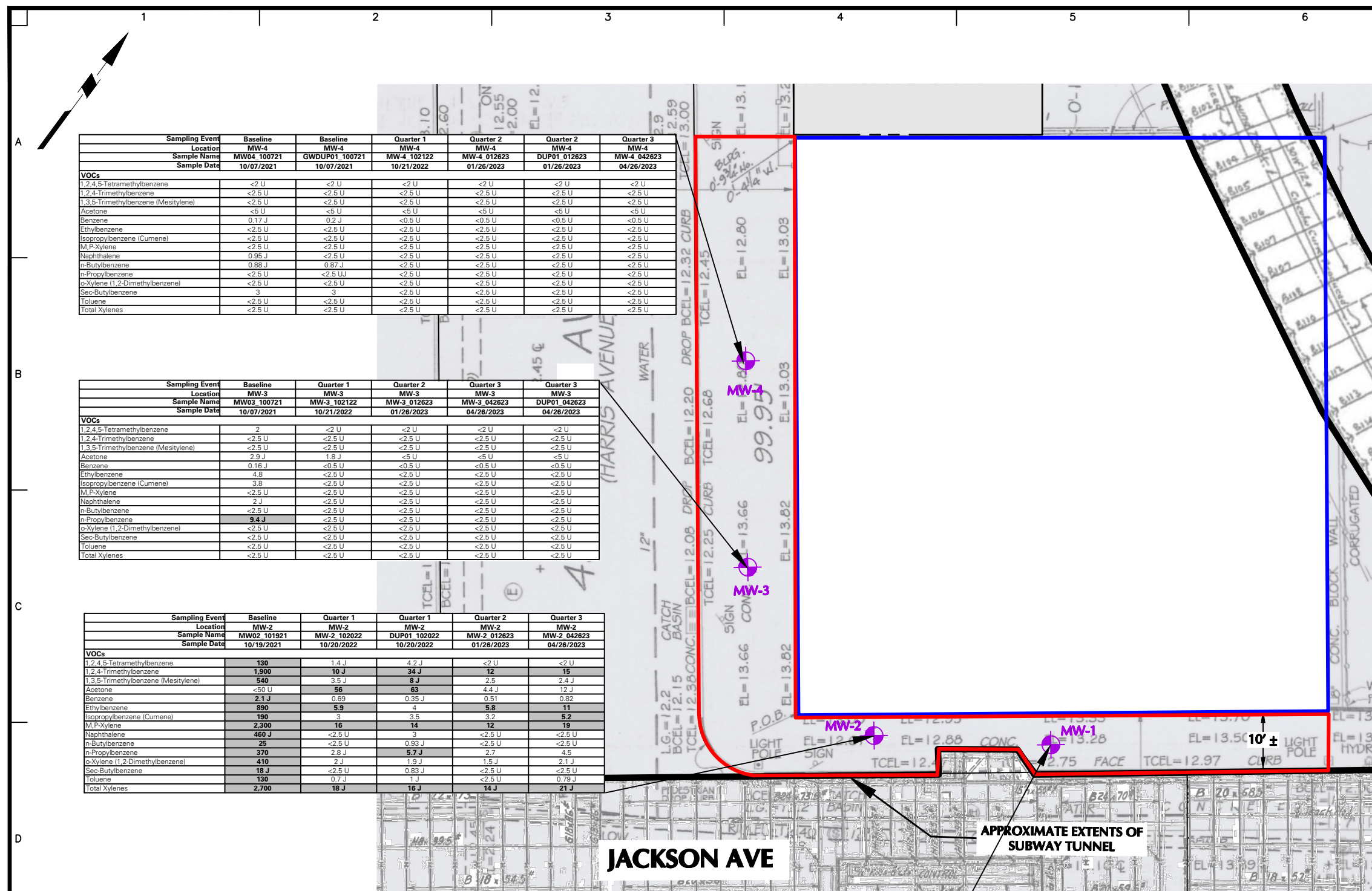
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Checked By

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Figure No.

1



LEGEND

APPROXIMATE BOUNDARY OF BROWNFIELD CLEANUP
PROGRAM SITE NO. C241209

APPROXIMATE SITE BOUNDARY

MONITORING WELL LOCATION

Analyte	NYSDEC SGVs
VOCs	
1,2,4,5-Tetramethylbenzene	5
1,2,4-Trimethylbenzene	5
1,3,5-Trimethylbenzene (Mesitylene)	5
Acetone	50
Benzene	1
Ethylbenzene	5
Isopropylbenzene (Cumene)	5
M,P-Xylene	5
Naphthalene	10
n-Butylbenzene	5
n-Propylbenzene	5
o-Xylene (1,2-Dimethylbenzene)	5
Sec-Butylbenzene	5
Toluene	5
Total Xylenes	5

NOTES

1. BASEMAP TAKEN FROM HAYNES LAND SURVEYORS, DATED ON NOVEMBER 12, 2014.
2. ALL LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER RESULTS ARE COMPARED TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) TECHNICAL AND OPERATIONAL GUIDANCE SERIES (TOGS) 1.1.1 AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES (SGVs) FOR CLASS GA GROUNDWATER.
4. ONLY COMPOUNDS EXCEEDING COMPARISON CRITERIA ARE SHOWN.
5. RESULTS ABOVE NYSDEC SGVs ARE SHADED AND BOLDED.
6. RESULTS ARE SHOWN IN MICROGRAMS PER LITER (µg/L).
7. J= THE ANALYTE WAS DETECTED ABOVE THE METHOD DETECTION LIMIT, BUT BELOW THE REPORTING LIMIT (RL); THE RESULT IS AN ESTIMATED CONCENTRATION.
8. U = THE ANALYTE WAS ANALYZED FOR, BUT NOT DETECTED AT A LEVEL GREATER THAN OR EQUAL TO THE RL; THE VALUE SHOWN IN THE TABLE IS THE RL.

WARNING: IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



Sampling Event	Baseline	Quarter 1	Quarter 2	Quarter 3
Location	MW-1	MW-1	MW-1	MW-1
Sample Name	MW01 101921	MW-1 102122	MW-1 012623	MW-1 042623
Sample Date	10/19/2021	01/26/2022	01/26/2023	04/26/2023
VOCs				
1,2,4,5-Tetramethylbenzene	12	1.9 J	8.9	1.7 J
1,2,4-Trimethylbenzene	11	0.77 J	0.74 J	<2.5 U
1,3,5-Trimethylbenzene (Mesitylene)	7.8	4	1.7 J	<2.5 U
Acetone	4.5 J	25	<5 U	<5 U
Benzene	17	<0.5 U	0.22 J	<0.5 U
Ethylbenzene	54	<2.5 U	5.4	<2.5 U
Isopropylbenzene (Cumene)	10	<2.5 U	9.1	<2.5 U
m,p-Xylene	11	1.3 J	0.88 J	<2.5 U
Naphthalene	3.4 J	<2.5 U	<2.5 U	<2.5 U
n-Butylbenzene	5.6	<2.5 U	2.2 J	<2.5 U
n-Propylbenzene	17	<2.5 U	11	<2.5 U
o-Xylene (1,2-Dimethylbenzene)	9.1	<2.5 U	<2.5 U	<2.5 U
Sec-Butylbenzene	4.6	<2.5 U	2.3 J	0.87 J
Toluene	5.3	<2.5 U	<2.5 U	<2.5 U
TotalXylenes	20	1.3 J	0.88 J	<2.5 U

 LANGAN Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444 www.langan.com	Project	Figure Title	Project No.	Figure No.
	27-01 JACKSON AVENUE	GROUNDWATER SAMPLE ANALYTICAL RESULTS MAP	170472002	
	BLOCK No. 432 LOT No. 21		Date	
	QUEENS NEW YORK		05/18/2023	
			Drawn By	
			LH	
			Checked By	
			BG	

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

Total Concentration (ug/l) vs Sample Date

Legend:

- 1,2,4,5-Tetramethylbenzene, MW-1
- 1,2,4-Trimethylbenzene, MW-1
- 1,3,5-Trimethylbenzene (Mesitylene), MW-1
- Acetone, MW-1
- Benzene, MW-1
- Ethylbenzene, MW-1
- Isopropylbenzene (Cumene), MW-1
- M,P-Xylene, MW-1
- Naphthalene, MW-1
- n-Butylbenzene, MW-1
- n-Propylbenzene, MW-1
- o-Xylene (1,2-Dimethylbenzene), MW-1
- Sec-Butylbenzene, MW-1
- Toluene, MW-1
- Total Xylenes, MW-1

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

Groundwater Trends - VOCs

Legend:

- 1,2,4,5-Tetramethylbenzene, MW-2
- 1,2,4-Trimethylbenzene, MW-2
- 1,3,5-Trimethylbenzene (Mesitylene), MW-2
- Acetone, MW-2
- Benzene, MW-2
- Ethylbenzene, MW-2
- Isopropylbenzene (Cumene), MW-2
- M,P-Xylene, MW-2
- Naphthalene, MW-2
- n-Butylbenzene, MW-2
- n-Propylbenzene, MW-2
- o-Xylene (1,2-Dimethylbenzene), MW-2
- Sec-Butylbenzene, MW-2
- Toluene, MW-2
- Total Xylenes, MW-2

