ARCADIS Design & Consultancy for natural and built assets

Alliance Energy LLC

SITE STATUS UPDATE REPORT

Mobil Branded Service Station

Former Mobil #12833 (17-GBR)

96-27 Queens Blvd

Rego Park, New York

NYSDEC Case No. 09-02519

PBS No. 2-157139

January 2020

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Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Rego Park, New York
NYSDEC Spill No. 09-02519
PBS No. 2-157139

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Prepared for:

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Our Ref.:

30007639

Date:

January 2020

WORK PERFORMED

- Arcadis of New York, Inc. (Arcadis) gauged and sampled 10 monitoring wells on October 28, 2019.
- Arcadis identified accumulated sediments in AS-105 were occluding the well screen. On June 19, 2019, Arcadis successfully removed 0.58 feet (ft) of sediment from AS-105, exposing a portion of the well screen and allowing the well to take air.
- The air sparge (AS) system was offline from August 1 through October 1, 2019 due to failure of components associated with the AS blower.
- Operation, monitoring, and maintenance (OM&M) was conducted on October 28, November 6, and December 18, 2019.

GROUNDWATER MONITORING; OCTOBER 28, 2019

- Number of wells: Ten groundwater monitoring wells are associated with the site, as shown on Figure 2
- Gauging Frequency: Quarterly
- Liquid Phase Hydrocarbons (LPH): None detected
- Sampling Frequency: Quarterly
- Reporting Frequency: Quarterly
- Groundwater Depth: 16.49 ft below measuring point (bmp) (MW-11) to 18.06 ft bmp (MW-5).
- Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX) Concentrations: Below reporting limits (BRL) (MW-1, MW-3, MW-5, and MW-6) to 3,370 micrograms per liter (µg/L) (MW-8).
- Methyl Tertiary Butyl Ether (MTBE) Concentrations: BRL (MW-2, MW-3, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11) to 1 µg/L (MW-1).
- Groundwater Flow (Direction Inferred): West-northwest at a hydraulic gradient of 0.009 feet per foot (ft/ft) on site, as shown on Figure 3.

SITE SPECIFIC GEOLOGY/HYDROGEOLOGY

- Overburden consists of predominantly well-graded sands and silts, with lesser amounts of clay and gravel to approximately 15 ft below ground surface (bgs). Material from 15 to 30 ft bgs consists primarily of poorly graded sand.
- Bedrock was not encountered during previous investigations.

POTENTIAL SENSITIVE RECEPTORS

- Subsurface catch basins, utility vaults, and storm drains are located on and adjacent to the site.

- Commercial and residential buildings containing basements are located adjacent to the site.
- A New York City Metropolitan Transit Authority (MTA) subway tunnel is located underneath Queens Boulevard to the south of the site.

SITE HISTORY

- On November 13, 1990, New York State Department of Environmental Conservation (NYSDEC) Case No. 90-08859 was assigned to the site when petroleum-impacted soil was discovered during removal of two 4,000-gallon capacity underground storage tanks (USTs). NYSDEC Case No. 90-08859 was closed on November 15, 2005.
- Subsurface investigations were conducted at the site during 1991, 1999, 2009, and 2010.
- On June 5, 1992, NYSDEC Case No. 92-02690 was generated due to a gasoline UST test failure. The case was closed on June 22, 1992.
- A soil vapor extraction (SVE) system was in operation at the site between August 1994 and September 1995 and removed approximately 15,000 pounds (lbs) of volatile organic compounds (VOCs).
- In September 1996, a leak in the annular space of a double-walled steel tank was detected and subsequently repaired and retested.
- On August 9, 2002, NYSDEC Case No. 02-04910 was opened due to a 550-gallon waste oil tank test failure. NYSDEC Case No. 02-04910 was closed on October 15, 2003.
- In December 2008, a Phase I Environmental Site Assessment (ESA) was completed.
- On June 2, 2009, NYSDEC Case No. 09-02519 was assigned to the site.
- On November 16, 2009, based on the results of a due diligence investigation (Phase II ESA), NYSDEC Case No. 09-09175 was assigned to the site. The case number was closed on November 20, 2009.
- In February 2010, Kleinfelder East, Inc. (Kleinfelder) completed a subsurface investigation, which included the installation of two new groundwater monitoring wells (MW-7 and MW-8).
- In March 2010, a Phase II Environmental Assessment Report was completed (work conducted in November 2009). Seven soil borings were installed, six of which were completed as groundwater monitoring wells. A geophysical survey was also conducted for the purpose of identifying possible dry wells. No dry wells were identified.
- In October 2010, a Phase I ESA Update was submitted.
- In June and July 2011, two additional monitoring wells (MW-9 and MW-10) were installed downgradient of the site in the sidewalk on the west side of 63rd Road.
- In January 2012, one additional monitoring well (MW-11) was installed downgradient of the site in the sidewalk on the west side of 63rd Road.

- In January 2013, four AS/SVE well pairs were installed at the site in accordance with the approved Remedial Action Plan (RAP). A pilot test was subsequently conducted in April 2013.
- The AS/SVE system was brought online on May 16, 2014.
- Historic OM&M and mass recovery information of the AS/SVE system were last summarized in the Site Status Update Report (SSUR) dated March 21, 2017. Total vapor phase BTEX recovered as of August 23, 2017 is 51.4 lbs. The total vapor phase hydrocarbon mass recovered as of August 23, 2017 is 1,995.6 lbs. The system has been shut off for rebound monitoring and repair but will be restarted once the upgrades are complete and new AS wells around MW-8 are installed.
- Following completion of the first quarter sampling in 2016, the AS/SVE system was optimized to increase mass recovery in the vicinity of the highest groundwater concentrations near MW-8.
- Arcadis installed an Oxygen Release Compound (ORC)-Advanced sock in MW-8 in July 2016 to increase the dissolved oxygen (DO) content and enhance natural attenuation of BTEX concentrations in the formation while continuing to operate the AS/SVE system. This sock was removed on September 28, 2017.
- AS/SVE system upgrades were completed in March 2019. The system was restarted on March 13, 2019 in both AS and SVE modes.
- Arcadis proposed upgrading components of the AS/SVE system with the installation of two additional AS wells around MW-8 to enhance removal of remaining impacts. Details of well placement were provided in the July 10, 2018 SSUR. Following considerable delays in receiving permit approval from New York City Transit (NYCT), approval was received on January 20, 2019 and system upgrades were completed from February 11 through March 1, 2019. In addition, monitoring well MW-7 was overdrilled and reinstalled.

RECENT MONITORING ACTIVITIES AND TRENDS

- On October 28, 2019, ten monitoring wells were gauged and sampled.
- LPH was not detected in the monitoring wells.
- Groundwater analytical results for all monitoring wells are summarized in Table 1 and provided in Figure 4. The groundwater laboratory analytical report is located in Appendix A.
- Total BTEX concentrations in MW-2, MW-7, and MW-11 decreased when compared to July 2019 concentrations. A significant decrease in BTEX concentrations was observed in MW-7 when compared to July 2019 event. These wells will continue to be monitored and sampled quarterly.
- An increase in BTEX was observed in MW-8, MW-9, and MW-10 from data collected during the July 2019 event. See attached hydrographs for historical trends. Groundwater sampling will continue on a quarterly basis.

REMEDIAL SYSTEM UPGRADE HISTORY

- AS compressor issues shut the system down on December 14, 2016. On June 1, 2017, a new AS blower was successfully installed and the AS/SVE system was brought online. On September 7, 2017, the system was shut down after failure of the AS blower motor. The system was offline awaiting repair/replacement of the AS motor and additional sparge well installation around MW-8. During this time, Arcadis was also monitoring the groundwater for rebound, and proposed closure of the spill number in the May 2018 Remedial Completion Report. Closure was denied on May 30, 2018, due to elevated BTEX concentrations in MW-8.
- On January 28, 2019, Arcadis received the final permit approval from NYCT to begin the NYSDEC-approved upgrades to the remediation system, including two additional AS wells and associated piping.
- System upgrades were completed from February 11 through March 1, 2019. Monitoring well MW-7 was over drilled and reinstalled, screening the same interval of the subsurface as the original MW-7 with 4-inch diameter 0.020-inch slotted schedule 40 polyvinyl chloride (PVC) well screen from 13 to 30 feet bgs. Two new AS wells (AS-105 and AS-106) were installed near existing monitoring well MW-8, both screened from 28-30 feet bgs with 2-inch diameter 0.010-inch slotted schedule 40 PVC well screen.
- Following completion of well installation and development, the two AS wells were connected to the AS/SVE system, the sparge blower was replaced, the system was restarted, optimized, and brought online into continuous operation on March 13, 2019.

REMEDIAL SYSTEM OPERATION

- OM&M of the AS/SVE system occurred on October 28, November 6, and December 18, 2019. OM&M data and sample results are presented on Table 2 and Table 3, and the laboratory analytical results from the system vapor sampling events are included as Appendix B.
- As of the December 18, 2019 OM&M visit, the total petroleum hydrocarbon mass recovered was 2,224 pounds (lbs) and the total BTEX recovered was 56.5 lbs. The system will continue to operate until the system has reached asymptotic recovery and/or groundwater concentrations have reduced to acceptable concentrations for spill closure.

UPCOMING ACTIVITIES AND RECOMMENDATIONS

- The next quarterly sampling event will be completed in January 2020 and will be reported in the next quarterly SSUR.
- System OM&M will continue on a monthly basis. Arcadis will request no further action (NFA) once system performance data indicates the bulk hydrocarbon mass in the vicinity of MW-7 and MW-8 has been removed to the extent feasible.

ATTACHMENTS:

Figure 1: Site Location Map

Figure 2: Site Map

Figure 3: Groundwater Contour Map – October 28, 2019

Figure 4: Groundwater Analytical Map – October 28, 2019

Table 1: Monitoring Well Gauging and Groundwater Analytical Data

Table 2: AS/SVE Influent Analytical Data

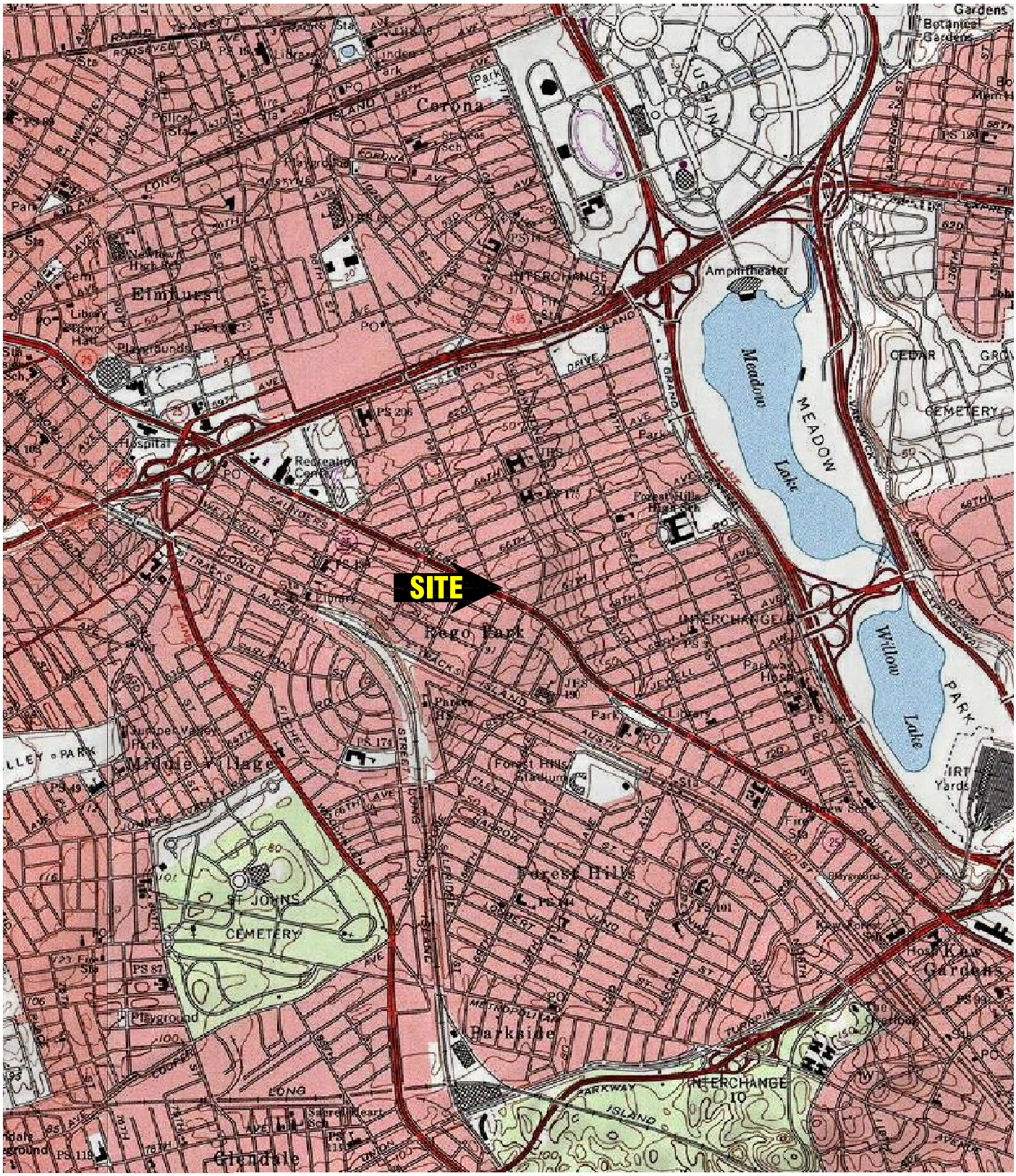
Table 3: AS/SVE Effluent Analytical Data