Sample Date	1,2,4,5-Tetramethylbenzene, MW-2	1,2,4-Trimethylbenzene, MW-2	1,3,5-Trimethylbenzene (Mesitylene), MW-2	Acetone, MW-2	Benzene, MW-2	Ethylbenzene, MW-2	Isopropylbenzene (Cumene), MW-2	M,P-Xylene, MW-2	Naphthalene, MW-2	n-Butylbenzene, MW-2	n-Propylbenzene, MW-2	o-Xylene (1,2-Dimethylbenzene), MW-2	Sec-Butylbenzene, MW-2	Toluene, MW-2	Total Xylenes, MW-2
Oct-21	~200	~1900	~550	~100	~400	~900	~200	~2300	~450	~100	~350	~400	~150	~150	~2700
Feb-22	~100	~1300	~350	~50	~250	~600	~100	~1600	~300	~50	~200	~250	~100	~100	~1900
May-22	~50	~800	~200	~20	~150	~350	~50	~1000	~150	~20	~100	~150	~50	~50	~1200
Aug-22	~20	~300	~100	~10	~50	~150	~20	~400	~50	~10	~50	~50	~20	~20	~500
Dec-22	~10	~50	~20	~5	~20	~50	~10	~100	~20	~5	~20	~20	~10	~10	~100
Mar-23	~5	~20	~10	~2	~10	~20	~5	~50	~10	~2	~10	~10	~5	~5	~50
Jun-23	~5	~20	~10	~2	~10	~20	~5	~50	~10	~2	~10	~10	~5	~5	~50

Figure 5
Quarterly Groundwater Monitoring Report
Groundwater Sample Analytical Results Trends

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

MW-3 Groundwater Trends - VOCs

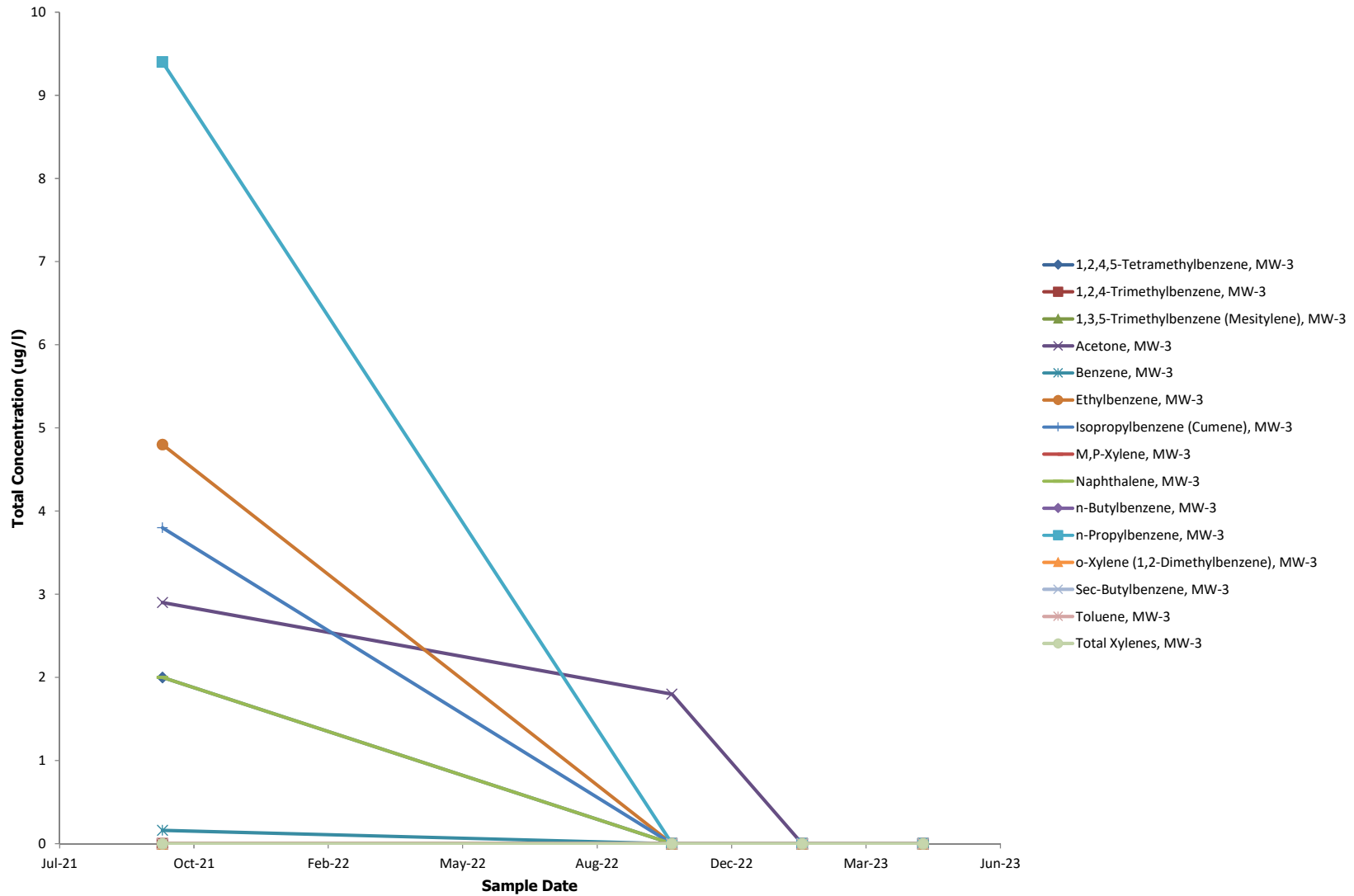
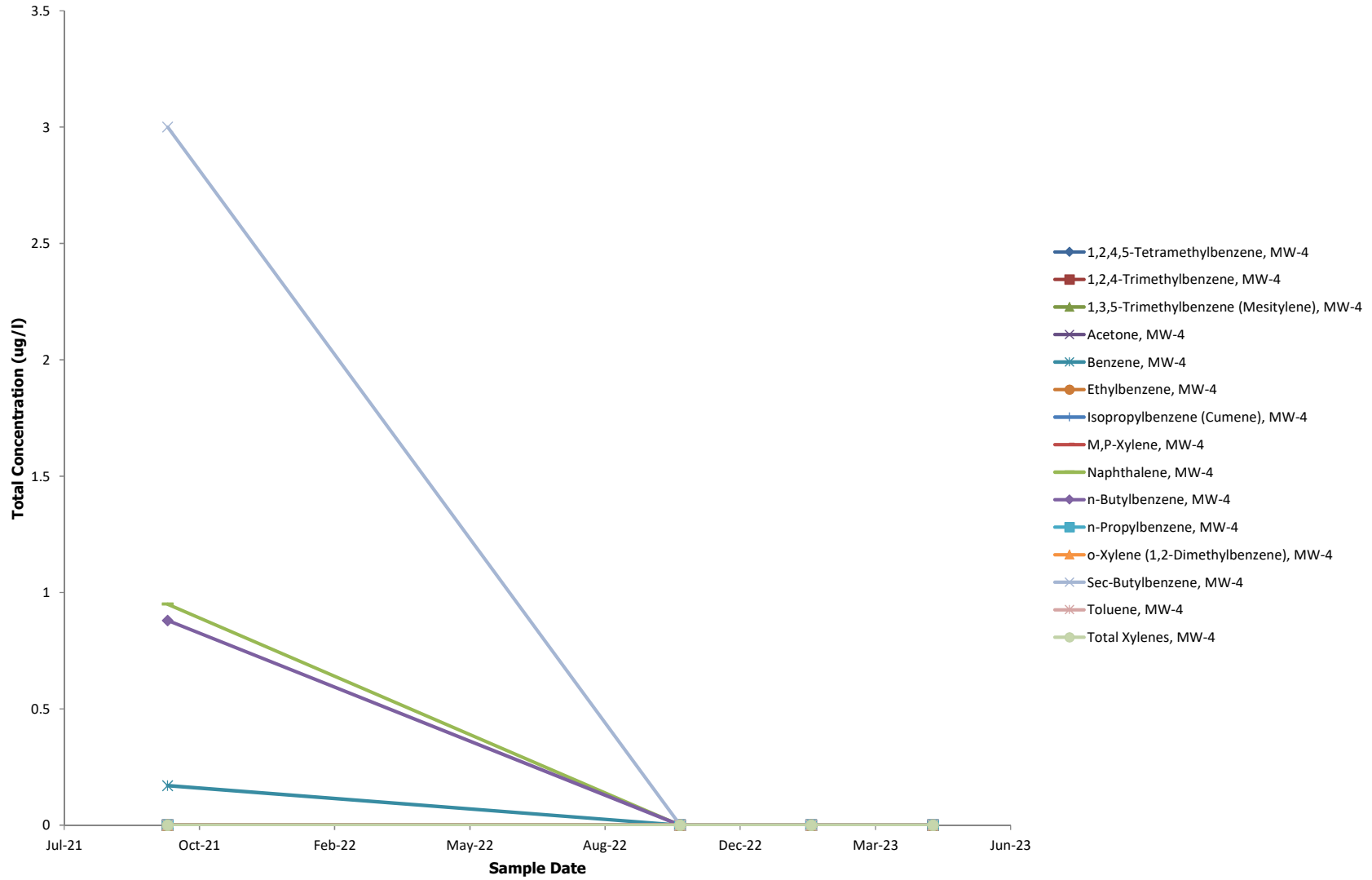