Hydrographs: MW-2, MW-7, and MW-8

Appendix A: Groundwater Laboratory Analytical Report

Appendix B: AS/SVE System Air Analytical Reports

FIGURES



REFERENCE: TOPO!, USGS 7.5 MINUTE
QUAD: JAMAICA, NEW YORK
DATED: 2010

0 2000' 4000'
GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

SITE LOCATION MAP

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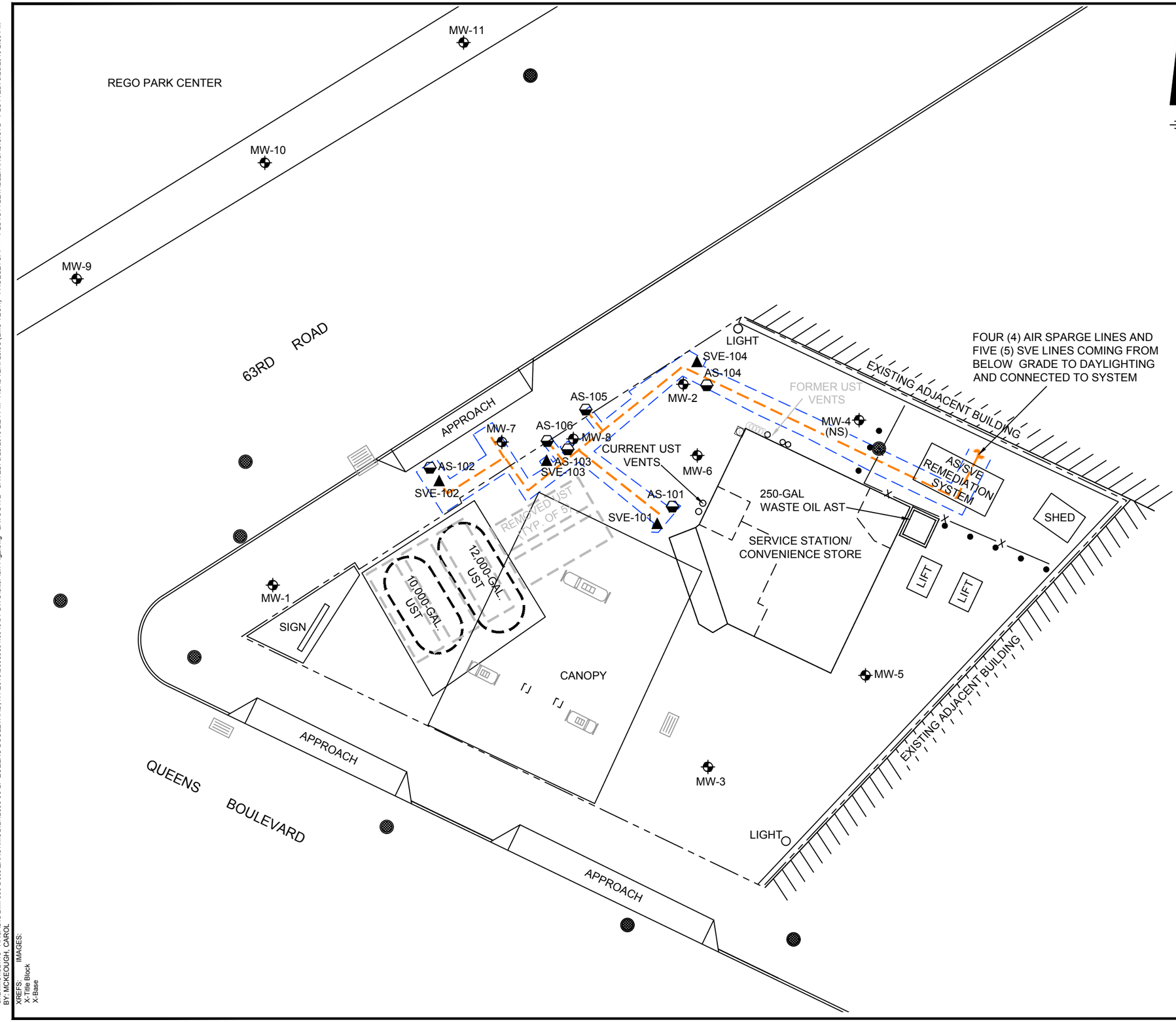
FIGURE 1



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK
- APPROXIMATE LOCATION OF REMEDIATION SYSTEM TRENCHING AND AS/SVE PROCESS LINES

NOTES:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

SITE MAP

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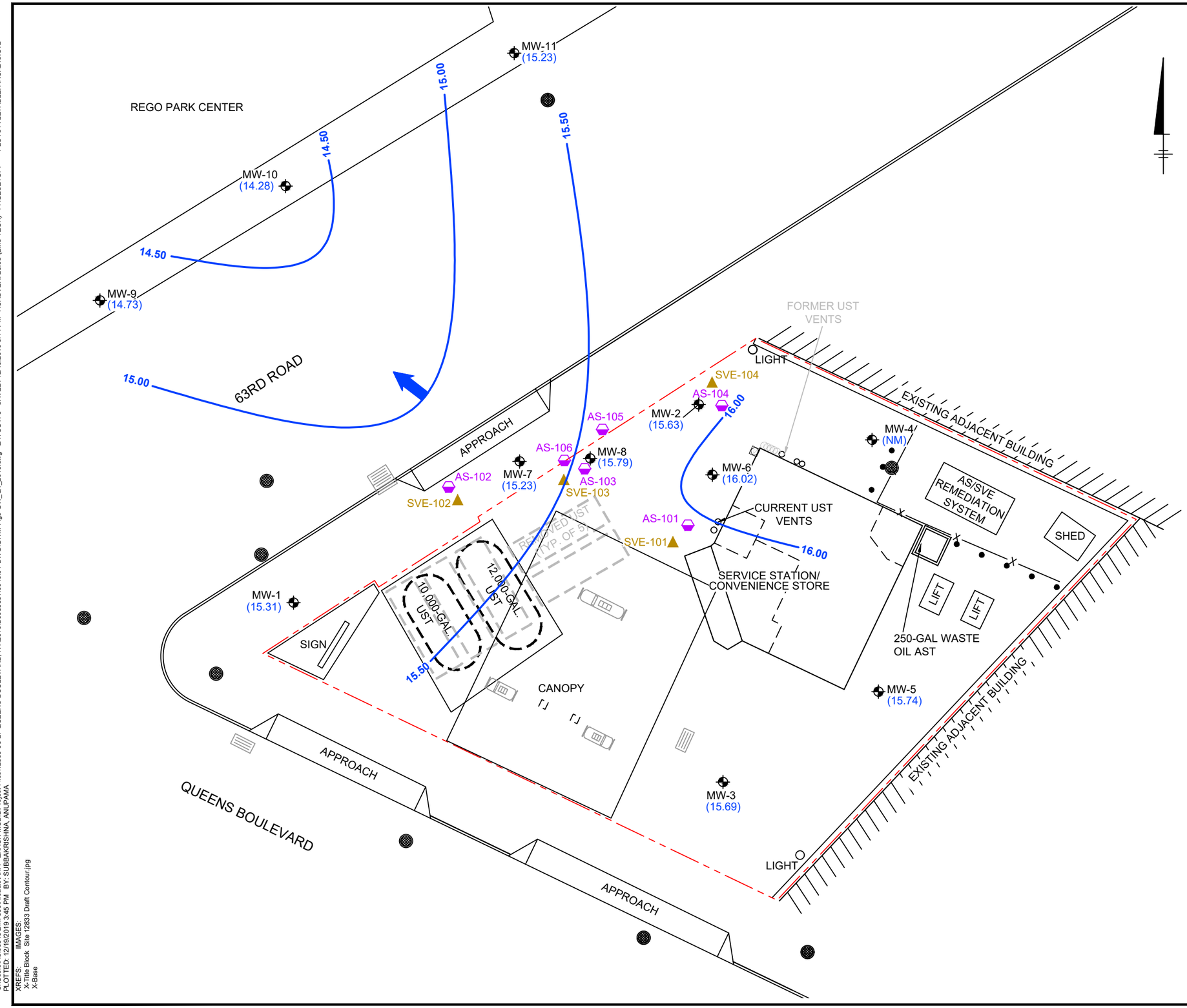
FIGURE 2



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK
- (16.02) — GROUNDWATER ELEVATION
- 16.00 — GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION
- (NM) — NOT MONITORED

NOTE:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER CONTOUR MAP OCTOBER 28, 2019

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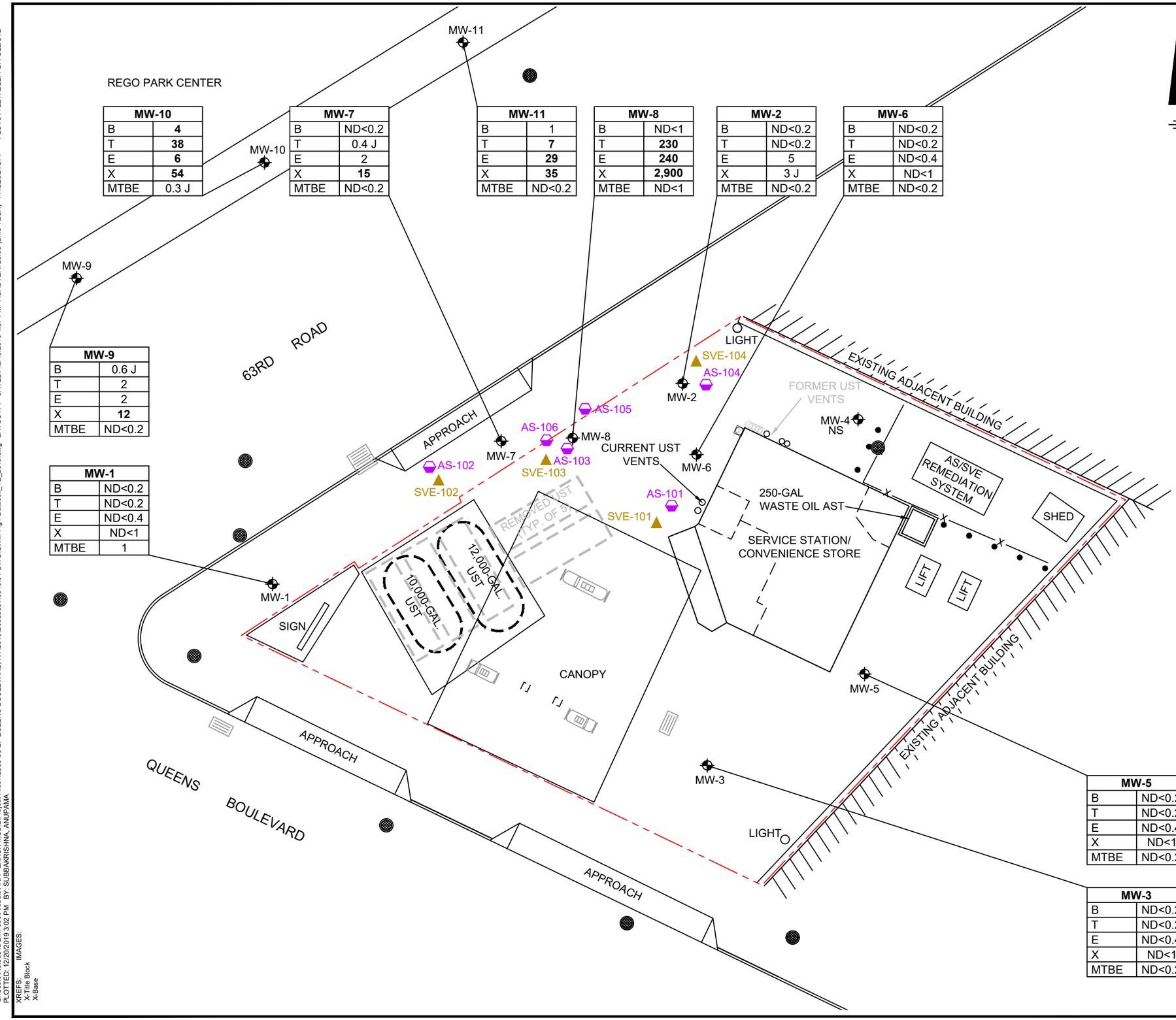
FIGURE 3



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- X — CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYL-BENZENE	5
X = TOTAL XYLENES	5
BTEX = TOTAL BTEX	--
MTBE = METHYL TERTIARY BUTYL ETHER	10

<	CONSTITUENT NOT DETECTED AT OR BELOW THE INDICATED REPORTING LIMIT
ND	NOT DETECTED
NS	NOT SAMPLED
BRL	BELOW LABORATORY REPORTING LIMIT
J	INDICATES AN ESTIMATED VALUE

NOTES:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.
2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUES INDICATE RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER ANALYTICAL MAP OCTOBER 28, 2019

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FIGURE 4

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
C:\Users\AS008813\BIM 360\Arcadis\ANA - EXXON MOBIL\Project Files\12833-96-27 QUEENS BOULEVARD, NY\2019\B0085851.0046\01-DWG\GWM-Fig4-Databox_4Q_2019.dwg LAYOUT: 4 SAVED: 12/19/2019 4:57 PM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB
PLOTTED: 12/20/2019 3:02 PM BY: SUBBAKRISHNA, ANUPAMA
XREFS:
IMAGES:
X-Title Block
X-Base

TABLES

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-1	4/22/2010	32.08	18.20	ND	ND	13.88	0.51 J	0.76 J	0.57 J	2.8	4.6	**1,480**	ND<100	3.62	
	7/16/2010	32.08	18.26	ND	ND	13.82	ND<1.0	ND<1.0	ND<1.0	0.66 J	0.66	**751**	ND<100	3.31	
	10/22/2010	32.08	18.31	ND	ND	13.77	0.51 J	ND<1.0	ND<1.0	ND<1.0	0.51	**123**	ND<100	0.85	
	1/19/2011	32.08	18.47	ND	ND	13.61	NS	NS	NS	NS	NS	NS	NS	0.99	Not submitted to laboratory.
	2/25/2011	32.08	18.28	ND	ND	13.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**210**	ND<200	NS	
	4/12/2011	32.08	18.32	ND	ND	13.76	ND<0.5	0.5 J	ND<0.5	1	1.5	**280**	ND<200	NS	
	7/29/2011	32.08	18.34	ND	ND	13.74	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**78**	ND<200	NS	
	10/25/2011	32.08	17.12	ND	ND	14.96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**110**	NS	NS	
	1/12/2012	32.08	16.98	ND	ND	15.10	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**110**	NS	NS	
	4/16/2012	32.08	17.84	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**67**	NS	NS	
	7/12/2012	32.08	17.90	ND	ND	14.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**36**	NS	NS	
	10/2/2012	32.08	17.90	ND	ND	14.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**25**	NS	NS	
	1/9/2013	32.08	18.06	ND	ND	14.02	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**25**	NS	NS	
	4/4/2013	32.08	18.10	ND	ND	13.98	ND<0.5	0.8 J	3	**14**	17.8	**33**	NS	NS	
	7/19/2013	32.08	17.94	ND	ND	14.14	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**31**	NS	NS	
	10/15/2013	32.08	18.20	ND	ND	13.88	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	**14**	NS	NS	
	1/16/2014	32.08	18.17	ND	ND	13.91	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	10	NS	NS	
	4/22/2014	32.08	18.06	ND	ND	14.02	ND<0.5	ND<0.5	ND<0	ND<0.5	BRL	9	NS	NS	
	7/9/2014	32.08	17.85	ND	ND	14.23	ND<0.5	ND<0.5	ND<0.5	0.7 J	0.7	8	NS	NS	
	10/29/2014	32.08	17.96	ND	ND	14.12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	5	NS	NS	
	1/20/2015	32.08	17.84	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	4/1/2015	32.08	17.89	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	6	NS	NS	
	7/1/2015	32.08	17.72	ND	ND	14.36	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	4	NS	NS	
	10/15/2015	32.08	18.05	ND	ND	14.03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	1/7/2016	32.08	18.05	ND	ND	14.03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	4/11/2016	32.08	18.03	ND	ND	14.05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	7/26/2016	32.08	18.10	ND	ND	13.98	ND<0.5	ND<0.5	ND<0.5	0.7 J	0.7 J	2	NS	NS	
	10/29/2016	32.08	18.13	ND	ND	13.95	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	1/5/2017	32.08	18.85	ND	ND	13.23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	4/18/2017	32.08	17.85	ND	ND	14.23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	7/28/2017	32.08	17.43	ND	ND	14.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	1	NS	NS	
	10/10/2017	32.08	18.52	ND	ND	13.56	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	1/16/2018	32.08	17.80	ND	ND	14.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	4/4/2018	32.08	17.43	ND	ND	14.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	1	NS	NS	
	7/2/2018	32.08	17.55	ND	ND	14.53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	1	NS	NS	
	10/31/2018	32.08	17.48	ND	ND	14.60	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	1	NS	NS	
	1/17/2019	32.08	17.40	ND	ND	14.68	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	1	NS	NS	
	4/1/2019	32.08	17.30	ND	ND	14.78	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	1			
	7/19/2019	32.08	17.07	ND	ND	15.01	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	0.9 J	NS	NS	
	10/28/2019	32.08	16.77	ND	ND	15.31	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	1	NS	NS	
MW-2	4/22/2010	32.58	18.65	ND	ND	13.93	**33.1**	**8.0 J**	**1,540**	**8,580**	10,161	**150**	ND<2,500	3.10	
	7/16/2010	32.58	18.72	ND	ND	13.86	**44.7**	ND<20	**1,210**	**7,250**	8,505	**165**	ND<100	2.81	
	10/22/2010	32.58	18.77	ND	ND	13.81	**26.9**	ND<25	**976**	**5,680**	6,683	**117**	ND<100	2.60	
	1/19/2011	32.58	18.94	ND	ND	13.64	**7**	1.0 J	**390**	**2,200**	2,598	**27**	ND<200	0.31	
	4/12/2011	32.58	18.72	ND	ND	13.86	**20**	ND<3	**610**	**4,300**	4,930	**97**	ND<200	NS	
	7/29/2011	32.58	18.80	ND	ND	13.78	**18**	2.0 J	**770**	**3,800**	4,590	**60**	ND<200	NS	
	10/25/2011	32.58	17.53	ND	ND	15.05	**17**	ND<3	**770**	**4,100**	4,887	**37**	NS	NS	
	1/12/2012	32.58	17.38	ND	ND	15.20	**17**	ND<5	**840**	**3,500**	4,357	**34**	NS	NS	
	4/16/2012	32.58	18.19	ND	ND	14.39	**25**	ND<3	**970**	**3,000**	3,995	**76**	NS	NS	
	7/12/2012	32.58	18.28	ND	ND	14.30	**44**	ND<3	**1,500**	**4,000**	5,544	**120**	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-2 (continued)	10/2/2012	32.58	18.30	ND	ND	14.28	**45**	ND<5	**1,200**	**3,100**	4,345	**80**	NS	NS	
	1/9/2013	32.58	18.45	ND	ND	14.13	**14**	ND<3	**500**	**1,300**	1,814	**23**	NS	NS	
	4/4/2013	32.58	18.51	ND	ND	14.07	**19**	ND<3	**670**	**1,100**	1,789	**26**	NS	NS	
	7/19/2013	32.58	18.32	ND	ND	14.26	**19**	ND<0.5	**660**	**1,300**	1,979	**17**	NS	NS	
	10/15/2013	32.58	18.78	ND	ND	13.80	**27**	ND<3	**1,000**	**2,100**	3,127	**26**	NS	NS	
	1/16/2014	32.58	18.61	ND	ND	13.97	**14**	ND<1	**620**	**990**	1,624	**14**	NS	NS	
	4/2/2014	32.58	18.45	ND	ND	14.13	**9**	ND<1	**490**	**650**	1,149	8	NS	NS	
	7/9/2014	32.58	18.01	ND	ND	14.57	**15**	1	**530**	**1,100**	1,646	**33**	NS	NS	
	10/29/2014	32.58	18.20	ND	ND	14.38	**11**	ND<3	**470**	**540**	1,021	4 J	NS	NS	
	1/20/2015	32.58	18.26	ND	ND	14.32	**17**	4 J	**1,200**	**1,900**	3,121	ND<3	NS	NS	
	4/1/2015	32.58	16.39	ND	ND	16.19	ND<0.5	ND<0.5	2	**8**	10	ND<0.5	NS	NS	
	7/1/2015	32.58	16.43	ND	ND	16.15	0.6 J	ND<0.5	**6**	**8**	14.6 J	ND<0.5	NS	NS	
	10/15/2015	32.58	18.39	ND	ND	14.19	0.9 J	2	**620**	**730**	1,352.9 J	ND<0.5	NS	NS	
	1/7/2016	32.58	18.44	ND	ND	14.14	ND<3	ND<3	**1,100**	**1,600**	2,700	ND<3	NS	NS	
	4/11/2016	32.58	18.39	ND	ND	14.19	ND<0.5	1	**720**	**410**	1,131	ND<0.5	NS	NS	
	7/26/2016	32.58	18.48	ND	ND	14.10	ND<0.5	1	**610**	**220**	831	ND<0.5	NS	NS	
	10/29/2016	32.58	17.00	ND	ND	15.58	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	32.58	18.52	ND	ND	14.06	ND<0.5	1 J	**680**	**110**	791 J	ND<0.5	NS	NS	
	4/18/2017	32.58	18.17	ND	ND	14.41	ND<0.5	0.8 J	**580**	**85**	665.8 J	ND<0.5	NS	NS	
	7/28/2017	32.58	17.70	ND	ND	14.88	ND<0.5	0.8 J	**410**	**150**	560.8 J	ND<0.5	NS	NS	
	10/10/2017	32.58	18.90	ND	ND	13.68	ND<0.5	1	**790**	**240**	1,031	ND<0.5	NS	NS	
	1/16/2018	32.58	18.03	ND	ND	14.55	ND<0.5	0.7 J	**490**	**160**	650.7 J	ND<0.5	NS	NS	
	4/4/2018	32.58	17.81	ND	ND	14.77	ND<0.5	ND<0.5	**370**	**120**	490	ND<0.5	NS	NS	
	7/2/2018	32.58	17.30	ND	ND	15.28	ND<0.5	ND<0.5	**460**	**120**	580	ND<0.5	NS	NS	
	10/31/2018	32.58	17.81	ND	ND	14.77	0.3 J	0.7 J	**640**	**130**	771 J	ND<0.2	NS	NS	
	1/17/2019	32.58	17.71	ND	ND	14.87	0.3 J	0.4 J	**280**	**27**	308 J	ND<0.2	NS	NS	
	4/1/2019	32.58	17.42	ND	ND	15.16	ND<0.2	ND<0.2	**46**	**20**	66	ND<0.2			
	7/19/2019	32.58	17.39	ND	ND	15.19	ND<0.2	ND<0.2	ND<0.4	**9**	9	ND<0.2	NS	NS	
	10/28/2019	32.58	16.95	ND	ND	15.63	ND<0.2	ND<0.2	5	3 J	8 J	ND<0.2	NS	NS	
MW-3	4/22/2010	33.12	18.99	ND	ND	14.13	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.87	
	7/16/2010	33.12	19.07	ND	ND	14.05	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.55	
	10/22/2010	33.12	19.15	ND	ND	13.97	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	0.92	
	1/19/2011	33.12	19.33	ND	ND	13.79	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	ND<0.5	ND<200	NS	
	4/12/2011	33.12	19.08	ND	ND	14.04	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	7/29/2011	33.12	19.14	ND	ND	13.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	33.12	17.87	ND	ND	15.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	33.12	17.74	ND	ND	15.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/16/2012	33.12	18.52	ND	ND	14.60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/12/2012	33.12	18.64	ND	ND	14.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	33.12	18.65	ND	ND	14.47	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	33.12	18.81	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	33.12	18.90	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	1 J	1	ND<0.5	NS	NS	
	7/19/2013	33.12	18.68	ND	ND	14.44	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	33.12	18.93	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	33.12	18.97	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/2/2014	33.12	18.83	ND	ND	14.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	33.12	18.59	ND	ND	14.53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.12	18.75	ND	ND	14.37	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.12	18.66	ND	ND	14.46	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	33.12	18.61	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-3 (continued)	7/1/2015	33.12	18.50	ND	ND	14.62	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.12	18.81	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.12	18.85	ND	ND	14.27	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/11/2016	33.12	18.80	ND	ND	14.32	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.12	18.88	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5 J	ND<0.5	NS	NS	
	10/29/2016	33.12	19.95	ND	ND	13.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.12	18.95	ND	ND	14.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	33.12	18.55	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.12	18.14	ND	ND	14.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	Could not access; parked car over well.
	10/10/2017	33.12	18.87	ND	ND	14.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.12	18.42	ND	ND	14.70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2018	33.12	18.18	ND	ND	14.94	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/2/2018	33.12	18.28	ND	ND	14.84	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/31/2018	33.12	18.18	ND	ND	14.94	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	1/17/2019	33.12	18.27	ND	ND	14.85	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	4/1/2019	33.12	17.89	ND	ND	15.23	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2			
	7/19/2019	33.12	17.73	ND	ND	15.39	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	10/28/2019	33.12	17.43	ND	ND	15.69	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
MW-4	4/22/2010	32.47	18.36	ND	ND	14.11	ND<1.0	ND<1.0	ND<1.0	0.45 J	0.45	ND<1.0	ND<100	3.29	
	7/16/2010	32.47	18.48	ND	ND	13.99	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.58	
	10/22/2010	32.47	18.55	ND	ND	13.92	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.57	
	1/19/2011	32.47	18.70	ND	ND	13.77	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5	ND<0.5	ND<200	NS	
	4/12/2011	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.
	7/29/2011	32.47	18.15	ND	ND	14.32	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	32.47	16.90	ND	ND	15.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	32.47	17.11	ND	ND	15.36	ND<0.5	ND<0.5	ND<0.5	1 J	1 J	ND<0.5	NS	NS	
	4/16/2012	32.47	17.90	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/12/2012	32.47	18.03	ND	ND	14.44	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	32.47	18.02	ND	ND	14.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	32.47	18.20	ND	ND	14.27	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	32.47	18.25	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/19/2013	32.47	18.06	ND	ND	14.41	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	32.47	17.95	ND	ND	14.52	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not locate. Possibly destroyed.
	4/2/2014	32.47	17.83	ND	ND	14.64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	32.47	17.57	ND	ND	14.90	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	ND<0.5	NS	NS	
	10/29/2014	32.47	17.81	ND	ND	14.66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	32.47	17.68	ND	ND	14.79	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	32.47	17.54	ND	ND	14.93	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	32.47	17.48	ND	ND	14.99	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	32.47	17.83	ND	ND	14.64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	32.47	17.87	ND	ND	14.60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/11/2016	32.47	17.79	ND	ND	14.68	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	32.47	18.00	ND	ND	14.47	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.
	1/5/2017	32.47	NM	NA	NA	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on well, could not move
	4/18/2017	32.47	17.58	ND	ND	14.89	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	32.47	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/10/2017	32.47	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.
	1/16/2018	32.47	17.43	ND	ND	15.04	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	