Figure 5
Quarterly Groundwater Monitoring Report
Groundwater Sample Analytical Results Trends

**27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002**

MW-4
Groundwater Trends - VOCs



TABLES

Table 1
Quarterly Groundwater Monitoring Report
Groundwater Sample Analytical Results

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

Analyte	CAS Number	NYSDEC SGVs	Sampling Event	Baseline	Quarter 1	Quarter 2	Quarter 3	Baseline	Quarter 1	Quarter 1	Quarter 2	Quarter 3
			Location	MW-1	MW-1	MW-1	MW-1	MW-2	MW-2	MW-2	MW-2	MW-2
			Sample Name	MW01_101921	MW-1_102122	MW-1_012623	MW-1_042623	MW02_101921	MW-2_102022	DUP01_102022	MW-2_012623	MW-2_042623
			Sample Date	10/19/2021	10/21/2022	01/26/2023	04/26/2023	10/19/2021	10/20/2022	10/20/2022	01/26/2023	04/26/2023
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Table 1
Quarterly Groundwater Monitoring Report
Groundwater Sample Analytical Results

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

Analyte	CAS Number	NYSDEC SGVs	Sampling Event	Baseline	Quarter 1	Quarter 2	Quarter 3	Quarter 3	Baseline	Baseline	Quarter 1	Quarter 2	Quarter 2	Quarter 3
			Location	MW-3	MW-3	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4	MW-4	MW-4	
			Sample Name	MW03_100721	MWV-3_102122	MWV-3_012623	MWV-3_042623	DUP01_042623	MW04_100721	GWDUP01_100721	MWV-4_102122	MWV-4_012623	DUP01_012623	MWV-4_042623
			Sample Date	10/07/2021	10/21/2022	01/26/2023	04/26/2023	04/26/2023	10/07/2021	10/07/2021	10/21/2022	01/26/2023	01/26/2023	04/26/2023
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Table 1
Quarterly Groundwater Monitoring Report
Groundwater Sample Analytical Results

Page 3 of 3

27-01 Jackson Avenue
Long Island City, New York
NYSDEC BCP Site No.: C241209
Langan Project No.: 170472002

Notes:

CAS - Chemical Abstract Service

NS - No standard

ug/l - microgram per liter

NA - Not analyzed

RL - Reporting limit

<RL - Not detected

Groundwater sample analytical results are compared to the New York State Department of Environmental Conservation (NYSDEC) Title 6 Codes, Rules, and Regulations (NYCRR) Part 703.5 and the NYSDEC Technical and Operation Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values for Class GA Water and published addenda (herein collectively referenced as "NYSDEC SGVs").

Qualifiers:

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected at a level greater than or equal to the RL; however, the reported RL is approximate and may be inaccurate or imprecise.

U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.

Exceedance Summary:

10	- Result exceeds NYSDEC SGVs
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ATTACHMENT A

Daily Site Observation Reports

SITE OBSERVATION REPORT

PROJECT No.: 170472002	CLIENT: 2701 Jackson Avenue LLC	DATE: 04/26/2023
PROJECT: 27-01 Jackson Avenue		
LOCATION: Long Island City, NY		
CONTRACTOR: Lions Group NYC		LANGAN REP. : Ali Reach
CONTRACTOR'S EQUIPMENT: N/A	PRESENT AT SITE: Ali Reach – Langan Michael Capozzoli– Lions Group NYC (Construction Manager)	

OBSERVATIONS, DISCUSSIONS, TEST RESULTS, ETC.:

Langan was present to observe environmental protocols in accordance with the January 2021 New York Department of Environmental Conservation (NYSDEC) approved Off-Site Site Management Plan (OSMP) for BCP site C241209 at 27-01 Jackson Avenue (Block 432, Lot 21). Observed activities were as follows:

Site Activities

- Langan used a peristaltic pump to purge and sample groundwater monitoring wells MW-1, MW-2, MW-3 and MW-4 along the Jackson Avenue and 43rd Avenue sidewalks, respectively. Purged groundwater was screened for odors, sheen, and organic vapors using a photoionization detector (PID). Odors, sheen or PID readings above background levels were not observed in MW-2, MW-3 or MW-4. A maximum PID reading of 102.1 parts per million (ppm) was detected beneath the well cap at MW-1; however, no sheen or odors were observed. Purged groundwater was containerized in a 55-gallon New York State Department of Transportation (NYSDOT)-approved drum for future disposal.

Sampling

- Langan collected four groundwater samples (plus quality assurance/quality control [QA/QC] samples) for laboratory analysis of NYSDEC Part 375/target compound list (TCL) volatile organic compounds (VOCs). The samples were submitted to Alpha Analytical Inc. (Alpha) of Mahwah, New Jersey, a New York State Department of Health (NYSDOH) Environmental Laboratory Accredited Program (ELAP)-certified laboratory under standard chain-of-custody protocols.

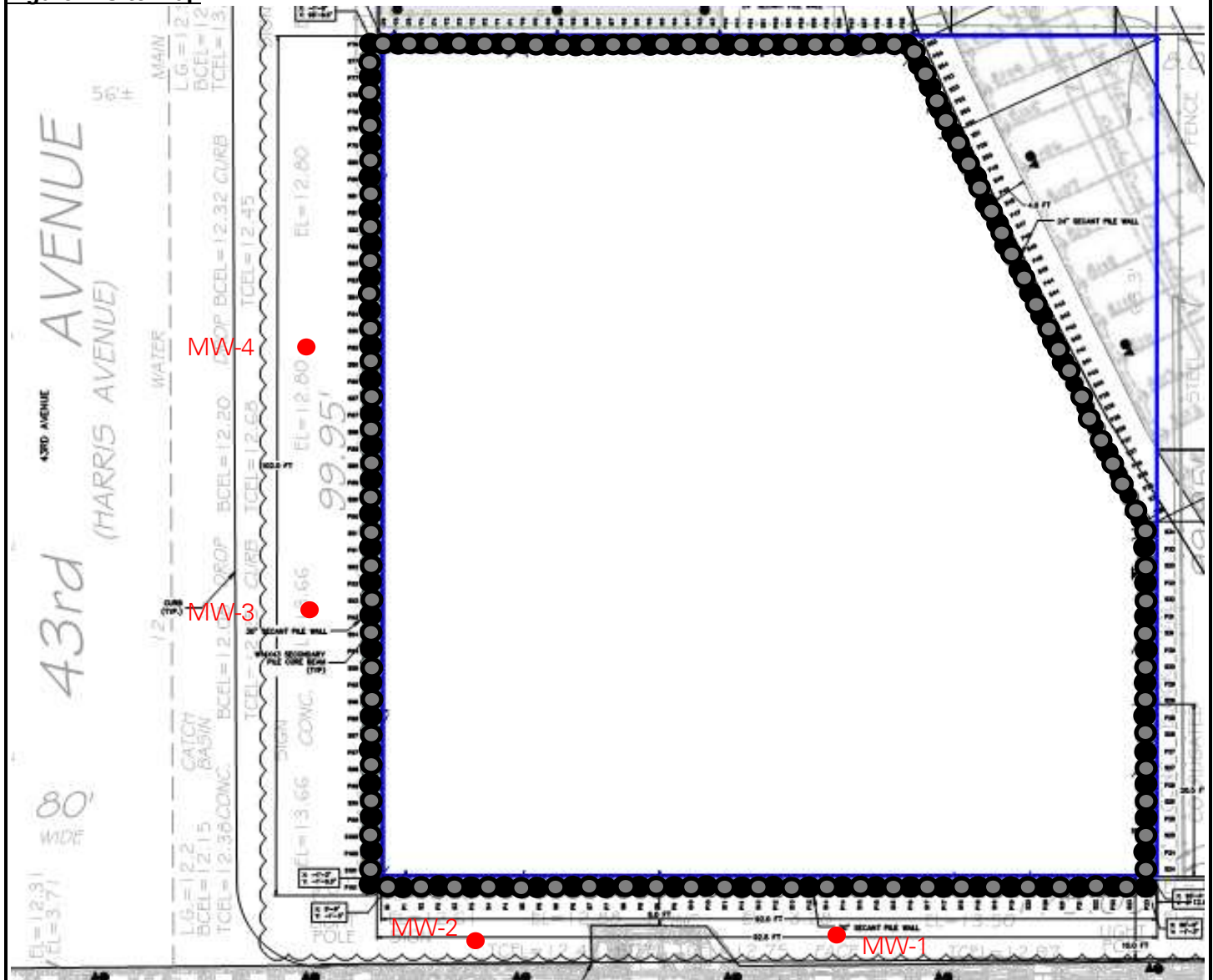
Anticipated Activities

- The next groundwater sampling event will take place in July 2023.

Cc:	L. Haley, K. Semon, B. Gochenaur, M. Raygorodetsky (Langan)	By:	Ali Reach
			LANGAN

SITE OBSERVATION REPORT

Figure 1: Site Map



Legend:

- Monitoring Well Location

Cc:	L. Haley, K. Semon, B. Gochenaur, M. Raygorodetsky (Langan)	By:	Ali Reach LANGAN
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SITE OBSERVATION REPORT

SITE PHOTOGRAPHS



Photo 1: View of Langan purging monitoring well MW-4 along the 43rd Avenue sidewalk (facing northwest).

Cc:	L. Haley, K. Semon, B. Gochenaur, M. Raygorodetsky (Langan)	By:	Ali Reach LANGAN
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ATTACHMENT B

Well Purging and Sampling Logs

Project Information		Well Information		Equipment Information		Sampling Conditions			Sampling Information		
Project Name:	27-01 Jackson Ave	Well No:	MW-1	Water Quality Device Model:	Horiba U-52	Weather:	Sunny, 43-59 °F		Sample(s):	MW-1_042623	
Project Number:	170472002	Well Depth:	19 ft	Pine Number:	21418	Background PID (ppm):	0.0				
Site Location:	Long Island City, NY	Well Diameter:	2-inch	Pump Make and Model:	Peristaltic Pump	PID Beneath Inner Cap (ppm):	102.1		Sample Date:	4/26/2023	
Sampling Personnel:	Ali Reach	Well Screen Interval:	9 ft	Pine Number:	24458	Pump Intake Depth:	18.90 ft				
				Tubing Diameter:	3/8-inch OD	Depth to Water Before Purge:	18.45 ft		Sample Time:	14:40	
STABILIZATION = 3 successive readings within limits											
	TEMP °Celsius	PH	ORP mV	CONDUCTIVITY mS/cm	TURBIDITY ntu	DO mg/l	DTW ft	Flow Rate (gpm)	Cumulative Discharge Volume (Gal)	NOTES	Stabilized?
TIME	(+/- 3%)	(+/- 0.1)	(+/- 10mV)	(+/- 3%)	(+/- 10%) above 5 NTU	(+/- 10%) above 0.5 mg/l	Drawdown < 0.33 ft	<0.13 gpm)		color, odor etc.	
BEGIN PURGING											
13:55	16.82	6.98	7	5.600	274.0	0.20	18.45	N/A	0.00	N/A	N/A
14:00	16.82	6.94	-11	5.770	196.0	0.20	18.45	0.03	0.15	N/A	N/A
14:05	16.87	6.94	-11	5.770	190.0	0.20	18.50	0.02	0.25	N/A	N
14:10	16.87	6.93	-16	5.820	169.0	0.20	18.52	0.01	0.30	N/A	N
14:15	16.86	6.94	-19	5.830	153.0	0.20	18.53	0.02	0.40	N/A	N
14:20	16.82	6.95	-21	5.870	140.0	0.20	18.55	0.02	0.50	N/A	N
14:25	16.80	6.96	-22	5.880	134.0	0.20	18.62	0.04	0.70	N/A	N
14:30	16.81	6.97	-21	5.900	126.0	0.20	18.64	0.01	0.75	N/A	Y
Notes:											
1. Well depths and groundwater depths were measured in feet below the top of well casing.											
2. Well and tubing diameters are measured in inches.											
3. PID = Photoionization Detector											
4. PPM = Parts per million											
5. pH = Hydrogen ion concentration											
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)											
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)											
8. DTW = Depth to water											
9. mS/cm = milli-Siemens per centimeter											
10. NTU = Nephelometric Turbidity Unit											
11. N/A = Not Applicable											
12. OD = Outer Diameter											
LANGAN Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.											
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York											

Project Information		Well Information		Equipment Information			Sampling Conditions			Sampling Information	
Project Name:	27-01 Jackson Ave	Well No:	MW-2	Water Quality Device Model:	Horiba U-52	Weather:	Sunny, 43-59 °F			Sample(s):	MW-2_042623
Project Number:	170472002	Well Depth:	20 ft	Pine Number:	21418	Background PID (ppm):	0.0				
Site Location:	Long Island City, NY	Well Diameter:	1-inch	Pump Make and Model:	Peristaltic Pump	PID Beneath Inner Cap (ppm):	0.2				
Sampling Personnel:	Ali Reach	Well Screen Interval:	10 ft 20 ft	Pine Number:	24458	Pump Intake Depth:	17.0 ft			Sample Date:	4/26/2023
				Tubing Diameter:	3/8-inch OD	Depth to Water Before Purge:	15.94 ft			Sample Time:	10:30
STABILIZATION = 3 successive readings within limits											
	TEMP °Celsius	PH	ORP mV	CONDUCTIVITY mS/cm	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) (<0.13 gpm)	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
TIME	(+/- 3%)	(+/- 0.1)	(+/- 10mV)	(+/- 3%)							
BEGIN PURGING											
9:25	14.78	9.09	109	2.610	0.00	8.52	15.94	N/A	0.01	Black color, no odor, no sheen	N/A
9:30	14.73	9.08	108	2.610	0.00	8.53	15.94	0.00	0.01		N/A
9:35	14.61	9.07	106	2.680	0.00	8.54	15.95	0.04	0.20		Y
9:40	14.47	9.05	100	2.770	0.00	8.59	15.96	0.01	0.23		N
9:45	14.60	9.05	99	2.780	0.00	8.59	15.99	0.00	0.25		N
9:50	14.39	9.04	93	2.840	0.00	8.63	16.01	0.00	0.27		Y
9:55	14.35	9.05	95	2.970	0.00	8.35	16.03	0.01	0.30		N
10:00	14.20	9.04	75	3.000	0.00	8.40	16.03	0.00	0.31		N
10:05	13.99	9.05	73	3.000	0.00	8.26	16.05	0.02	0.40	Y	
10:10	13.98	9.05	73	3.020	0.00	8.31	16.06	0.00	0.41	Gray water, no odor, no sheen	Y
10:15	13.93	9.04	72	3.000	0.00	8.25	16.08	0.00	0.43		Y
10:20	13.87	9.03	74	3.050	0.00	8.24	16.12	0.02	0.50		Y
10:25	13.84	9.02	76	3.060	0.0	8.26	16.12	0	0.5		Y

Notes:

1. Well depths and groundwater depths were measured in feet below the top of well casing.

2. Well and tubing diameters are measured in inches.

3. PID = Photoionization Detector

4. PPM = Parts per million

5. pH = Hydrogen ion concentration

6. ORP = Oxidation-reduction potential, measured in millivolts (mV)

7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)

8. DTW = Depth to water

9. mS/cm = milli-Siemens per centimeter

10. NTU = Nephelometric Turbidity Unit

11. N/A = Not Applicable

12. OD = Outer Diameter

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Project Information		Well Information		Equipment Information			Sampling Conditions			Sampling Information	
Project Name:	27-01 Jackson Ave	Well No:	MW-3	Water Quality Device Model:	Horiba U-52		Weather:	Sunny, 43-59 °F		Sample(s):	MW-3_042623 DUP01_042623
Project Number:	170472002	Well Depth:	24 ft	Pine Number:		21418	Background PID (ppm):		0.0		
Site Location:	Long Island City, NY	Well Diameter:	2-inch	Pump Make and Model:		Peristaltic Pump	PID Beneath Inner Cap (ppm):		15.3		
Sampling Personnel:	Ali Reach	Well Screen Interval:	14 ft	Pine Number:		24458	Pump Intake Depth:		20.0 ft	Sample Date:	4/26/2023
			24 ft	Tubing Diameter:		3/8-inch OD	Depth to Water Before Purge:		16.12 ft	Sample Time:	13:00
STABILIZATION = 3 successive readings within limits											
	TEMP °Celsius	PH	ORP mV	CONDUCTIVITY mS/cm	TURBIDITY ntu (+/- 10%) above 5 NTU	DO mg/l (+/- 10%) above 0.5 mg/l	DTW ft Drawdown < 0.33 ft	Flow Rate (gpm) <0.13 gpm	Cumulative Discharge Volume (Gal)	NOTES color, odor etc.	Stabilized?
TIME	(+/- 3%)	(+/- 0.1)	(+/- 10mV)	(+/- 3%)							
BEGIN PURGING											
12:25	13.83	7.05	7	2.740	75.6	0.41	16.12	N/A	0.0	N/A	N/A
12:30	13.74	7.00	2	2.740	61.8	0.14	16.30	0.05	0.25	N/A	N/A
12:35	13.60	6.97	-16	2.760	35.4	0.14	16.35	0.05	0.5	N/A	N
12:40	13.58	6.99	-26	2.770	25.9	0.14	16.39	0.05	0.75	N/A	N
12:45	13.60	7.00	-31	2.780	21.1	0.14	16.41	0.05	1	N/A	N
12:50	13.57	7.00	-36	2.780	20.9	0.14	16.43	0.05	1.25	N/A	N
12:55	13.58	7.01	-36	2.780	20.7	0.14	16.48	0.05	1.5	N/A	Y
Notes: 1. Well depths and groundwater depths were measured in feet below the top of well casing. 2. Well and tubing diameters are measured in inches. 3. PID = Photoionization Detector 4. PPM = Parts per million 5. pH = Hydrogen ion concentration 6. ORP = Oxidation-reduction potential, measured in millivolts (mV) 7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L) 8. DTW = Depth to water 9. mS/cm = milli-Siemens per centimeter 10. NTU = Nephelometric Turbidity Unit 11. N/A = Not Applicable 12. OD = Outer Diameter											
LANGAN Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. 21 Penn Plaza, 360 West 31st Street, 8th Floor, New York											