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Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-4 (continued)	4/4/2018	32.47	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on well, could not move
	7/2/2018	32.47	17.29	ND	ND	15.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/31/2018	32.47	17.18	ND	ND	15.29	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	1/17/2019	32.47	17.04	ND	ND	15.43	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	4/1/2019	32.47	16.89	ND	ND	15.58	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2			
	7/19/2019	32.47	17.70	ND	ND	14.77	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	10/28/2019	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not locate.
MW-5	4/22/2010	33.80	19.65	ND	ND	14.15	ND<1.0	0.32 J	ND<1.0	ND<1.0	0.32	ND<1.0	ND<100	4.42	
	7/16/2010	33.80	19.71	ND	ND	14.09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	3.42	
	10/22/2010	33.80	19.78	ND	ND	14.02	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.72	
	1/19/2011	33.80	19.98	ND	ND	13.82	ND<0.5	**7**	2	**12**	21	ND<0.5	ND<200	3.15	
	4/12/2011	33.80	19.69	ND	ND	14.11	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	7/29/2011	33.80	19.79	ND	ND	14.01	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	33.80	18.51	ND	ND	15.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	33.80	18.40	ND	ND	15.40	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/16/2012	33.80	19.17	ND	ND	14.63	ND<0.5	0.7 J	ND<0.5	ND<0.5	0.70	ND<0.5	NS	NS	
	7/12/2012	33.80	19.31	ND	ND	14.49	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	33.80	19.29	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	33.80	19.47	ND	ND	14.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	33.80	19.49	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/19/2013	33.80	19.32	ND	ND	14.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	33.80	19.59	ND	ND	14.21	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	33.80	19.61	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/2/2014	33.80	19.47	ND	ND	14.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	33.80	19.21	ND	ND	14.59	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.80	19.42	ND	ND	14.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.80	19.29	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	33.80	19.25	ND	ND	14.55	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	33.80	19.15	ND	ND	14.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.80	19.45	ND	ND	14.35	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.80	19.52	ND	ND	14.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/11/2016	33.80	19.43	ND	ND	14.37	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.80	19.51	ND	ND	14.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	33.80	19.65	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.80	19.58	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/18/2017	33.80	19.19	ND	ND	14.61	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.80	18.81	ND	ND	14.99	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/10/2017	33.80	19.55	ND	ND	14.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.80	18.06	ND	ND	15.74	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2018	33.80	18.83	ND	ND	14.97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/2/2018	33.80	18.94	ND	ND	14.86	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/31/2018	33.8	18.84	ND	ND	14.96	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	1/17/2019	33.80	18.67	ND	ND	15.13	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	4/1/2019	33.80	18.49	ND	ND	15.31	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2			
	7/19/2019	33.80	18.34	ND	ND	15.46	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	10/28/2019	33.80	18.06	ND	ND	15.74	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
MW-6	4/22/2010	33.26	19.25	ND	ND	14.01	**1.6**	0.49 J	**17**	**108**	127	2.1	ND<100	4.02	
	7/16/2010	33.26	19.26	ND	ND	14.00	1	ND<1.0	**10.8**	**68.5**	80.3	1	ND<100	3.11	
	10/22/2010	33.26	19.35	ND	ND	13.91	0.98 J	0.34 J	**11.3**	**65.5**	78.1	2.1	ND<100	2.97	
	1/19/2011	33.26	19.56	ND	ND	13.70	1	ND<0.5	**23**	**150**	174	0.8 J	ND<200	NS	
	4/12/2011	33.26	19.30	ND	ND	13.96	**4**	ND<0.5	**48**	**260**	312	ND<0.5	ND<200	NS	
	7/29/2011	33.26	19.41	ND	ND	13.85	**4**	0.8 J	**73**	**440**	518	3	ND<200	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-6 (Continued)	10/25/2011	33.26	18.12	ND	ND	15.14	**4**	ND<0.5	**63**	**410**	477	8	NS	NS	
	1/12/2012	33.26	17.99	ND	ND	15.27	**4**	0.7 J	**87**	**460**	552	5	NS	NS	
	4/16/2012	33.26	18.79	ND	ND	14.47	**2**	0.6 J	**42**	**250**	295	3	NS	NS	
	7/12/2012	33.26	18.90	ND	ND	14.36	**2**	ND<0.5	**29**	**160**	191	3	NS	NS	
	10/2/2012	33.26	18.88	ND	ND	14.38	**3**	3	**66**	**340**	412	3	NS	NS	
	1/9/2013	33.26	19.06	ND	ND	14.20	1	ND<0.5	**28**	**160**	189	1	NS	NS	
	4/4/2013	33.26	19.12	ND	ND	14.14	1	ND<0.5	**27**	**150**	178	2	NS	NS	
	7/19/2013	33.26	18.93	ND	ND	14.33	1	ND<0.5	**22**	**75**	98	2	NS	NS	
	10/15/2013	33.26	19.19	ND	ND	14.07	1	ND<0.5	**33**	**120**	154	2	NS	NS	
	1/16/2014	33.26	19.21	ND	ND	14.05	1	ND<0.5	**25**	**110**	136	2	NS	NS	
	4/2/2014	33.26	19.05	ND	ND	14.21	1	ND<0.5	**20**	**89**	110	1	NS	NS	
	7/9/2014	33.26	18.72	ND	ND	14.54	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.26	19.00	ND	ND	14.26	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.26	18.90	ND	ND	14.36	ND<0.5	ND<0.5	ND<0.5	2	2	ND<0.5	NS	NS	
	4/1/2015	33.26	18.96	ND	ND	14.30	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	33.26	18.69	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.26	19.06	ND	ND	14.20	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.26	19.04	ND	ND	14.22	ND<0.5	ND<0.5	2	9	11	ND<0.5	NS	NS	
	4/11/2016	33.26	19.04	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.26	19.11	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	33.26	19.09	ND	ND	14.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.26	19.19	ND	ND	14.07	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/18/2017	33.26	18.81	ND	ND	14.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.26	13.39	ND	ND	19.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/10/2017	33.26	19.21	ND	ND	14.05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.26	18.87	ND	ND	14.39	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2018	33.26	18.40	ND	ND	14.86	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5 J	ND<0.5	NS	NS	
	7/2/2018	33.26	18.49	ND	ND	14.77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/31/2018	33.26	18.40	ND	ND	14.86	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	1/17/2019	33.26	18.28	ND	ND	14.98	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	4/1/2019	33.26	18.09	ND	ND	15.17	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2			
	7/19/2019	33.26	17.98	ND	ND	15.28	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
	10/28/2019	33.26	17.24	ND	ND	16.02	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NS	NS	
MW-7	4/22/2010	31.84	17.90	ND	ND	13.94	**1,120**	**16,800**	**4,830**	**23,800**	46,550	**19.9 J**	ND<5,000	2.72	
	7/16/2010	31.84	18.00	ND	ND	13.84	**1,980**	**21,000**	**5,150**	**31,800**	59,930	ND<200	ND<100	2.83	
	10/22/2010	31.84	18.06	ND	ND	13.78	**1,530**	**27,600**	**5,520**	**29,200**	63,850	ND<100	ND<100	1.16	
	1/19/2011	31.84	18.23	ND	ND	13.61	**1,100**	**15,000**	**3,900**	**24,000**	44,000	ND<10	ND<200	0.37	
	4/12/2011	31.84	18.51	ND	ND	13.33	**120**	**25,000**	**6,700**	**30,000**	61,820	ND<10	ND<200	NS	
	7/29/2011	31.84	18.05	ND	ND	13.79	**1,200**	**30,000**	**5,600**	**31,000**	67,800	ND<10	ND<200	NS	
	10/25/2011	31.84	16.80	ND	ND	15.04	**280**	**4,000**	**3,000**	**18,000**	25,280	**14**	NS	NS	
	1/12/2012	31.84	16.67	ND	ND	15.17	**250**	**5,900**	**3,700**	**23,000**	32,850	**11 J**	NS	NS	
	4/16/2012	31.84	17.47	ND	ND	14.37	**210**	**5,600**	**4,000**	**26,000**	35,810	ND<0.5	NS	NS	
	7/12/2012	31.84	17.60	ND	ND	14.24	**180**	**6,800**	**4,300**	**26,000**	37,280	ND<25	NS	NS	
	10/2/2012	31.84	17.59	ND	ND	14.25	**230**	**10,000**	**5,900**	**34,000**	50,130	ND<5	NS	NS	
	1/9/2013	31.84	17.70	ND	ND	14.14	**140**	**5,800**	**4,200**	**26,000**	36,140	ND<5	NS	NS	
	4/4/2013	31.84	17.80	ND	ND	14.04	**150**	**7,900**	**5,300**	**27,000**	40,350	ND<3	NS	NS	
	7/19/2013	31.84	17.63	ND	ND	14.21	**87**	**1,500**	**4,000**	**21,000**	26,587	ND<5	NS	NS	
	10/15/2013	31.84	17.88	ND	ND	13.96	**93**	**1,000**	**3,100**	**18,000**	22,193	ND<5	NS	NS	
	1/16/2014	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/2/2014	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	
MW-7 (Continued)	7/9/2014	31.84	17.66	ND	ND	14.18	**3**	**140**	**450**	**2,800**	3,393	1 J	NS	NS	
	10/29/2014	31.84	17.91	ND	ND	13.93	**4**	**61**	**190**	**560**	815	ND<0.5	NS	NS	
	1/20/2015	31.84	17.91	ND	ND	13.93	**16**	**280**	**310**	**2,000**	2,606	ND<3	NS	NS	
	4/1/2015	31.84	17.76	ND	ND	14.08	**2**	**37**	**16**	**440**	495	ND<0.5	NS	NS	
	7/1/2015	31.84	17.12	ND	ND	14.72	ND<0.5	ND<0.5	3	**7**	10	ND<0.5	NS	NS	
	10/15/2015	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	1/7/2016	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/11/2016	31.84	2.80	ND	ND	29.04	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6 J	ND<0.5	NS	NS	
	7/26/2016	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	10/29/2016	31.84	11.58	ND	ND	20.26	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	31.84	NM	ND	ND	NA	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/18/2017	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	7/28/2017	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	10/10/2017	31.84	11.62	ND	ND	20.22	ND<5	**1,900**	**2,500**	**13,000**	17,400	ND<5	NS	NS	
	1/16/2018	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/4/2018	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	7/2/2018	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	10/31/2018	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	1/17/2019	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/1/2019	31.84	17.07	ND	ND	14.77	ND<10	**1,900**	**2,000**	**14,000**	17,900	ND<10			
	7/19/2019	31.84	16.92	ND	ND	14.92	ND<10	**90**	**630**	**4,500**	5,220	ND<10	NS	NS	
	10/28/2019	31.84	16.61	ND	ND	15.23	ND<0.2	0.4 J	2	**15**	17.4 J	ND<0.2	NS	NS	
MW-8	4/22/2010	32.36	18.52	18.4	0.12	13.93	NS	NS	NS	NS	NS	NS	NS	NS	LPH Present, not sampled
	7/16/2010	32.36	18.50	ND	ND	13.86	**226 J**	**34,600**	**7,370**	**32,800**	74,996	ND<250	ND<100	2.73	
	10/22/2010	32.36	18.56	ND	ND	13.80	**156**	**23,900**	**7,670**	**29,100**	60,826	ND<100	ND<100	2.82	
	1/19/2011	32.36	18.75	ND	ND	13.61	**120**	**20,000**	**6,100**	**33,000**	59,220	ND<13	ND<200	NS	
	4/12/2011	32.36	18.03	ND	ND	14.33	**1,200**	**20,000**	**3,500**	**32,000**	56,700	ND<10	ND<200	NS	
	7/29/2011	32.36	18.56	ND	ND	13.80	**89**	**25,000**	**7,000**	**30,000**	62,089	ND<10	ND<200	NS	
	10/25/2011	32.36	17.31	ND	ND	15.05	**120**	**26,000**	**7,300**	**31,000**	64,420	ND<25	NS	NS	