Project Information		Well Information		Equipment Information		Sampling Conditions		Sampling Information			
Project Name:	27-01 Jackson Ave	Well No:	MW-4	Water Quality Device Model:	Horiba U-52	Weather:	Sunny, 43-59 °F	Sample(s):	MW-4_042623 MS/MSD		
Project Number:	170472002	Well Depth:	23.5 ft	Pine Number:	21418	Background PID (ppm):	0.0				
Site Location:	Long Island City, NY	Well Diameter:	2 inch	Pump Make and Model:	Peristaltic Pump	PID Beneath Inner Cap (ppm):	0.2	Sample Date:	4/26/2023		
Sampling Personnel:	Ali Reach	Well Screen Interval:	13.5 ft 23.5 ft	Pine Number:	24458	Pump Intake Depth:	19.5 ft				
						Tubing Diameter:	3/8-inch OD	Depth to Water Before Purge:	16.18 ft	Sample Time:	12:00
STABILIZATION = 3 successive readings within limits											
	TEMP °Celsius	PH	ORP mV	CONDUCTIVITY mS/cm	TURBIDITY ntu	DO mg/l	DTW ft	Flow Rate (gpm)	Cumulative Discharge Volume (Gal)	NOTES	Stabilized?
TIME	(+/- 3%)	(+/- 0.1)	(+/- 10mV)	(+/- 3%)	(+/- 10%) above 5 NTU	(+/- 10%) above 0.5 mg/l	Drawdown < 0.33 ft	<0.13 gpm)		color, odor etc.	
BEGIN PURGING											
11:15	13.97	7.49	140	2.940	202.0	0.35	16.18	N/A	0.00	Gray color	N/A
11:20	13.96	7.46	141	2.960	195.0	0.34	16.21	0.05	0.25		N/A
11:25	13.92	7.25	146	2.990	92.2	0.19	16.24	0.05	0.50	Clear	N
11:30	13.80	7.09	151	3.000	46.0	0.03	16.27	0.05	0.75		N
11:35	13.76	6.49	159	3.010	30.4	0.00	16.30	0.05	1.00		N
11:40	13.75	6.92	161	3.010	23.4	0.00	16.32	0.05	1.25		N
11:45	13.81	6.90	162	3.020	14.8	0.00	16.34	0.05	1.50		N
11:50	13.82	6.91	162	3.020	14.0	0.00	16.37	0.05	1.75		N
11:55	13.81	6.90	162	3.020	14.1	0.00	16.38	0.01	1.80		Y
Notes:											
1. Well depths and groundwater depths were measured in feet below the top of well casing.											
2. Well and tubing diameters are measured in inches.											
3. PID = Photoionization Detector											
4. PPM = Parts per million											
5. pH = Hydrogen ion concentration											
6. ORP = Oxidation-reduction potential, measured in millivolts (mV)											
7. DO = Dissolved Oxygen, measured in milligrams per liter (mg/L)											
8. DTW = Depth to water											
9. mS/cm = milli-Siemens per centimeter											
10. NTU = Nephelometric Turbidity Unit											
11. N/A = Not Applicable											
12. OD = Outer Diameter											
13. MS/MSD = Matrix Spike/Matrix Spike Duplicate											
LANGAN Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.											
21 Penn Plaza, 360 West 31st Street, 8th Floor, New York											

ATTACHMENT C

Laboratory Analytical Reports



ANALYTICAL REPORT

Lab Number:	L2322586
Client:	Langan Engineering & Environmental 21 Penn Plaza 360 W. 31st Street, 8th Floor New York, NY 10001-2727
ATTN:	Brian Gochenaur
Phone:	(212) 479-5590
Project Name:	27-01 JACKSON AVENUE
Project Number:	170472002
Report Date:	05/03/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2322586-01	MW-2_042623	WATER	LONG ISLAND CITY, NY	04/26/23 10:30	04/26/23
L2322586-02	MW-4_042623	WATER	LONG ISLAND CITY, NY	04/26/23 12:00	04/26/23
L2322586-03	MW-3_042623	WATER	LONG ISLAND CITY, NY	04/26/23 13:00	04/26/23
L2322586-04	MW-1_042623	WATER	LONG ISLAND CITY, NY	04/26/23 14:40	04/26/23
L2322586-05	DUP01_042623	WATER	LONG ISLAND CITY, NY	04/26/23 00:00	04/26/23
L2322586-06	FB01_042623	WATER	LONG ISLAND CITY, NY	04/26/23 14:45	04/26/23
L2322586-07	TB01_042623	WATER	LONG ISLAND CITY, NY	04/26/23 14:50	04/26/23

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cristin Walker

Title: Technical Director/Representative

Date: 05/03/23

ORGANICS

VOLATILES

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-01
Client ID: MW-2_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 10:30
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 14:43
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	0.82		ug/l	0.50	0.16	1
Toluene	0.79	J	ug/l	2.5	0.70	1
Ethylbenzene	11		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-01
Client ID: MW-2_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 10:30
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	19		ug/l	2.5	0.70	1
o-Xylene	2.1	J	ug/l	2.5	0.70	1
Xylenes, Total	21	J	ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	12		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	1.7	J	ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	5.2		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-01
Client ID: MW-2_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 10:30
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	4.5		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	2.4	J	ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	15		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	0.85	J	ug/l	2.0	0.70	1
p-Ethyltoluene	9.7		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	95		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-02
Client ID: MW-4_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 12:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 10:34
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-02
 Client ID: MW-4_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 12:00
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-02
Client ID: MW-4_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 12:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	106		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-03
Client ID: MW-3_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 13:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 15:07
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-03
 Client ID: MW-3_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 13:00
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-03
Client ID: MW-3_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 13:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	99		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-04
Client ID: MW-1_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:40
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 15:31
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-04
 Client ID: MW-1_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:40
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	0.87	J	ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-04
Client ID: MW-1_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:40
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	1.7	J	ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	1.7	J	ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	106		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	99		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-05
Client ID: DUP01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 00:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 15:54
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-05
 Client ID: DUP01_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 00:00
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-05
Client ID: DUP01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 00:00
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	105		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	100		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-06
Client ID: FB01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:45
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 11:00
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-06
 Client ID: FB01_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:45
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	2.0	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-06
Client ID: FB01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:45
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	95		70-130
Dibromofluoromethane	106		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-07
Client ID: TB01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:50
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Matrix: Water
Analytical Method: 1,8260D
Analytical Date: 04/28/23 11:27
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.5	0.70	1
1,1-Dichloroethane	ND		ug/l	2.5	0.70	1
Chloroform	ND		ug/l	2.5	0.70	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.0	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	2.5	0.70	1
Trichlorofluoromethane	ND		ug/l	2.5	0.70	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.70	1
Bromoform	ND		ug/l	2.0	0.65	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	2.5	0.70	1
Ethylbenzene	ND		ug/l	2.5	0.70	1
Chloromethane	ND		ug/l	2.5	0.70	1
Bromomethane	ND		ug/l	2.5	0.70	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	2.5	0.70	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE**Lab Number:** L2322586**Project Number:** 170472002**Report Date:** 05/03/23**SAMPLE RESULTS**

Lab ID: L2322586-07
 Client ID: TB01_042623
 Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:50
 Date Received: 04/26/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Trichloroethene	ND		ug/l	0.50	0.18	1
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70	1
Methyl tert butyl ether	ND		ug/l	2.5	0.70	1
p/m-Xylene	ND		ug/l	2.5	0.70	1
o-Xylene	ND		ug/l	2.5	0.70	1
Xylenes, Total	ND		ug/l	2.5	0.70	1
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70	1
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70	1
Dibromomethane	ND		ug/l	5.0	1.0	1
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70	1
Acrylonitrile	ND		ug/l	5.0	1.5	1
Styrene	ND		ug/l	2.5	0.70	1
Dichlorodifluoromethane	ND		ug/l	5.0	1.0	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	1.0	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	1.0	1
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0	1
2-Hexanone	ND		ug/l	5.0	1.0	1
Bromochloromethane	ND		ug/l	2.5	0.70	1
2,2-Dichloropropane	ND		ug/l	2.5	0.70	1
1,2-Dibromoethane	ND		ug/l	2.0	0.65	1
1,3-Dichloropropane	ND		ug/l	2.5	0.70	1
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70	1
Bromobenzene	ND		ug/l	2.5	0.70	1
n-Butylbenzene	ND		ug/l	2.5	0.70	1
sec-Butylbenzene	ND		ug/l	2.5	0.70	1
tert-Butylbenzene	ND		ug/l	2.5	0.70	1
o-Chlorotoluene	ND		ug/l	2.5	0.70	1
p-Chlorotoluene	ND		ug/l	2.5	0.70	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70	1
Hexachlorobutadiene	ND		ug/l	2.5	0.70	1
Isopropylbenzene	ND		ug/l	2.5	0.70	1
p-Isopropyltoluene	ND		ug/l	2.5	0.70	1
Naphthalene	ND		ug/l	2.5	0.70	1

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

SAMPLE RESULTS

Lab ID: L2322586-07
Client ID: TB01_042623
Sample Location: LONG ISLAND CITY, NY

Date Collected: 04/26/23 14:50
Date Received: 04/26/23
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	2.5	0.70	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70	1
1,4-Dioxane	ND		ug/l	250	61.	1
p-Diethylbenzene	ND		ug/l	2.0	0.70	1
p-Ethyltoluene	ND		ug/l	2.0	0.70	1
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54	1
Ethyl ether	ND		ug/l	2.5	0.70	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	107		70-130

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D

Analytical Date: 04/28/23 09:33

Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03-05 Batch: WG1773063-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D

Analytical Date: 04/28/23 09:33

Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03-05 Batch: WG1773063-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 04/28/23 09:33
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,03-05 Batch: WG1773063-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	105		70-130