	1/12/2012	32.36	17.16	ND	ND	15.20	**110**	**25,000**	**6,900**	**31,000**	63,010	ND<10	NS	NS	
	4/16/2012	32.36	17.96	ND	ND	14.40	**80**	**25,000**	**6,800**	**27,000**	58,880	ND<25	NS	NS	
	7/12/2012	32.36	18.08	ND	ND	14.28	**82 J**	**24,000**	**6,100**	**27,000**	57,182	ND<50	NS	NS	
	10/2/2012	32.36	18.09	ND	ND	14.27	**53**	**20,000**	**6,000**	**28,000**	54,053	ND<5	NS	NS	
	1/9/2013	32.36	18.26	ND	ND	14.10	**53**	**23,000**	**5,500**	**25,000**	53,553	ND<25	NS	NS	
	4/4/2013	32.36	18.30	ND	ND	14.06	**40**	**22,000**	**6,100**	**25,000**	53,140	ND<5	NS	NS	
	7/19/2013	32.36	18.12	ND	ND	14.24	**31**	**22,000**	**6,000**	**25,000**	53,031	ND<5	NS	NS	
	10/15/2013	32.36	19.37	ND	ND	12.99	**30 J**	**25,000**	**6,400**	**26,000**	57,430	ND<25	NS	NS	
	1/16/2014	32.36	19.41	ND	ND	12.95	ND<25	**19,000**	**5,600**	**20,000**	44,600	ND<25	NS	NS	
	4/2/2014	32.36	18.26	ND	ND	14.10	ND<25	**24,000**	**6,700**	**26,000**	56,700	ND<25	NS	NS	
	7/9/2014	32.36	17.94	ND	ND	14.42	ND<25	**12,000**	**3,500**	**25,000**	40,500	ND<25	NS	NS	
	10/29/2014	32.36	18.07	ND	ND	14.29	ND<5	**8,500**	**1,100**	**25,000**	34,600	ND<5	NS	NS	
	1/20/2015	32.36	18.09	ND	ND	14.27	ND<25	**14,000**	**5,100**	**23,000**	42,100	ND<25	NS	NS	
	4/1/2015	32.36	17.98	ND	ND	14.38	ND<3	**5,200**	**990**	**17,000**	23,190	ND<3	NS	NS	
	7/1/2015	32.36	17.83	ND	ND	14.53	ND<10	**5,400**	**2,300**	**18,000**	25,700	ND<10	NS	NS	
	10/15/2015	32.36	18.19	ND	ND	14.17	ND<5	**2,900**	**1,600**	**12,000**	16,500	ND<5	NS	NS	
	1/7/2016	32.36	18.24	ND	ND	14.12	ND<10	**5,400**	**3,200**	**15,000**	23,600	ND<10	NS	NS	
	4/11/2016	32.36	18.19	ND	ND	14.17	ND<5	**1,200**	**2,500**	**10,000**	13,700	ND<5	NS	NS	
	7/26/2016	32.36	18.26	ND	ND	14.10	ND<5	**3,400**	**1,700**	**14,000**	19,100	ND<5	NS	NS	ORC sock installed
	10/29/2016	32.36	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	11/22/2016	32.36	NM	NM	NM	NM	ND<5	**2,900**	**910**	**9,400**	13,210	ND<5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-8 (Continued)	1/5/2017	32.36	18.45	ND	ND	13.91	ND<10	**4,000**	**850**	**14,000**	18,850	ND<10	NS	NS	
	4/18/2017	32.36	17.99	ND	ND	14.37	ND<5	**2,100**	**650**	**13,000**	15,750	ND<5	NS	NS	
	7/28/2017	32.36	17.31	ND	ND	15.05	ND<0.5	3	3	**28**	34	ND<0.5	NS	NS	
	10/10/2017	32.36	18.35	ND	ND	14.01	ND<0.5	ND<0.5	**7**	1	8	ND<0.5	NS	NS	ORC sock removed September 28, 2017
	1/16/2018	32.36	17.89	ND	ND	14.47	ND<10	**3,100**	**3,400**	**12,000**	18,500	ND<10	NS	NS	
	4/4/2018	32.36	17.80	ND	ND	14.56	ND<3	**2,700**	**4,000**	**16,000**	22,700	ND<3	NS	NS	
	7/2/2018	32.36	17.73	ND	ND	14.63	ND<1	**1,200**	**4,200 E**	**13,000 E**	18,400 E	ND<1	NS	NS	
	10/31/2018	32.36	17.60	ND	ND	14.76	ND<1	560	**4,100**	**11,000**	15,660	ND<1	NS	NS	
	1/17/2019	32.36	17.58	ND	ND	14.78	ND<1	5 J	**690**	**1,500**	2,195 J	ND<1	NS	NS	
	4/1/2019	32.36	17.23	ND	ND	15.13	ND<2	**73**	**470**	**2,900**	3,443	ND<2			
	7/19/2019	32.36	17.15	ND	ND	15.21	ND<2	**93**	**200**	**2,300**	2,593	ND<2	NS	8.23	
	10/28/2019	32.36	16.57	ND	ND	15.79	ND<1	**230**	**240**	**2,900**	3,370	ND<1	NS	NS	
MW-9	7/29/2011	31.92	18.50	ND	ND	13.42	0.6 J	1 J	ND<0.8	3 J	5	ND<0.5	ND<200	NS	
	10/25/2011	31.92	17.45	ND	ND	14.47	0.7 J	2	5	**8**	15.7	ND<0.5	NS	NS	
	1/12/2012	31.92	17.33	ND	ND	14.59	1	2	4	**9**	16	ND<0.5	NS	NS	
	4/16/2012	31.92	18.10	ND	ND	13.82	**2**	3	4	**17**	26	ND<0.5	NS	NS	
	7/12/2012	31.92	18.18	ND	ND	13.74	**2**	3	1	**14**	20	ND<0.5	NS	NS	
	10/2/2012	31.92	18.17	ND	ND	13.75	1	2	0.8 J	**11**	14.8	ND<0.5	NS	NS	
	1/9/2013	31.92	18.23	ND	ND	13.69	**2**	4	1	**15**	22	ND<0.5	NS	NS	
	4/4/2013	31.92	18.31	ND	ND	13.61	**2**	4	1	**15**	22	ND<0.5	NS	NS	
	7/19/2013	31.92	18.17	ND	ND	13.75	**3**	5	2	**20**	30	ND<0.5	NS	NS	
	10/15/2013	31.92	18.37	ND	ND	13.55	1	4	1	**15**	21	ND<0.5	NS	NS	
	1/16/2014	31.92	18.39	ND	ND	13.53	1	3	1	**15**	20	ND<0.5	NS	NS	
	4/2/2014	31.92	18.27	ND	ND	13.65	2 J	4	1 J	**16**	23	ND<1	NS	NS	
	7/9/2014	31.92	18.13	ND	ND	13.79	ND<0.5	0.8 J	1 J	**6**	7.8	ND<0.5	NS	NS	
	10/29/2014	31.92	18.21	ND	ND	13.71	0.6 J	0.8 J	0.7 J	5	7.1	ND<0.5	NS	NS	
	1/20/2015	31.92	18.12	ND	ND	13.80	0.7 J	1	0.6 J	5	7.3	ND<0.5	NS	NS	
	4/1/2015	31.92	18.16	ND	ND	13.76	0.8 J	2	0.5 J	7	10.3	ND<0.5	NS	NS	
	7/1/2015	31.92	18.02	ND	ND	13.90	ND<0.5	0.8 J	1	5	6.8 J	ND<0.5	NS	NS	
	10/15/2015	31.92	18.27	ND	ND	13.65	ND<0.5	0.9 J	1	5	6.9 J	ND<0.5	NS	NS	
	1/7/2016	31.92	18.23	ND	ND	13.69	0.6 J	1	2	**8**	11.6 J	ND<0.5	NS	NS	
	4/11/2016	31.92	18.23	ND	ND	13.69	0.8 J	2	1	**8**	11.8 J	ND<0.5	NS	NS	
	7/26/2016	31.92	18.27	ND	ND	13.65	ND<0.5	0.8 J	0.6 J	5	6.4 J	ND<0.5	NS	NS	
	10/29/2016	31.92	18.34	ND	ND	13.58	ND<0.5	0.8 J	ND<0.5	2	2.8 J	ND<0.5	NS	NS	
	1/5/2017	31.92	18.36	ND	ND	13.56	ND<0.5	0.7 J	ND<0.5	2	2.7 J	ND<0.5	NS	NS	
	4/18/2017	31.92	18.07	ND	ND	13.85	ND<0.5	1	ND<0.5	4	5	ND<0.5	NS	NS	
	7/28/2017	31.92	17.49	ND	ND	14.43	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6 J	ND<0.5	NS	NS	
	10/10/2017	31.92	18.29	ND	ND	13.63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	31.92	17.95	ND	ND	13.97	0.6 J	1	0.6 J	5	7.2 J	ND<0.5	NS	NS	
	4/4/2018	31.92	17.74	ND	ND	14.18	ND<0.5	1	0.8 J	5	6.8 J	ND<0.5	NS	NS	
	7/2/2018	31.92	17.66	ND	ND	14.26	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/31/2018	31.92	17.75	ND	ND	14.17	ND<0.2	0.4 J	ND<0.4	1 J	1.4 J	ND<0.2	NS	NS	
	1/17/2019	31.92	17.62	ND	ND	14.30	ND<0.2	0.3 J	ND<0.4	ND<1	0.3 J	ND<0.2	NS	NS	
	4/1/2019	31.92	18.57	ND	ND	13.35	0.4 J	1	0.8 J	**7**	9.2 J	ND<0.2			
	7/19/2019	31.92	17.37	ND	ND	14.55	0.3 J	0.9 J	0.7 J	4 J	5.9 J	ND<0.2	NS	NS	
	10/28/2019	31.92	17.19	ND	ND	14.73	0.6 J	2	2	**12**	16.6 J	ND<0.2	NS	NS	
MW-10	7/29/2011	31.83	18.68	ND	ND	13.15	**680**	**71**	**9**	**174 J**	934	10	ND<200	NS	
	10/25/2011	31.83	17.82	ND	ND	14.01	**360**	**37**	3	**51**	451	**12**	NS	NS	
	1/12/2012	31.83	17.72	ND	ND	14.11	**350**	**37**	5	**64**	456	5	NS	NS	
	4/16/2012	31.83	18.36	ND	ND	13.47	**550**	**170**	**31**	**690**	1,441	5 J	NS	NS	
	7/12/2012	31.83	17.43	ND	ND	14.40	**600**	**140**	**12**	**810**	1,562	5	NS	NS	
	10/2/2012	31.83	18.46	ND	ND	13.37	**480**	**110**	5	**570**	1,165	3 J	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-10 (Continued)	1/9/2013	31.83	18.51	ND	ND	13.32	**400**	**60**	3 J	**310**	773	3 J	NS	NS	
	4/4/2013	31.83	18.57	ND	ND	13.26	**380**	**51**	4	**110**	545	3	NS	NS	
	7/19/2013	31.83	18.48	ND	ND	13.35	**230**	**33**	3 J	**59**	325	ND<3	NS	NS	
	10/15/2013	31.83	18.62	ND	ND	13.21	**200**	**53**	2	**48**	303	2	NS	NS	
	1/16/2014	31.83	18.64	ND	ND	13.19	**170**	**26**	ND<3	**42**	238	ND<3	NS	NS	
	4/2/2014	31.83	18.52	ND	ND	13.31	**33**	**36**	**75**	**80**	224	10	NS	NS	
	7/9/2014	31.83	18.40	ND	ND	13.43	**110**	**45**	4	**72**	231	2	NS	NS	
	10/29/2014	31.83	18.52	ND	ND	13.31	**93**	**24**	**12**	**110**	239	ND<3	NS	NS	
	1/20/2015	31.83	18.44	ND	ND	13.39	**97**	**29**	4	**57**	187	2	NS	NS	
	4/1/2015	31.83	18.43	ND	ND	13.40	**80**	**29**	3 J	**52**	164	ND<3	NS	NS	
	7/1/2015	31.83	18.31	ND	ND	13.52	**92**	**39**	**7**	**75**	213	0.9 J	NS	NS	
	10/15/2015	31.83	18.54	ND	ND	13.29	**71**	**28**	4 J	**47**	150 J	ND<3	NS	NS	
	1/7/2016	31.83	18.52	ND	ND	13.31	**55**	**35**	5 J	**42**	137 J	ND<3	NS	NS	
	4/11/2016	31.83	18.45	ND	ND	13.38	**35**	**30**	5 J	**39**	109 J	ND<3	NS	NS	
	7/26/2016	31.83	18.50	ND	ND	13.33	**21**	**40**	5	**40**	106	ND<0.5	NS	NS	
	10/29/2016	31.83	18.61	ND	ND	13.22	**12**	**28**	**9**	**27**	76	ND<3	NS	NS	
	1/5/2017	31.83	18.65	ND	ND	13.18	**12**	**37**	**6**	**34**	89	ND<3	NS	NS	
	4/18/2017	31.83	18.36	ND	ND	13.47	**12**	**46**	**6**	**42**	106	ND<3	NS	NS	
	7/28/2017	31.83	18.05	ND	ND	13.78	**6**	**38**	**8**	**43**	95	ND<3	NS	NS	
	10/10/2017	31.83	18.83	ND	ND	13.00	**5**	**36**	5	**38**	84	ND<0.5	NS	NS	
	1/16/2018	31.83	18.23	ND	ND	13.60	**5**	**42**	**7**	**36**	90	ND<0.5	NS	NS	
	4/4/2018	31.83	18.03	ND	ND	13.80	**5**	**30**	**6**	**40**	81	ND<3	NS	NS	
	7/2/2018	31.83	18.13	ND	ND	13.70	**5**	**29**	4	**33**	71	ND<0.5	NS	NS	
	10/31/2018	31.83	18.06	ND	ND	13.77	7	31	**17**	**38**	93	ND<0.2	NS	NS	
	1/17/2019	31.83	18.11	ND	ND	13.72	**11**	**32**	4	**33**	80	ND<0.2	NS	NS	
	4/1/2019	31.83	17.83	ND	ND	14.00	**11**	**30**	5	**28**	74	ND<0.2			
	7/19/2019	31.83	17.83	ND	ND	14.00	**5**	**36**	**8**	**47**	96	ND<0.2	NS	NS	
	10/28/2019	31.83	17.55	ND	ND	14.28	**4**	**38**	**6**	**54**	102	0.3 J	NS	NS	
MW-11	2/7/2012	31.72	16.87	ND	ND	14.85	**120**	**38**	**69**	**133**	360	**55**	NS	NS	
	4/16/2012	31.72	17.49	ND	ND	14.23	**92**	**94**	**61**	**91**	338	**40**	NS	NS	
	7/12/2012	31.72	17.58	ND	ND	14.14	**94**	**180**	**67**	**100**	441	**42**	NS	NS	
	10/2/2012	31.72	17.58	ND	ND	14.14	**70**	**80**	**57**	**81**	288	**51**	NS	NS	
	1/9/2013	31.72	17.69	ND	ND	14.03	**63**	**48**	**79**	**98**	288	**34**	NS	NS	
	4/4/2013	31.72	17.80	ND	ND	13.92	**61**	**41**	**250**	**200**	552	**26**	NS	NS	
	7/19/2013	31.72	17.58	ND	ND	14.14	**39**	**27**	**290**	**120**	476	**18**	NS	NS	
	10/15/2013	31.72	17.82	ND	ND	13.90	**46**	**38**	**180**	**110**	374	**18**	NS	NS	
	1/16/2014	31.72	17.86	ND	ND	13.86	**33**	**30**	**82**	**77**	222	**12**	NS	NS	
	4/2/2014	31.72	17.70	ND	ND	14.02	**150**	**33**	**3**	**47**	233	2	NS	NS	
	7/9/2014	31.72	17.49	ND	ND	14.23	**33**	**43**	**58**	**91**	225	9	NS	NS	
	10/29/2014	31.72	17.64	ND	ND	14.08	**23**	**31**	**40**	**74**	168	8 J	NS	NS	
	1/20/2015	31.72	17.56	ND	ND	14.16	**28**	**27**	**43**	**60**	158	8	NS	NS	
	4/1/2015	31.72	17.56	ND	ND	14.16	**24**	**18**	**28**	**35**	105	4 J	NS	NS	
	7/1/2015	31.72	17.44	ND	ND	14.28	**31**	**18**	**31**	**46**	126	3	NS	NS	
	10/15/2015	31.72	17.70	ND	ND	14.02	**23**	**12**	**29**	**28**	92	ND<3	NS	NS	
	1/7/2016	31.72	17.74	ND	ND	13.98	**19**	**11**	**26**	**28**	84	ND<3	NS	NS	
	4/11/2016	31.72	17.66	ND	ND	14.06	**14**	**9**	**24**	**25**	72	ND<3	NS	NS	
	7/26/2016	31.72	17.72	ND	ND	14.00	**12**	**17**	**24**	**30**	83	ND<5	NS	NS	
	10/29/2016	31.72	17.76	ND	ND	13.96	**12**	**24**	**21**	**31**	88	ND<3	NS	NS	
	1/5/2017	31.72	17.81	ND	ND	13.91	**11**	**18**	**23**	**29**	81	ND<3	NS	NS	
	4/18/2017	31.72	17.49	ND	ND	14.23	**10**	**11**	**23**	**38**	82	ND<0.5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation (feet)	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-11 (Continued)	7/28/2017	31.72	17.08	ND	ND	14.64	**7**	**11**	**18**	**34**	70	ND<3	NS	NS	
	10/10/2017	31.72	17.61	ND	ND	14.11	**6**	**15**	**26**	**63**	110	ND<0.5	NS	NS	
	1/16/2018	31.72	17.32	ND	ND	14.40	**5**	**12**	**34**	**96**	147	ND<0.5	NS	NS	
	4/4/2018	31.72	17.10	ND	ND	14.62	**4**	**16**	**25**	**54**	99	ND<0.5	NS	NS	
	7/2/2018	31.72	17.25	ND	ND	14.47	**3**	**38**	**38**	**130**	209	ND<0.5	NS	NS	
	10/31/2018	31.72	17.14	ND	ND	14.58	**2**	**31**	**68**	**660 E**	761	ND<0.2	NS	NS	
	1/17/2019	31.72	17.29	ND	ND	14.43	**2 J**	**23**	**70**	**440**	535 J	ND<1	NS	NS	
	4/1/2019	31.72	16.78	ND	ND	14.94	**2**	**17**	**44**	**240**	303	ND<0.2			
	7/19/2019	31.72	16.73	ND	ND	14.99	1	**13**	**35**	**110**	159	ND<0.2	NS	NS	
	10/28/2019	31.72	16.49	ND	ND	15.23	1	**7**	**29**	**35**	72	ND<0.2	NS	NS	