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/28/23 10:08
 Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,06-07 Batch: WG1773111-5					
Methylene chloride	ND		ug/l	2.5	0.70
1,1-Dichloroethane	ND		ug/l	2.5	0.70
Chloroform	ND		ug/l	2.5	0.70
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.0	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	1.5	0.50
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	2.5	0.70
Trichlorofluoromethane	ND		ug/l	2.5	0.70
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	2.5	0.70
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.70
Bromoform	ND		ug/l	2.0	0.65
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	2.5	0.70
Ethylbenzene	ND		ug/l	2.5	0.70
Chloromethane	ND		ug/l	2.5	0.70
Bromomethane	ND		ug/l	2.5	0.70
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	2.5	0.70
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	2.5	0.70
Trichloroethene	ND		ug/l	0.50	0.18

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
 Analytical Date: 04/28/23 10:08
 Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,06-07 Batch: WG1773111-5					
1,2-Dichlorobenzene	ND		ug/l	2.5	0.70
1,3-Dichlorobenzene	ND		ug/l	2.5	0.70
1,4-Dichlorobenzene	ND		ug/l	2.5	0.70
Methyl tert butyl ether	ND		ug/l	2.5	0.70
p/m-Xylene	ND		ug/l	2.5	0.70
o-Xylene	ND		ug/l	2.5	0.70
Xylenes, Total	ND		ug/l	2.5	0.70
cis-1,2-Dichloroethene	ND		ug/l	2.5	0.70
1,2-Dichloroethene, Total	ND		ug/l	2.5	0.70
Dibromomethane	ND		ug/l	5.0	1.0
1,2,3-Trichloropropane	ND		ug/l	2.5	0.70
Acrylonitrile	ND		ug/l	5.0	1.5
Styrene	ND		ug/l	2.5	0.70
Dichlorodifluoromethane	ND		ug/l	5.0	1.0
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	1.0
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	1.0
4-Methyl-2-pentanone	ND		ug/l	5.0	1.0
2-Hexanone	ND		ug/l	5.0	1.0
Bromochloromethane	ND		ug/l	2.5	0.70
2,2-Dichloropropane	ND		ug/l	2.5	0.70
1,2-Dibromoethane	ND		ug/l	2.0	0.65
1,3-Dichloropropane	ND		ug/l	2.5	0.70
1,1,1,2-Tetrachloroethane	ND		ug/l	2.5	0.70
Bromobenzene	ND		ug/l	2.5	0.70
n-Butylbenzene	ND		ug/l	2.5	0.70
sec-Butylbenzene	ND		ug/l	2.5	0.70
tert-Butylbenzene	ND		ug/l	2.5	0.70

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8260D
Analytical Date: 04/28/23 10:08
Analyst: PID

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02,06-07 Batch: WG1773111-5					
o-Chlorotoluene	ND		ug/l	2.5	0.70
p-Chlorotoluene	ND		ug/l	2.5	0.70
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.70
Hexachlorobutadiene	ND		ug/l	2.5	0.70
Isopropylbenzene	ND		ug/l	2.5	0.70
p-Isopropyltoluene	ND		ug/l	2.5	0.70
Naphthalene	ND		ug/l	2.5	0.70
n-Propylbenzene	ND		ug/l	2.5	0.70
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.70
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.70
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.70
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.70
1,4-Dioxane	ND		ug/l	250	61.
p-Diethylbenzene	ND		ug/l	2.0	0.70
p-Ethyltoluene	ND		ug/l	2.0	0.70
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54
Ethyl ether	ND		ug/l	2.5	0.70
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.70

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	110		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	96		70-130
Dibromofluoromethane	106		70-130

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-05 Batch: WG1773063-3 WG1773063-4								
Methylene chloride	120		110		70-130	9		20
1,1-Dichloroethane	120		120		70-130	0		20
Chloroform	110		120		70-130	9		20
Carbon tetrachloride	120		120		63-132	0		20
1,2-Dichloropropane	120		120		70-130	0		20
Dibromochloromethane	110		110		63-130	0		20
1,1,2-Trichloroethane	120		120		70-130	0		20
Tetrachloroethene	120		110		70-130	9		20
Chlorobenzene	120		120		75-130	0		20
Trichlorofluoromethane	120		120		62-150	0		20
1,2-Dichloroethane	120		120		70-130	0		20
1,1,1-Trichloroethane	120		110		67-130	9		20
Bromodichloromethane	110		110		67-130	0		20
trans-1,3-Dichloropropene	110		110		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	120		120		70-130	0		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	120		120		67-130	0		20
Benzene	120		120		70-130	0		20
Toluene	120		120		70-130	0		20
Ethylbenzene	120		110		70-130	9		20
Chloromethane	110		110		64-130	0		20
Bromomethane	81		68		39-139	17		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-05 Batch: WG1773063-3 WG1773063-4								
Vinyl chloride	120		110		55-140	9		20
Chloroethane	140	Q	150	Q	55-138	7		20
1,1-Dichloroethene	120		110		61-145	9		20
trans-1,2-Dichloroethene	120		110		70-130	9		20
Trichloroethene	110		100		70-130	10		20
1,2-Dichlorobenzene	120		120		70-130	0		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	120		120		70-130	0		20
Methyl tert butyl ether	120		120		63-130	0		20
p/m-Xylene	115		115		70-130	0		20
o-Xylene	110		115		70-130	4		20
cis-1,2-Dichloroethene	110		110		70-130	0		20
Dibromomethane	110		120		70-130	9		20
1,2,3-Trichloropropane	110		110		64-130	0		20
Acrylonitrile	120		120		70-130	0		20
Styrene	110		115		70-130	4		20
Dichlorodifluoromethane	120		120		36-147	0		20
Acetone	96		100		58-148	4		20
Carbon disulfide	120		110		51-130	9		20
2-Butanone	110		100		63-138	10		20
Vinyl acetate	130		130		70-130	0		20
4-Methyl-2-pentanone	110		110		59-130	0		20
2-Hexanone	100		100		57-130	0		20

Lab Control Sample Analysis **Batch Quality Control**

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-05 Batch: WG1773063-3 WG1773063-4								
Bromochloromethane	120		110		70-130	9		20
2,2-Dichloropropane	120		120		63-133	0		20
1,2-Dibromoethane	120		110		70-130	9		20
1,3-Dichloropropane	120		120		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	120		110		70-130	9		20
n-Butylbenzene	120		110		53-136	9		20
sec-Butylbenzene	120		110		70-130	9		20
tert-Butylbenzene	120		110		70-130	9		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	120		110		70-130	9		20
1,2-Dibromo-3-chloropropane	110		100		41-144	10		20
Hexachlorobutadiene	110		100		63-130	10		20
Isopropylbenzene	120		110		70-130	9		20
p-Isopropyltoluene	120		110		70-130	9		20
Naphthalene	120		110		70-130	9		20
n-Propylbenzene	120		110		69-130	9		20
1,2,3-Trichlorobenzene	120		110		70-130	9		20
1,2,4-Trichlorobenzene	120		110		70-130	9		20
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,2,4-Trimethylbenzene	120		110		70-130	9		20
1,4-Dioxane	122		120		56-162	2		20
p-Diethylbenzene	120		110		70-130	9		20

Lab Control Sample Analysis Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,03-05 Batch: WG1773063-3 WG1773063-4								
p-Ethyltoluene	120		110		70-130	9		20
1,2,4,5-Tetramethylbenzene	110		110		70-130	0		20
Ethyl ether	110		120		59-134	9		20
trans-1,4-Dichloro-2-butene	91		91		70-130	0		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		109		70-130
Toluene-d8	99		103		70-130
4-Bromofluorobenzene	98		100		70-130
Dibromofluoromethane	102		102		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 Batch: WG1773111-3 WG1773111-4								
Methylene chloride	100		94		70-130	6		20
1,1-Dichloroethane	110		100		70-130	10		20
Chloroform	100		94		70-130	6		20
Carbon tetrachloride	99		90		63-132	10		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	86		82		63-130	5		20
1,1,2-Trichloroethane	94		90		70-130	4		20
Tetrachloroethene	94		88		70-130	7		20
Chlorobenzene	96		90		75-130	6		20
Trichlorofluoromethane	110		100		62-150	10		20
1,2-Dichloroethane	100		96		70-130	4		20
1,1,1-Trichloroethane	99		91		67-130	8		20
Bromodichloromethane	97		88		67-130	10		20
trans-1,3-Dichloropropene	88		84		70-130	5		20
cis-1,3-Dichloropropene	96		90		70-130	6		20
1,1-Dichloropropene	100		93		70-130	7		20
Bromoform	80		75		54-136	6		20
1,1,2,2-Tetrachloroethane	96		94		67-130	2		20
Benzene	110		99		70-130	11		20
Toluene	96		90		70-130	6		20
Ethylbenzene	96		89		70-130	8		20
Chloromethane	120		110		64-130	9		20
Bromomethane	110		100		39-139	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 Batch: WG1773111-3 WG1773111-4								
Vinyl chloride	120		110		55-140	9		20
Chloroethane	110		110		55-138	0		20
1,1-Dichloroethene	100		93		61-145	7		20
trans-1,2-Dichloroethene	100		95		70-130	5		20
Trichloroethene	100		92		70-130	8		20
1,2-Dichlorobenzene	94		87		70-130	8		20
1,3-Dichlorobenzene	94		87		70-130	8		20
1,4-Dichlorobenzene	93		87		70-130	7		20
Methyl tert butyl ether	95		92		63-130	3		20
p/m-Xylene	95		90		70-130	5		20
o-Xylene	95		85		70-130	11		20
cis-1,2-Dichloroethene	100		95		70-130	5		20
Dibromomethane	97		94		70-130	3		20
1,2,3-Trichloropropane	89		85		64-130	5		20
Acrylonitrile	100		99		70-130	1		20
Styrene	90		85		70-130	6		20
Dichlorodifluoromethane	100		92		36-147	8		20
Acetone	98		87		58-148	12		20
Carbon disulfide	110		94		51-130	16		20
2-Butanone	98		92		63-138	6		20
Vinyl acetate	120		120		70-130	0		20
4-Methyl-2-pentanone	81		79		59-130	3		20
2-Hexanone	80		77		57-130	4		20