Notes:
~ no standard or guidance value exists
ND<1.0 - Not detected at or above the laboratory reporting limit shown
µg/L - micrograms per liter
Bold Items - Reported concentration detected above the applicable standard or guidance value
BRL - Below laboratory reporting limits
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes
Corrected GW elevation - calculated with following formula:
(top of casing - depth to water) + (hydrocarbon thickness * (hydrocarbon specific gravity))
Depth to Water - measured in feet below land surface from top of casing
GW - Groundwater
Hydrocarbon - liquid-phase hydrocarbon (LPH)
J - Indicates an estimated value
E - The concentration reported are estimated since they exceed thecalibration range of the instrument
mg/L - milligrams per liter
MTBE - Methyl Tertiary-Butyl Ether
N/A - Not applicable
NA - Not analyzed
ND - Not detected
NM - Not monitored
NS - Not sampled
NSVD - Not surveyed to vertical datum
NYSDEC Standards and Guidance Values - New York State Department of Environmental Conservation Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values, June 1998 and Addendum April 2000
Survey data - Monitoring wells surveyed to the Borough of Queens Highway Datum on May 25, 2010.
Total Xylenes for MW-9 and MW-10 calculated by adding results for individual congers (m+p and o) for July 29, 2011 sampling event.

Table 2
AS/SVE Influent Analytical Data
June 1, 2017 through

ExxonMobil 12833
96-27 Queens Blvd
Rego Park, NY

ARCADIS Design & Consultancy for natural and built assets

DATE	HOUR METER READING	DAYS IN MONITORING PERIOD	ACTUAL RUN TIME	PERCENT RUN TIME	AIR FLOW	AIR SPARGE	BTEX				MTBE				TPH			
							CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED	CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED	CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED
	(hr)	(days)		(%)	(scfm)	(Y/N)	(mg/m^3)	(lb/day)	(lb)	(lb)	(mg/m^3)	(lb/day)	(lb)	(lb)	(mg/m^3)	(lb/day)	(lb)	(lb)
5/23/2014	156	NA	NA	NA	321	N	NS	NS	NA	0.0	NS	NS	NA	0.00	NS	NS	NA	NA
5/30/2014	324	7	7	100%	245	N	2.0	0.0	0.3	0.3	0.03	0.001	0.00	0.00	75	1.7	11.6	12
6/6/2014	493	7	7	100%	243	Y	3.4	0.1	0.5	0.8	0.04	0.001	0.01	0.01	2300	50.2	353.1	365
7/2/2014	1,120	26	26	100%	239	Y	16.9	0.4	9.5	10.3	0.04	0.001	0.02	0.03	1100	23.6	617.3	982
8/15/2014	2,165	44	44	100%	242	Y	17.5	0.4	16.6	26.9	0.04	0.001	0.03	0.06	270	5.9	255.7	1238
8/15/2014	2,169	0	0	96%	242	Y	17.5	0.4	0.1	27.0	0.04	0.001	0.00	0.06	270	5.9	1.1	1239
9/26/2014	3,173	42	42	100%	243	Y	6.3	0.1	5.7	32.7	0.04	0.001	0.03	0.10	300	6.5	273.5	1512
10/29/2014	3,962	33	33	100%	232	Y	0.2	0.0	0.1	32.8	0.00	0.000	0.00	0.10	10	0.2	6.8	1519
11/20/2014	4,477	22	21	98%	261	N	0.7	0.0	0.4	33.2	0.00	0.000	0.00	0.10	30	0.7	15.1	1534
12/12/2014	5,011	22	22	100%	254	Y	0.0	0.0	0.0	33.2	0.00	0.000	0.00	0.10	10	0.2	5.1	1539
3/13/2015	5,783	91	32	35%	254	Y	0.2	0.0	0.1	33.3	0.00	0.000	0.00	0.10	10	0.2	7.3	1547
4/7/2015	6,383	25	25	100%	246	Y	0.1	0.0	0.0	33.4	0.00	0.000	0.00	0.10	10	0.2	5.5	1552
5/19/2015	7,200	42	34	81%	269	Y	1.0	0.0	0.8	34.2	0.00	0.000	0.00	0.10	100	2.4	82.3	1634
6/30/2015	7,820	42	26	61%	259	Y	3.0	0.1	1.8	36.0	0.07	0.002	0.04	0.14	82	1.9	49.4	1684
7/31/2015	8,274	31	19	61%	248	Y	2.7	0.1	1.1	37.1	0.01	0.000	0.00	0.15	120	2.7	50.6	1734
8/28/2015	8,382	28	5	16%	251	Y	0.0	0.0	0.0	37.1	0.00	0.000	0.00	0.15	10	0.2	1.0	1735
9/30/2015	9,177	33	33	100%	260	Y	0.8	0.0	0.6	37.7	0.00	0.000	0.00	0.15	10	0.2	7.7	1743
10/8/2015	9,366	8	8	100%	249	Y	0.0	0.0	0.0	37.7	0.00	0.000	0.00	0.15	10	0.2	1.8	1745
11/12/2015	9,868	35	21	60%	263	Y	0.0	0.0	0.0	37.7	0.00	0.000	0.00	0.15	10	0.2	4.9	1750
12/21/2015	10,466	39	25	64%	230	Y	21.6	0.4	11.1	48.8	0.04	0.001	0.02	0.17	280	5.8	144.0	1894
1/11/2016	10,551	21	4	17%	230	Y	1.3	0.0	0.1	48.9	0.00	0.000	0.00	0.17	20	0.4	1.5	1895
2/11/2016	11,029	31	20	64%	223	Y	0.0	0.0	0.0	48.9	0.00	0.000	0.00	0.17	10	0.2	4.0	1899
3/22/2016	11,669	40	27	67%	191	Y	0.6	0.0	0.3	49.2	0.00	0.000	0.00	0.17	10	0.2	4.6	1904
4/20/2016	11,946	29	12	40%	178	Y	0.1	0.0	0.0	49.2	0.00	0.000	0.00	0.17	20	0.3	3.7	1908
5/18/2016	12,618	28	28	100%	178	Y	4.3	0.1	1.9	51.2	0.07	0.001	0.03	0.20	30	0.5	13.4	1921
6/15/2016	13,293	28	28	100%	175	N	0.0	0.0	0.0	51.2	0.00	0.000	0.00	0.20	20	0.3	8.8	1930
7/13/2016	13,794	28	21	75%	176	N	0.2	0.0	0.1	51.2	0.01	0.000	0.00	0.20	20	0.3	6.6	1936
8/10/2016	13,795	28	0	0%	177	N	3.2	0.1	0.0	51.2	0.01	0.000	0.00	0.20	110	1.7	0.1	1937
9/14/2016	14,636	35	35	100%	176	N	0.1	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	11.1	1948
10/12/2016	15,307	28	28	100%	177	N	0.05	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	8.9	1956
11/9/2016	15,978	28	28	99%	179	N	0.04	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	9.0	1965
12/14/2016	16,557	35	24	69%	180	N	0.2	0.0	0.1	51.4	0.00	0.000	0.00	0.20	20	0.3	7.8	1973
6/1/2017	16,856	NA	NA	NA	150	N	65.0	0.9	NA	51.4	0.04	0.000	NA	0.20	1200	16.2	NA	1973
7/12/2017	17,837	41	41	100%	150	Y	0.02	0.000	0.01	51.4	0.00	0.000	0.00	0.20	20	0.3	11.0	1984
8/23/2017	18,841	42	42	100%	150	Y	0.04	0.001	0.02	51.4	0.00	0.000	0.00	0.20	20	0.3	11.3	1996
3/14/2019	18,860	1	1	72%	248	Y	89.7	2.00	1.12	52.5	0.07	0.002	0.00	0.20	760	16.9	9.5	2005
4/10/2019	19,499	27	27	99%	270	Y	1.9	0.05	1.25	53.8	0.00	0.000	0.00	0.20	20	0.5	12.9	2018
5/7/2019	20,147	27	27	100%	270	Y	0.7	0.02	0.48	54.3	0.00	0.000	0.00	0.21	20	0.5	13.1	2031
6/19/2019	21,176	43	43	100%	290	Y	0.5	0.01	0.51	54.8	0.00	0.000	0.00	0.21	20	0.5	22.4	2053
7/17/2019	21,793	28	26	91%	290	Y	0.4	0.01	0.24	55.0	0.00	0.000	0.00	0.21	130	3.4	87.1	2141
10/3/2019	21,992	78	8	11%	280	Y	0.5	0.01	0.10	55.1	0.00	0.000	0.00	0.21	140	3.5	29.2	2170
11/6/2019	22,809	34	34	100%	280	Y	0.3	0.01	0.22	55.3	0.00	0.000	0.00	0.21	20	0.5	17.1	2187
12/18/2019	23,729	42	38	91%	265	Y	1.2	0.03	1.12	56.5	0.00	0.000	0.00	0.21	40	1.0	36.5	2224

Notes:

BTEX - Benzene, toluene, ethylbenzene and xylene
MTBE - Methyl tertiary butyl ether
TPH - Total petroleum hydrocarbons (C1-C10)
NA - Not applicable
NM - Not measured
scfm - Standard cubic feet per minute
mg/m^3 - Milligrams per cubic meter
lb - Pounds
MDL - Method detection limit

Calculations:

Release Rate (lb/hr) = Flow Rate (scfm) x Concentration (mg/m^3)

$$\frac{ft^3}{min} \quad \frac{mg}{m^3} \quad \frac{m^3}{35.31\ ft^3} \quad \frac{lb}{453592\ mg} \quad \frac{60\ min}{hr}$$

For mass calculations, half of the MDL is used for samples which are below the MDL.

Table 3
AS/SVE Effluent Analytical Data
June 1, 2017 through

ExxonMobil 12833
96-27 Queens Blvd
Rego Park, NY

EFFLUENT SAMPLE DATE	AIR FLOW RATE	BENZENE		TOLUENE		ETHYLBENZENE		TOTAL XYLENES		MTBE		TPH	
	scfm	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr
5/23/2014	321	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
5/30/2014	245	0.002	1.47E-06	0.01	0.00	0.00	1.97E-06	0.01	1.01E-05	0.002	1.65E-06	10	0.01
6/6/2014	243	0.003	2.91E-06	0.01	8.54E-06	0.01	8.27E-06	0.02	2.09E-05	0.004	3.27E-06	30	0.03
7/2/2014	239	0.003	2.86E-06	0.03	2.60E-05	0.00	3.89E-06	0.05	4.21E-05	0.004	3.22E-06	69	0.06
8/15/2014	242	0.003	2.90E-06	0.23	2.08E-04	0.04	3.94E-05	0.45	4.08E-04	0.036	3.26E-05	30	0.03
8/15/2014	242	0.032	2.90E-05	0.23	2.08E-04	0.04	3.94E-05	0.45	4.07E-04	0.036	3.26E-05	30	0.03
9/26/2014	243	0.032	2.91E-05	0.04	3.40E-05	0.04	3.95E-05	0.04	3.95E-05	0.036	3.27E-05	42	0.04
10/29/2014	232	0.000	2.78E-07	0.04	3.13E-05	0.02	1.65E-05	0.23	1.99E-04	0.000	3.13E-07	10	0.01
11/20/2014	261	0.001	1.17E-06	0.01	6.45E-06	0.01	9.78E-06	0.02	2.41E-05	0.000	3.52E-07	10	0.01
12/12/2014	254	0.002	1.43E-06	0.01	5.81E-06	0.00	3.71E-06	0.02	1.86E-05	0.000	3.43E-07	10	0.01
3/13/2015	254	0.001	6.65E-07	0.00	7.60E-07	0.00	4.14E-07	0.00	4.14E-07	0.000	3.42E-07	10	0.01
4/7/2015	246	0.002	1.84E-06	0.01	1.10E-05	0.01	1.01E-05	0.03	2.54E-05	0.000	3.31E-07	10	0.01
5/19/2015	269	0.003	3.22E-06	0.00	3.78E-06	0.01	9.77E-06	0.03	3.41E-05	0.000	3.63E-07	10	0.01
6/30/2015	259	0.003	2.91E-06	0.01	9.32E-06	0.02	1.46E-05	0.05	4.47E-05	0.001	6.99E-07	20	0.02
7/31/2015	248	0.006	5.95E-06	0.01	7.16E-06	0.01	8.09E-06	0.01	1.02E-05	0.007	6.69E-06	20	0.02
8/28/2015	251	0.006	6.00E-06	0.01	7.03E-06	0.01	8.16E-06	0.02	1.63E-05	0.007	6.75E-06	20	0.02
9/30/2015	260	0.006	6.22E-06	0.02	2.14E-05	0.02	1.94E-05	0.13	1.29E-04	0.007	7.00E-06	20	0.02
10/8/2015	249	0.006	5.97E-06	0.01	7.00E-06	0.01	8.12E-06	0.02	1.62E-05	0.007	6.72E-06	20	0.02
11/12/2015	263	0.003	2.56E-06	0.02	1.57E-05	0.00	8.56E-07	0.00	3.74E-06	0.007	7.08E-06	20	0.02
12/21/2015	230	0.001	1.12E-06	0.01	1.20E-05	0.05	4.39E-05	0.02	1.87E-05	0.001	6.19E-07	20	0.02
1/11/2016	230	0.002	1.38E-06	0.01	1.12E-05	0.00	1.12E-06	0.01	5.26E-06	0.001	6.21E-07	20	0.02
2/11/2016	223	0.001	6.60E-07	0.00	3.26E-06	0.00	7.27E-07	0.00	7.52E-07	0.001	6.02E-07	20	0.02
3/22/2016	191	0.002	1.07E-06	0.01	5.44E-06	0.00	7.88E-07	0.00	3.22E-06	0.001	5.16E-07	20	0.01
4/20/2016	178	0.002	1.07E-06	0.01	5.33E-06	0.00	1.07E-06	0.01	5.39E-06	0.001	4.80E-07	20	0.01
5/18/2016	178	0.006	3.66E-06	0.03	1.80E-05	0.00	9.32E-07	0.01	4.33E-06	0.001	4.80E-07	20	0.01
6/15/2016	175	0.014	9.18E-06	0.01	4.79E-06	0.00	5.77E-07	0.00	2.43E-06	0.001	4.72E-07	20	0.01
7/13/2016	176	0.018	1.19E-05	0.01	8.58E-06	0.00	2.05E-06	0.01	4.88E-06	0.001	4.75E-07	20	0.01
8/10/2016	177	0.018	1.19E-05	0.02	1.32E-05	0.00	9.91E-07	0.01	4.56E-06	0.001	4.76E-07	20	0.01
9/14/2016	176	0.023	1.52E-05	0.06	3.95E-05	0.01	9.23E-06	0.01	4.61E-06	0.001	5.60E-07	20	0.01
10/12/2016	177	0.011	7.30E-06	0.45	2.99E-04	0.01	5.77E-06	0.02	1.15E-05	0.007	4.78E-06	20	0.01
11/9/2016	179	0.003	1.94E-06	0.15	1.00E-04	0.00	1.14E-06	0.00	2.34E-06	0.001	4.81E-07	20	0.01
12/14/2016	180	0.003	2.02E-06	0.06	3.98E-05	0.00	9.44E-07	0.00	2.29E-06	0.001	4.86E-07	20	0.01
6/1/2017	150	0.000	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.000	0.00E+00	0	0.00
7/12/2017	150	0.020	1.12E-05	0.04	2.36E-05	0.00	7.31E-07	0.02	8.60E-06	0.000	2.02E-07	20	0.01
8/23/2017	150	0.005	2.87E-06	0.02	9.55E-06	0.00	2.44E-07	0.00	1.74E-06	0.000	2.02E-07	20	0.01
3/14/2019	248	0.008	7.71E-06	0.02	1.95E-05	0.01	4.65E-06	0.04	3.44E-05	0.004	3.34E-06	269	0.25
4/10/2019	270	0.004	4.05E-06	0.14	1.42E-04	0.01	5.06E-06	0.02	1.57E-05	0.004	3.64E-06	20	0.02
5/7/2019	270	0.001	1.42E-06	0.21	2.12E-04	0.03	3.34E-05	0.00	4.55E-06	0.001	7.08E-07	20	0.02
6/19/2019	290	0.001	1.52E-06	1.00	1.09E-03	0.16	1.74E-04	0.05	5.70E-05	0.001	7.60E-07	30	0.03
7/17/2019	290	0.002	1.74E-06	0.02	2.61E-05	0.80	8.69E-04	4.74	5.15E-03	0.004	3.91E-06	99	0.11
10/3/2019	280	0.001	9.55E-07	0.02	1.99E-05	0.00	1.47E-06	0.01	7.13E-06	0.000	3.78E-07	20	0.02
11/6/2019	280	0.001	9.96E-07	0.01	9.23E-06	0.00	1.26E-06	0.01	6.19E-06	0.000	3.78E-07	30	0.03
12/18/2019	265	0.002	2.18E-06	0.02	1.89E-05	0.00	4.96E-07	0.00	2.78E-06	0.000	3.57E-07	30	0.03
Discharge Limits (lb/hr)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
BTEX - Benzene, toluene, ethylbenzene and xylene
MTBE - Methyl tertiary butyl ether
TPH - Total petroleum hydrocarbons (C1-C10)
NA - Not applicable
scfm - Standard cubic feet per minute
mg/m^3 - Milligrams per cubic meter
lb - Pounds
MDL - Method detection limit

Calculations:

Release Rate (lb/hr) = Flow Rate (scfm) x Concentration (mg/m^3)