Lab Control Sample Analysis Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 Batch: WG1773111-3 WG1773111-4								
Bromochloromethane	100		95		70-130	5		20
2,2-Dichloropropane	100		96		63-133	4		20
1,2-Dibromoethane	91		87		70-130	4		20
1,3-Dichloropropane	96		90		70-130	6		20
1,1,1,2-Tetrachloroethane	91		86		64-130	6		20
Bromobenzene	94		86		70-130	9		20
n-Butylbenzene	97		88		53-136	10		20
sec-Butylbenzene	94		86		70-130	9		20
tert-Butylbenzene	92		84		70-130	9		20
o-Chlorotoluene	97		88		70-130	10		20
p-Chlorotoluene	94		88		70-130	7		20
1,2-Dibromo-3-chloropropane	73		73		41-144	0		20
Hexachlorobutadiene	91		84		63-130	8		20
Isopropylbenzene	94		86		70-130	9		20
p-Isopropyltoluene	93		84		70-130	10		20
Naphthalene	80		79		70-130	1		20
n-Propylbenzene	96		88		69-130	9		20
1,2,3-Trichlorobenzene	89		85		70-130	5		20
1,2,4-Trichlorobenzene	86		84		70-130	2		20
1,3,5-Trimethylbenzene	93		85		64-130	9		20
1,2,4-Trimethylbenzene	94		86		70-130	9		20
1,4-Dioxane	94		94		56-162	0		20
p-Diethylbenzene	92		84		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Lab Number: L2322586

Project Number: 170472002

Report Date: 05/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 Batch: WG1773111-3 WG1773111-4								
p-Ethyltoluene	95		86		70-130	10		20
1,2,4,5-Tetramethylbenzene	89		81		70-130	9		20
Ethyl ether	99		93		59-134	6		20
trans-1,4-Dichloro-2-butene	87		84		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		107		70-130
Toluene-d8	100		100		70-130
4-Bromofluorobenzene	96		94		70-130
Dibromofluoromethane	106		106		70-130

Matrix Spike Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 QC Batch ID: WG1773111-6 WG1773111-7 QC Sample: L2322586-02 Client ID: MW-4_042623												
Methylene chloride	ND	10	10	100		10	100		70-130	0		20
1,1-Dichloroethane	ND	10	11	110		11	110		70-130	0		20
Chloroform	ND	10	10	100		10	100		70-130	0		20
Carbon tetrachloride	ND	10	10	100		10	100		63-132	0		20
1,2-Dichloropropane	ND	10	11	110		10	100		70-130	10		20
Dibromochloromethane	ND	10	8.4	84		8.5	85		63-130	1		20
1,1,2-Trichloroethane	ND	10	9.4	94		9.4	94		70-130	0		20
Tetrachloroethene	ND	10	9.6	96		9.8	98		70-130	2		20
Chlorobenzene	ND	10	9.3	93		9.4	94		75-130	1		20
Trichlorofluoromethane	ND	10	12	120		12	120		62-150	0		20
1,2-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
1,1,1-Trichloroethane	ND	10	10	100		10	100		67-130	0		20
Bromodichloromethane	ND	10	9.6	96		9.5	95		67-130	1		20
trans-1,3-Dichloropropene	ND	10	8.5	85		8.5	85		70-130	0		20
cis-1,3-Dichloropropene	ND	10	9.0	90		8.8	88		70-130	2		20
1,1-Dichloropropene	ND	10	11	110		11	110		70-130	0		20
Bromoform	ND	10	7.8	78		7.8	78		54-136	0		20
1,1,2,2-Tetrachloroethane	ND	10	9.7	97		9.8	98		67-130	1		20
Benzene	ND	10	11	110		11	110		70-130	0		20
Toluene	ND	10	9.4	94		9.7	97		70-130	3		20
Ethylbenzene	ND	10	9.3	93		9.6	96		70-130	3		20
Chloromethane	ND	10	10	100		10	100		64-130	0		20
Bromomethane	ND	10	3.4	34	Q	5.0	50		39-139	38	Q	20

Matrix Spike Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 QC Batch ID: WG1773111-6 WG1773111-7 QC Sample: L2322586-02 Client ID: MW-4_042623												
Vinyl chloride	ND	10	12	120		12	120		55-140	0		20
Chloroethane	ND	10	13	130		12	120		55-138	8		20
1,1-Dichloroethene	ND	10	11	110		11	110		61-145	0		20
trans-1,2-Dichloroethene	ND	10	10	100		10	100		70-130	0		20
Trichloroethene	ND	10	10	100		10	100		70-130	0		20
1,2-Dichlorobenzene	ND	10	8.7	87		9.0	90		70-130	3		20
1,3-Dichlorobenzene	ND	10	8.6	86		8.9	89		70-130	3		20
1,4-Dichlorobenzene	ND	10	8.5	85		8.9	89		70-130	5		20
Methyl tert butyl ether	ND	10	9.6	96		9.6	96		63-130	0		20
p/m-Xylene	ND	20	18	90		19	95		70-130	5		20
o-Xylene	ND	20	18	90		18	90		70-130	0		20
cis-1,2-Dichloroethene	ND	10	10	100		10	100		70-130	0		20
Dibromomethane	ND	10	10	100		9.7	97		70-130	3		20
1,2,3-Trichloropropane	ND	10	9.0	90		9.3	93		64-130	3		20
Acrylonitrile	ND	10	10	100		10	100		70-130	0		20
Styrene	ND	20	17	85		18	90		70-130	6		20
Dichlorodifluoromethane	ND	10	11	110		11	110		36-147	0		20
Acetone	ND	10	9.4	94		9.4	94		58-148	0		20
Carbon disulfide	ND	10	11	110		11	110		51-130	0		20
2-Butanone	ND	10	9.3	93		9.6	96		63-138	3		20
Vinyl acetate	ND	10	12	120		12	120		70-130	0		20
4-Methyl-2-pentanone	ND	10	8.3	83		8.3	83		59-130	0		20
2-Hexanone	ND	10	8.4	84		8.0	80		57-130	5		20

Matrix Spike Analysis

Batch Quality Control

Project Name: 27-01 JACKSON AVENUE

Project Number: 170472002

Lab Number: L2322586

Report Date: 05/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 QC Batch ID: WG1773111-6 WG1773111-7 QC Sample: L2322586-02 Client ID: MW-4_042623												
Bromochloromethane	ND	10	10	100		9.9	99		70-130	1		20
2,2-Dichloropropane	ND	10	8.5	85		8.3	83		63-133	2		20
1,2-Dibromoethane	ND	10	9.2	92		9.1	91		70-130	1		20
1,3-Dichloropropane	ND	10	9.6	96		9.5	95		70-130	1		20
1,1,1,2-Tetrachloroethane	ND	10	8.8	88		9.0	90		64-130	2		20
Bromobenzene	ND	10	9.0	90		9.3	93		70-130	3		20
n-Butylbenzene	ND	10	8.3	83		9.2	92		53-136	10		20
sec-Butylbenzene	ND	10	9.0	90		9.5	95		70-130	5		20
tert-Butylbenzene	ND	10	9.0	90		9.5	95		70-130	5		20
o-Chlorotoluene	ND	10	9.0	90		9.6	96		70-130	6		20
p-Chlorotoluene	ND	10	8.8	88		9.1	91		70-130	3		20
1,2-Dibromo-3-chloropropane	ND	10	7.7	77		7.6	76		41-144	1		20
Hexachlorobutadiene	ND	10	8.2	82		8.7	87		63-130	6		20
Isopropylbenzene	ND	10	9.1	91		9.5	95		70-130	4		20
p-Isopropyltoluene	ND	10	8.8	88		9.2	92		70-130	4		20
Naphthalene	ND	10	7.0	70		7.7	77		70-130	10		20
n-Propylbenzene	ND	10	9.2	92		9.6	96		69-130	4		20
1,2,3-Trichlorobenzene	ND	10	7.4	74		8.2	82		70-130	10		20
1,2,4-Trichlorobenzene	ND	10	7.0	70		7.7	77		70-130	10		20
1,3,5-Trimethylbenzene	ND	10	8.9	89		9.3	93		64-130	4		20
1,2,4-Trimethylbenzene	ND	10	8.7	87		9.1	91		70-130	4		20
1,4-Dioxane	ND	500	300	60		340	68		56-162	13		20
p-Diethylbenzene	ND	10	8.3	83		8.8	88		70-130	6		20

Matrix Spike Analysis**Batch Quality Control****Project Name:** 27-01 JACKSON AVENUE**Project Number:** 170472002**Lab Number:** L2322586**Report Date:** 05/03/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02,06-07 QC Batch ID: WG1773111-6 WG1773111-7 QC Sample: L2322586-02 Client ID: MW-4_042623												
p-Ethyltoluene	ND	10	8.9	89		9.4	94		70-130	5		20
1,2,4,5-Tetramethylbenzene	ND	10	7.9	79		8.4	84		70-130	6		20
Ethyl ether	ND	10	10	100		9.9	99		59-134	1		20
trans-1,4-Dichloro-2-butene	ND	10	6.9	69	Q	6.9	69	Q	70-130	0		20

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		106		70-130
4-Bromofluorobenzene	93		94		70-130
Dibromofluoromethane	106		105		70-130
Toluene-d8	99		99		70-130

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Serial_No:05032313:52
Lab Number: L2322586
Report Date: 05/03/23

Sample Receipt and Container Information

Were project specific reporting limits specified?

YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2322586-01A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-01B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-01C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02A1	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02A2	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02B1	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02B2	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02C1	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-02C2	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-03A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-03B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-03C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-04A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-04B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-04C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-05A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-05B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-05C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-06A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-06B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Serial_No:05032313:52
Lab Number: L2322586
Report Date: 05/03/23

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2322586-06C	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-07A	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)
L2322586-07B	Vial HCl preserved	A	NA		3.3	Y	Absent		NYTCL-8260(14)

Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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Data Qualifiers

Identified Compounds (TICs).

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report with 'J' Qualifiers



Project Name: 27-01 JACKSON AVENUE
Project Number: 170472002

Lab Number: L2322586
Report Date: 05/03/23

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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Certification Information**The following analytes are not included in our Primary NELAP Scope of Accreditation:****Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 625/625.1:** alpha-Terpineol**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B**The following analytes are included in our Massachusetts DEP Scope of Accreditation****Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.****EPA 522, EPA 537.1.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 NEW YORK CHAIN OF CUSTODY		Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105		Page 1 of 1		Date Rec'd in Lab 4/26/23		ALPHA Job # L2320586	
Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3288		Project Information Project Name: 27-01 Jackson Avenue Project Location: Long Island City, NY Project # 170472002 (Use Project name as Project #) ☐		Deliverables ☐ ASP-A ☒ ASP-B ☐ EQulS (1 File) ☐ EQulS (4 File) ☐ Other		Billing Information ☒ Same as Client Info PO #	
Client Information Client: LANGAN Address: 360 W 31st Street NYC, NY 10001 Phone: 212-479-5400 Fax: 212-479-5444 Email: ksemen@langan.com		Project Manager: Kim Semon Brian Gochenaur ALPHAQuote #:		Regulatory Requirement ☐ NY TOGS ☐ NY Part 375 ☐ AWQ Standards ☐ NY CP-51 ☐ NY Restricted Use ☐ Other ☐ NY Unrestricted Use ☐ NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: ☐ NJ ☐ NY ☐ Other:			
These samples have been previously analyzed by Alpha ☐		Other project specific requirements/comments: Please cc: Data management@langan.com and L.Haley@langan.com * Additional Volume Provided from MW-2-042623 for MS/MSD *		ANALYSIS		Sample Filtration ☐ Done ☐ Lab to do ☐ Lab to do (Please Specify below)		Total Bottles	
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date Time		Sample Matrix		Sampler's Initials	
22586-01		MW-2-042623		4/26/23 1030		GW		AK	
-02		MW-4-042623		4/26/23 1200		GW		AK	
-03		MW-3-042623		4/26/23 1300		GW		AK	
-04		MW-1-042623		4/26/23 1440		GW		AK	
-05		DUP01-042623		4/26/23 -		GW		MR	
-06		FB01-042623		4/26/23 1445		AG		AK	
-07		TB01-042623		4/26/23 1450		AG		AK	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type		Preservative	
Relinquished By: Mi Leach (Langan) Al. Inc		Date/Time: 4/26/23 15:07		Received By: MRJN ALPHA		Date/Time: 4/26/23 15:07		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)	
Relinquished By: MRJN ALPHA		Date/Time: 4/26/23 18:30		Received By: ROB ST.		Date/Time: 4/26/23 19:10			
Relinquished By: AL		Date/Time: 4/26/23 21:30		Received By: AL		Date/Time: 4/26/23 21:30			
Relinquished By: AL		Date/Time: 4/26/23 23:20		Received By: AL		Date/Time: 4/26/23 23:20			

ATTACHMENT D

Data Usability Summary Reports

1 University Square Drive Princeton, NJ 08540 T: 609.282.8000
Mailing Address: 1 University Square Drive Princeton, NJ 08540

To: Lexi Haley, Langan Senior Staff Engineer

From: Joe Conboy, Langan Senior Staff Chemist

Date: May 8, 2023

Re: Data Usability Summary Report
For 27-01 Jackson Avenue
April 2023 Groundwater Samples
Langan Project No.: 170472002

This memorandum presents the findings of an analytical data validation from the analysis of groundwater samples collected in April 2023 by Langan Engineering and Environmental Services at 27-01 Jackson Avenue. The samples were analyzed by Alpha Analytical Laboratories, Inc. (NYSDOH NELAP registration # 11148) for volatile organic compounds (VOCs) by the methods specified below.

- VOCs by SW-846 Method 8260D

Table 1, attached, summarizes the laboratory and client sample identification numbers, sample collection dates, level of data validation, and analytical parameters subject to review.

Validation Overview

This data validation was performed in accordance with the following guidelines, where applicable:

- USEPA Region II Standard Operating Procedures (SOPs) for Data Validation
- USEPA Contract Laboratory Program “National Functional Guidelines for Organic Superfund Methods Data Review” (EPA 540- R-20-005, November 2020)
- USEPA Contract Laboratory Program “National Functional Guidelines for Inorganic Superfund Methods Data Review” (EPA 540- R-20-005, November 2020), and
- published analytical methodologies.

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Data Usability Summary Report
For 27-01 Jackson Avenue
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The following acronyms may be used in the discussion of data-quality issues:

%D	Percent Difference	MB	Method Blank
CCV	Continuing Calibration Verification	MDL	Method Detection Limit
FB	Field Blank	MS	Matrix Spike
FD	Field Duplicate	MSD	Matrix Spike Duplicate
ICAL	Initial Calibration	RF	Response Factor
ICV	Initial Calibration Verification	RL	Reporting Limit
ISTD	Internal Standard	RPD	Relative Percent Difference
LCL	Lower Control Limit	RSD	Relative Standard Deviation
LCS	Laboratory Control Sample	TB	Trip Blank
LCSD	Laboratory Control Sample Duplicate	UCL	Upper Control Limit

Tier 1 data validation is based on completeness and compliance checks of sample-related QC results including: sample receipt documentation; analytical holding times; sample preservation; blank results (method, field, and trip); surrogate recoveries; MS/MSD recoveries and RPDs values; field duplicate RPDs, laboratory duplicate RPDs, and LCS/LCSD recoveries and RPDs. SDG L2322586 underwent Tier 1 validation review.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA guidelines and our best professional judgment:

- R** – The sample results are unusable because certain criteria were not met when generating the data. The analyte may or may not be present in the sample.
- J** – The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ** – The analyte was not detected at a level greater than or equal to the reporting limit; however, the reported reporting limit is approximate and may be inaccurate or imprecise.
- U** – The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the RL or the sample concentration for results impacted by blank contamination.
- NJ** – The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned, these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are considered invalid and are not technically usable for data interpretation. Data that is otherwise qualified because of minor data-quality anomalies are usable, as qualified in Table 2 (attached).

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Data Usability Summary Report
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MAJOR DEFICIENCIES:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies were identified.

MINOR DEFICIENCIES:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that were identified.

VOCs by SW-846 Method 8260D

L2322586

The FB (FB01_042623) exhibited a detection of acetone (2.0 ug/L). The associated detected results in samples MW-1_042623, MW-2_042623, MW-3_042623, MW-4_042623, and DUP01_042623 are qualified as J because of potential blank contamination. Non-detect results do not require qualification.

OTHER DEFICIENCIES:

Other deficiencies include anomalies that do not directly impact data quality and do not necessitate qualification. The section below describes the other deficiencies that were identified.

VOCs by SW-846 Method 8260D

L2322586

The LCS/LCSD for batch WG1773063 exhibited a percent recovery above the UCL for chloroethane (140%, 150%). The associated results are non-detect. No qualification is necessary.

The MS and/or MSD performed on sample MW-4_042623 exhibited percent recoveries below the LCL for bromomethane (34%) and trans-1,4-dichloro-2-butene (69%, 69%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

The MS/MSD performed on sample MW-4_042623 exhibited a RPD above the control limit for bromomethane (38%). Organic results are not qualified on the basis of MS/MSD recoveries alone. No qualification is necessary.

FIELD DUPLICATE:

One field duplicate and parent sample pair was collected and analyzed for all parameters. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than $\pm 1X$ the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 30% for soil/groundwater. The following field duplicate and parent sample pair was compared to and met the precision criteria:

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For 27-01 Jackson Avenue
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- DUP01_042623 and MW-3_042623

CONCLUSION:

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter. All of the data packages met ASP Category B requirements.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:



Joe Conboy
Senior Staff Chemist