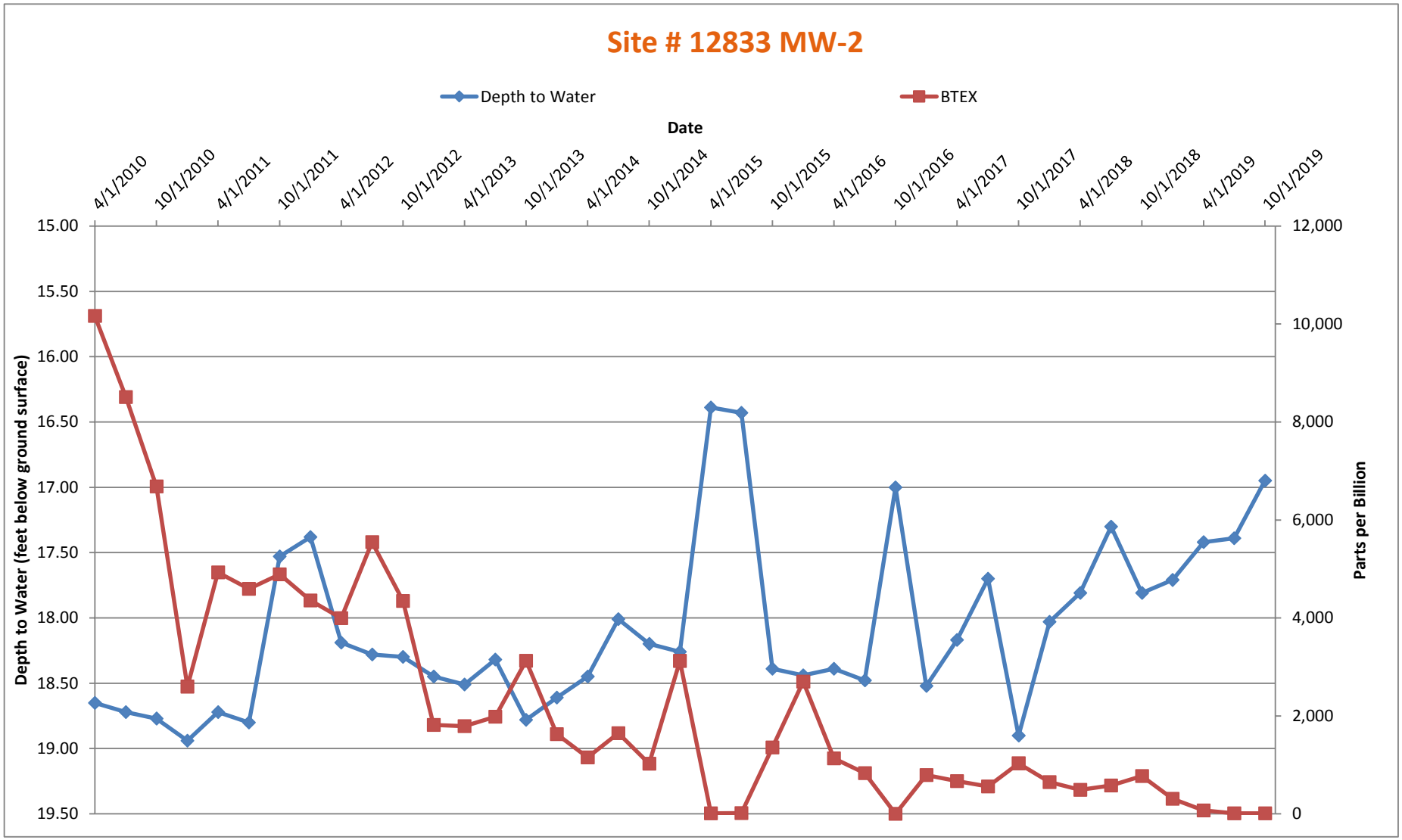
ft^3	mg	m^3	lb	60 min
min	m^3	35.31 ft^3	453592 mg	hr

For mass calculations, half of the MDL is used for samples which are below the MDL

HYDROGRAPHS

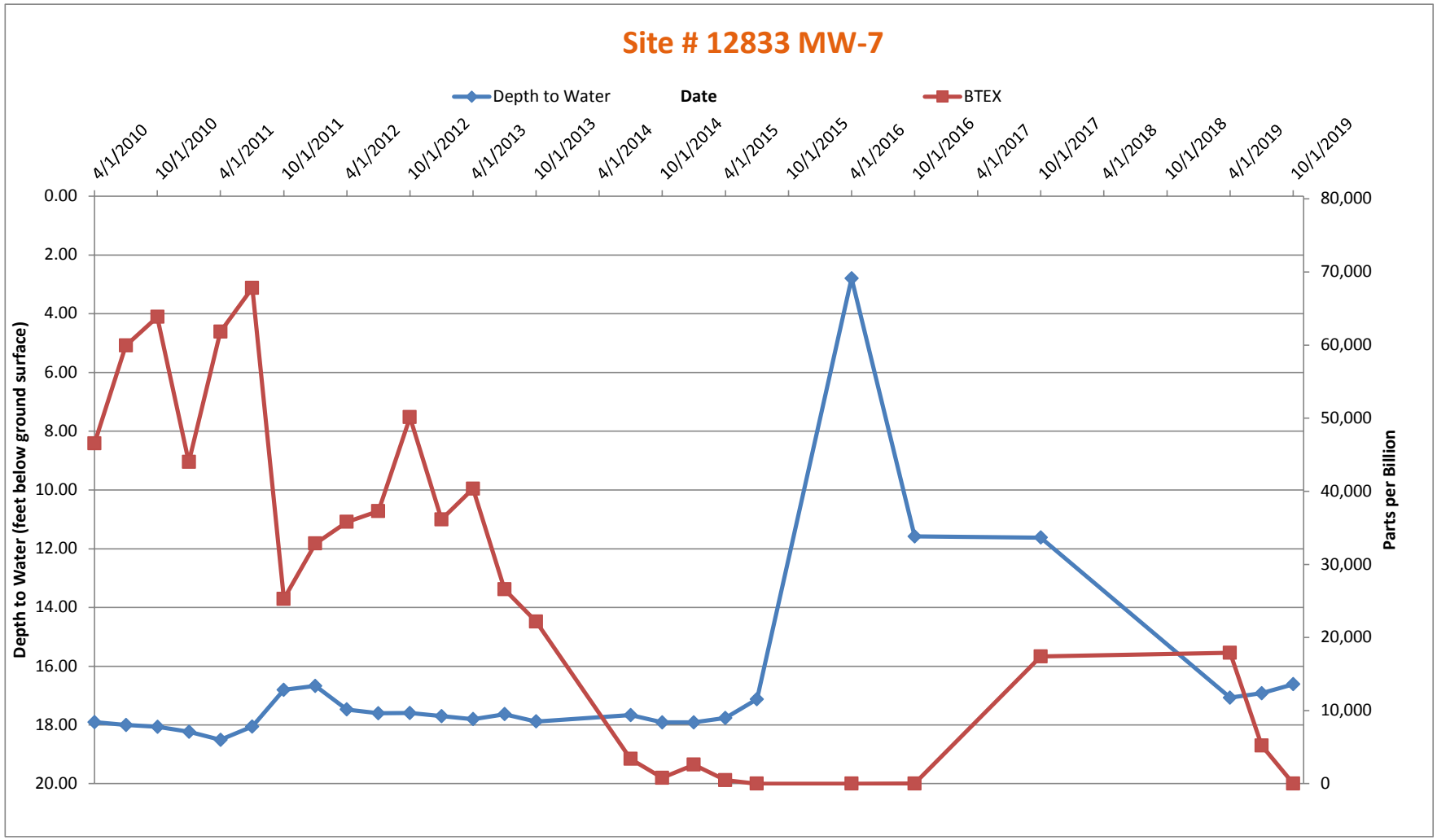
MW-2 Hydrograph
April 22, 2010 through October 28, 2019

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York



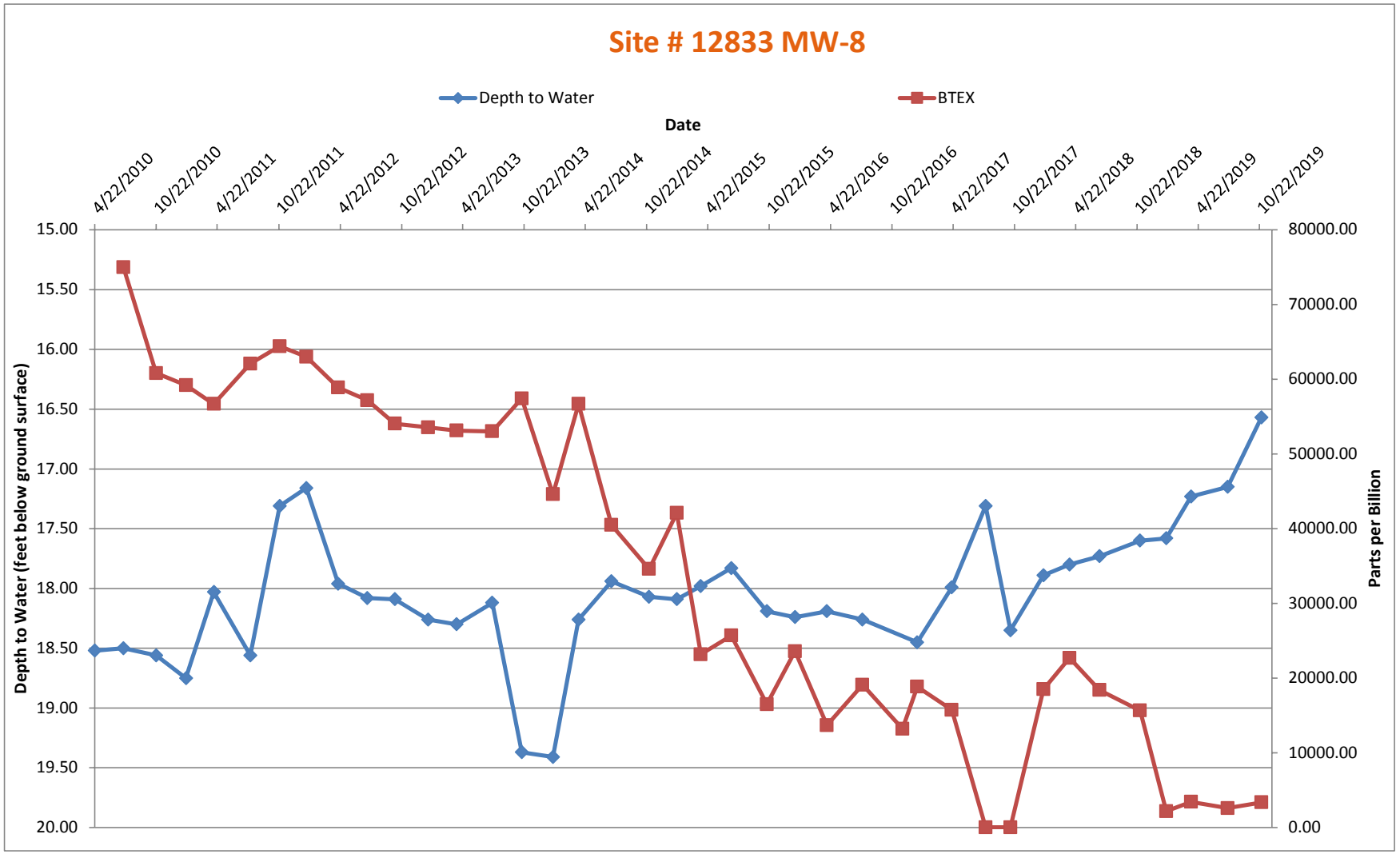
MW-7 Hydrograph
April 22, 2010 through October 28, 2019

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York



MW-8 Hydrograph
April 22, 2010 through October 28, 2019

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York



APPENDIX A

Groundwater Laboratory Analytical Report

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: November 11, 2019 11:52

Project: 12833

Account #: 13045
Group Number: 2072076
PO Number: 30007639.NA000.C
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Chad Colwell
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle
Electronic Copy To	ARCADIS	Attn: Jerome Oertling

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-1 Water	10/28/2019 11:20	1189497
MW-2 Water	10/28/2019 11:32	1189498
MW-3 Water	10/28/2019 12:15	1189499
MW-5 Water	10/28/2019 12:29	1189500
MW-6 Water	10/28/2019 11:45	1189501
MW-7 Water	10/28/2019 11:58	1189502
MW-8 Water	10/28/2019 12:00	1189503
MW-9 Water	10/28/2019 13:00	1189504
MW-10 Water	10/28/2019 12:47	1189505
MW-11 Water	10/28/2019 13:18	1189506
Trip Blank Water	10/28/2019	1189507

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-1 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 11:20

ARCADIS
ELLE Sample #: GW 1189497
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	1	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193121AA	11/08/2019 11:15	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193121AA	11/08/2019 11:14	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-2 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 11:32

ARCADIS
ELLE Sample #: GW 1189498
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	5	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	3 J	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193121AA	11/08/2019 11:39	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193121AA	11/08/2019 11:38	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-3 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 12:15

ARCADIS
ELLE Sample #: GW 1189499
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193121AA	11/08/2019 12:04	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193121AA	11/08/2019 12:03	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 12:29

ARCADIS
ELLE Sample #: GW 1189500
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193121AA	11/08/2019 13:17	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193121AA	11/08/2019 13:16	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-6 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 11:45

ARCADIS
ELLE Sample #: GW 1189501
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193121AA	11/08/2019 13:41	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193121AA	11/08/2019 13:40	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-7 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 11:58

ARCADIS
ELLE Sample #: GW 1189502
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	2	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	0.4 J	0.2	1	1
13130	Xylene (Total)	1330-20-7	15	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 00:15	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 00:14	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-8 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 12:00

ARCADIS
ELLE Sample #: GW 1189503
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 1	1	5	5
13130	Ethylbenzene	100-41-4	240	2	5	5
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 1	1	5	5
13130	Toluene	108-88-3	230	1	5	5
13130	Xylene (Total)	1330-20-7	2,900	70	300	50

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 13:53	Alexander D Sechrist	5
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 14:17	Alexander D Sechrist	50
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 13:52	Alexander D Sechrist	5
01163	GC/MS VOA Water Prep	SW-846 5030C	2	Z193122AA	11/08/2019 14:16	Alexander D Sechrist	50

*=This limit was used in the evaluation of the final result

Sample Description: **MW-9 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 13:00

ARCADIS
ELLE Sample #: GW 1189504
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	0.6 J	0.2	1	1
13130	Ethylbenzene	100-41-4	2	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	2	0.2	1	1
13130	Xylene (Total)	1330-20-7	12	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 00:39	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 00:38	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-10 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 12:47

ARCADIS
ELLE Sample #: GW 1189505
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	4		0.2	1	1
13130	Ethylbenzene	100-41-4	6		0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	0.3	J	0.2	1	1
13130	Toluene	108-88-3	38		0.2	1	1
13130	Xylene (Total)	1330-20-7	54		1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 01:03	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 01:02	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-11 Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019 13:18

ARCADIS
ELLE Sample #: GW 1189506
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	1	0.2	1	1
13130	Ethylbenzene	100-41-4	29	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	7	0.2	1	1
13130	Xylene (Total)	1330-20-7	35	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 01:27	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 01:26	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/31/2019 10:48
Collection Date/Time: 10/28/2019

ARCADIS
ELLE Sample #: GW 1189507
ELLE Group #: 2072076
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/07/2019 22:39	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/07/2019 22:38	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: ARCADIS
Reported: 11/11/2019 11:52

Group Number: 2072076

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: D193114AA	Sample number(s): 1189502,1189504-1189507		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	6
Batch number: Z193121AA	Sample number(s): 1189497-1189501		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	6
Batch number: Z193122AA	Sample number(s): 1189503		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D193114AA	Sample number(s): 1189502,1189504-1189507								
Benzene	20	20.89	20	21.61	104	108	80-120	3	30
Ethylbenzene	20	19.85	20	20.45	99	102	80-120	3	30
Methyl Tertiary Butyl Ether	20	20.08	20	20.6	100	103	69-122	3	30
Toluene	20	19.69	20	20.33	98	102	80-120	3	30
Xylene (Total)	60	61.11	60	63.21	102	105	80-120	3	30
Batch number: Z193121AA	Sample number(s): 1189497-1189501								
Benzene	20	19.66			98		80-120		
Ethylbenzene	20	18.5			93		80-120		
Methyl Tertiary Butyl Ether	20	17.53			88		69-122		
Toluene	20	20.81			104		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 11/11/2019 11:52

Group Number: 2072076

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Xylene (Total)	60	60.63			101		80-120		
Batch number: Z193122AA	Sample number(s): 1189503								
Benzene	20	20.02			100		80-120		
Ethylbenzene	20	19.89			99		80-120		
Methyl Tertiary Butyl Ether	20	19.51			98		69-122		
Toluene	20	21.12			106		80-120		
Xylene (Total)	60	65.1			108		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z193121AA	Sample number(s): 1189497-1189501 UNSPK: 1189499									
Benzene	< 0.2	20	21.62	20	20.87	108	104	80-120	4	30
Ethylbenzene	< 0.4	20	21.01	20	20.24	105	101	80-120	4	30
Methyl Tertiary Butyl Ether	< 0.2	20	17.85	20	17.21	89	86	69-122	4	30
Toluene	< 0.2	20	22.84	20	21.19	114	106	80-120	7	30
Xylene (Total)	< 1	60	68.88	60	64	115	107	80-120	7	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: D193114AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1189502	95	96	97	103
1189504	94	101	100	98
1189505	98	99	96	99
1189506	98	102	99	99
1189507	95	98	97	100
Blank	98	97	99	100
LCS	96	102	100	105
LCSD	96	96	97	101

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 11/11/2019 11:52

Group Number: 2072076

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: D193114AA

Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: Z193121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1189497	85	91	93	95
1189498	84	88	95	97
1189499	86	92	95	92
1189500	85	89	92	96
1189501	84	91	97	100
Blank	85	90	103	91
LCS	86	93	102	94
MS	83	91	102	96
MSD	83	90	98	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: Z193122AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1189503	84	89	98	90
Blank	91	99	95	93
LCS	91	93	97	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

A.13045 G2072076 S.1109497-07

Arcadis/Exxon

Req Due Date (mm/dd/yy): ASAP- Standard **Rush TAT:** Yes ___ No x

Lab Work Order Number:

Lab Name:	Lancaster	Site Number:	12833	Consultant/Contractor:	EnviroTrac Ltd.
Lab Address:	2425 New Holland Pike	Facility Address:	96-27 Queens Blvd	Consultant/Contractor Project No:	
Lab PM:	Hannah Cottman	City, State, ZIP Code:	Rego Park	Address:	5 Old Dock Road, Yaphank, New York 11980
Lab Phone:	(717) 656-2300 ext 1815	Lead Regulatory Agency:	NYSDEC	Consultant/Contractor PM:	Dan Ruffini
Lab Shipping Accnt:		Invoice to:	****BILL ARCADIS****	Phone:	631-924-3001
Lab Bottle Order No:				Email EDD To:	jerome.oertling@arcadis-us.com
Other Info:					

Arcadis PM:	Jerome Oertling
PM Phone:	
PM Email:	jerome.oertling@arcadis-us.com

Report Type & QC Level

Standard x

Full Data Package ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: BTEX/MTBE 8260	Ethanol 8015									
	MW-1	10/28/19	11:20		X			3				X			X										
	MW-2	10/28/19	11:32		X			3				X			X										
	MW-3	10/28/19	12:15		X			3				X			X										
	~~MW-4~~	~~10/28/19~~			X			3				X			X										
	MW-5	10/28/19	12:29		X			3				X			X										
	MW-6	10/28/19	11:45		X			3				X			X										
	MW-7	10/28/19	11:58		X			3				X			X										
	MW-8	10/28/19	12:00		X			3				X			X										
	MW-9	10/28/19	13:00		X			3				X			X										
	MW-10	10/28/19	12:47		X			3				X			X										
	MW-11	10/28/19	13:18		x			3				x			x										
	Trip Blank	10/28/19			X			2				X			X										

Comments

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

		Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name:	Josh Levy						
Sampler's Company:	EnviroTrac LTD.	EnviroTrac LTD.	10/28/19			10/30/19	1400
Shipment Method:	FedEx Ship Date: 10/30/19		10/30/19	1460	Ellie	10/31/19	1048
Shipment Tracking No:	814386548386						

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 1.7 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 264751

Group Number(s): 2072076

Client: Arcadis/Exxon

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Tamara Lugardo

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.7	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX B

AS/SVE System Air Analytical Reports

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: October 15, 2019 15:45

Project: 12833

Account #: 13045
Group Number: 2067595
PO Number: 30007639.00002.C
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Chad Colwell
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CARBON INF Air	10/03/2019 07:45	1167770
CARBON EFF Air	10/03/2019 07:40	1167771

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **CARBON INF Air**
12833
96-27 Queens Blvd - Rego Park, NY

ARCADIS
ELLE Sample #: AQ 1167770
ELLE Group #: 2067595
Matrix: Air

Project Name: **12833**

Submittal Date/Time: 10/04/2019 17:01
Collection Date/Time: 10/03/2019 07:45

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	130	20	38	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	< 20	20	< 5	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Benzene	71-43-2	< 0.0013	0.0013	< 0.00040	0.00040	4
05265	Ethylbenzene	100-41-4	0.034	0.0040	0.0078	0.00092	4
05265	Methyl t-Butyl Ether	1634-04-4	< 0.0029	0.0029	< 0.00080	0.00080	4
05265	Toluene	108-88-3	0.053	0.0018	0.014	0.00048	4
05265	m/p-Xylene	179601-23-1	0.17	0.0073	0.040	0.0017	4
05265	o-Xylene	95-47-6	0.21	0.0050	0.049	0.0012	4

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1928330AA	10/10/2019 22:18	Alexander D Sechrist	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1928830AA	10/15/2019 14:41	Jacob E Bailey	4

Sample Description: **CARBON EFF Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/04/2019 17:01
Collection Date/Time: 10/03/2019 07:40

ARCADIS
ELLE Sample #: AQ 1167771
ELLE Group #: 2067595
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	< 20	20	< 5	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	< 20	20	< 5	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Acetone	67-64-1	0.058	0.0013	0.024	0.00053	1
05265	Acetonitrile	75-05-8	0.014	0.0014	0.0082	0.00082	1
05265	Acrolein	107-02-8	< 0.0013	0.0013	< 0.00057	0.00057	1
05265	Acrylonitrile	107-13-1	< 0.00043	0.00043	< 0.00020	0.00020	1
05265	Benzene	71-43-2	0.00091 J	0.00032	0.00029 J	0.00010	1
05265	Bromobenzene[1]	108-86-1	< 0.00064	0.00064	< 0.00010	0.00010	1
05265	Bromodichloromethane	75-27-4	< 0.00080	0.00080	< 0.00012	0.00012	1
05265	Bromoform	75-25-2	< 0.0018	0.0018	< 0.00017	0.00017	1
05265	Bromomethane	74-83-9	< 0.00070	0.00070	< 0.00018	0.00018	1
05265	1,3-Butadiene	106-99-0	< 0.00038	0.00038	< 0.00017	0.00017	1
05265	2-Butanone	78-93-3	0.015	0.00065	0.0050	0.00022	1
05265	tert-Butyl Alcohol	75-65-0	0.0024 J	0.00061	0.00081 J	0.00020	1
05265	Carbon Disulfide	75-15-0	0.020	0.00037	0.0066	0.00012	1
05265	Carbon Tetrachloride	56-23-5	< 0.00088	0.00088	< 0.00014	0.00014	1
05265	Chlorobenzene	108-90-7	< 0.00055	0.00055	< 0.00012	0.00012	1
05265	Chlorodifluoromethane[1]	75-45-6	< 0.00053	0.00053	< 0.00015	0.00015	1
05265	Chloroethane	75-00-3	< 0.00047	0.00047	< 0.00018	0.00018	1
05265	Chloroform	67-66-3	< 0.00042	0.00042	< 0.000087	0.000087	1
05265	Chloromethane	74-87-3	< 0.00047	0.00047	< 0.00023	0.00023	1
05265	3-Chloropropene	107-05-1	< 0.00050	0.00050	< 0.00016	0.00016	1
05265	Cumene	98-82-8	< 0.0012	0.0012	< 0.00025	0.00025	1
05265	Dibromochloromethane	124-48-1	< 0.0012	0.0012	< 0.00014	0.00014	1
05265	1,2-Dibromoethane	106-93-4	< 0.0010	0.0010	< 0.00013	0.00013	1
05265	Dibromomethane[1]	74-95-3	< 0.0010	0.0010	< 0.00014	0.00014	1
05265	1,2-Dichlorobenzene	95-50-1	< 0.0011	0.0011	< 0.00019	0.00019	1
05265	1,3-Dichlorobenzene	541-73-1	< 0.0011	0.0011	< 0.00018	0.00018	1
05265	1,4-Dichlorobenzene	106-46-7	< 0.0010	0.0010	< 0.00017	0.00017	1
05265	Dichlorodifluoromethane	75-71-8	0.0024 J	0.00064	0.00048 J	0.00013	1
05265	1,1-Dichloroethane	75-34-3	< 0.00039	0.00039	< 0.000096	0.000096	1
05265	1,2-Dichloroethane	107-06-2	< 0.00020	0.00020	< 0.000050	0.000050	1
05265	1,1-Dichloroethene	75-35-4	< 0.00056	0.00056	< 0.00014	0.00014	1
05265	cis-1,2-Dichloroethene	156-59-2	< 0.00044	0.00044	< 0.00011	0.00011	1
05265	trans-1,2-Dichloroethene	156-60-5	< 0.00036	0.00036	< 0.000090	0.000090	1
05265	Dichlorofluoromethane[1]	75-43-4	< 0.00051	0.00051	< 0.00012	0.00012	1
05265	1,2-Dichloropropane	78-87-5	< 0.00044	0.00044	< 0.000096	0.000096	1
05265	cis-1,3-Dichloropropene	10061-01-5	< 0.00040	0.00040	< 0.000088	0.000088	1
05265	trans-1,3-Dichloropropene	10061-02-6	< 0.00050	0.00050	< 0.00011	0.00011	1
05265	1,4-Dioxane	123-91-1	< 0.00050	0.00050	< 0.00014	0.00014	1
05265	Ethyl Acetate[1]	141-78-6	0.0065	0.00068	0.0018	0.00019	1

Sample Description: **CARBON EFF Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/04/2019 17:01
Collection Date/Time: 10/03/2019 07:40

ARCADIS
ELLE Sample #: AQ 1167771
ELLE Group #: 2067595
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Ethyl Acrylate	140-88-5	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Ethyl Methacrylate[1]	97-63-2	< 0.00098	0.00098	< 0.00021	0.00021	1
05265	Ethylbenzene	100-41-4	0.0014 J	0.0010	0.00031 J	0.00023	1
05265	4-Ethyltoluene[1]	622-96-8	< 0.00093	0.00093	< 0.00019	0.00019	1
05265	Freon 113	76-13-1	< 0.00084	0.00084	< 0.00011	0.00011	1
05265	Freon 114	76-14-2	< 0.00084	0.00084	< 0.00012	0.00012	1
05265	Heptane	142-82-5	< 0.00098	0.00098	< 0.00024	0.00024	1
05265	Hexachlorobutadiene	87-68-3	< 0.0049	0.0049	< 0.00046	0.00046	1
05265	Hexachloroethane	67-72-1	< 0.0022	0.0022	< 0.00023	0.00023	1
05265	Hexane	110-54-3	0.0042	0.00046	0.0012	0.00013	1
05265	2-Hexanone[1]	591-78-6	< 0.00078	0.00078	< 0.00019	0.00019	1
05265	Isooctane	540-84-1	< 0.00061	0.00061	< 0.00013	0.00013	1
05265	Methyl Acrylate[1]	96-33-3	< 0.00049	0.00049	< 0.00014	0.00014	1
05265	Methyl Iodide	74-88-4	< 0.00070	0.00070	< 0.00012	0.00012	1
05265	Methyl Methacrylate	80-62-6	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Alpha Methyl Styrene[1]	98-83-9	0.0021 J	0.00087	0.00044 J	0.00018	1
05265	Methyl t-Butyl Ether	1634-04-4	< 0.00072	0.00072	< 0.00020	0.00020	1
05265	4-Methyl-2-pentanone	108-10-1	< 0.00061	0.00061	< 0.00015	0.00015	1
05265	Methylene Chloride	75-09-2	0.012	0.00069	0.0034	0.00020	1
05265	Octane[1]	111-65-9	< 0.0021	0.0021	< 0.00046	0.00046	1
05265	Pentane[1]	109-66-0	0.0012 J	0.00038	0.00041 J	0.00013	1
05265	Propene[1]	115-07-1	0.019	0.00034	0.011	0.00020	1
05265	Styrene	100-42-5	< 0.00089	0.00089	< 0.00021	0.00021	1
05265	1,1,1,2-Tetrachloroethane[1]	630-20-6	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	1,1,2,2-Tetrachloroethane	79-34-5	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	Tetrachloroethene	127-18-4	< 0.0014	0.0014	< 0.00021	0.00021	1
05265	Toluene	108-88-3	0.019	0.00045	0.0051	0.00012	1
05265	1,2,4-Trichlorobenzene	120-82-1	< 0.0028	0.0028	< 0.00038	0.00038	1
05265	1,1,1-Trichloroethane	71-55-6	< 0.00065	0.00065	< 0.00012	0.00012	1
05265	1,1,2-Trichloroethane	79-00-5	< 0.00052	0.00052	< 0.000096	0.000096	1
05265	Trichloroethene	79-01-6	< 0.00075	0.00075	< 0.00014	0.00014	1
05265	Trichlorofluoromethane	75-69-4	< 0.00067	0.00067	< 0.00012	0.00012	1
05265	1,2,3-Trichloropropane[1]	96-18-4	< 0.00084	0.00084	< 0.00014	0.00014	1
05265	1,2,4-Trimethylbenzene	95-63-6	0.0024 J	0.0014	0.00048 J	0.00028	1
05265	1,3,5-Trimethylbenzene	108-67-8	< 0.0016	0.0016	< 0.00032	0.00032	1
05265	Vinyl Acetate	108-05-4	< 0.00060	0.00060	< 0.00017	0.00017	1
05265	Vinyl Chloride	75-01-4	< 0.00033	0.00033	< 0.00013	0.00013	1
05265	m/p-Xylene	179601-23-1	0.0051 J	0.0018	0.0012 J	0.00042	1
05265	o-Xylene	95-47-6	0.0017 J	0.0013	0.00039 J	0.00029	1

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Description: **CARBON EFF Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 10/04/2019 17:01
Collection Date/Time: 10/03/2019 07:40

ARCADIS
ELLE Sample #: AQ 1167771
ELLE Group #: 2067595
Matrix: Air

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1928330AA	10/10/2019 23:43	Alexander D Sechrist	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1928730BA	10/15/2019 09:41	Jacob E Bailey	1

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Quality Control Summary

Client Name: ARCADIS
Reported: 10/15/2019 15:45

Group Number: 2067595

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
Batch number: F1928730BA	Sample number(s): 1167771			
Acetone	< 0.0013	0.0013	< 0.00053	0.00053
Acetonitrile	< 0.0014	0.0014	< 0.00083	0.00083
Acrolein	< 0.0014	0.0014	< 0.00062	0.00062
Acrylonitrile	< 0.00028	0.00028	< 0.00013	0.00013
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Bromobenzene	< 0.00064	0.00064	< 0.00010	0.00010
Bromodichloromethane	< 0.00080	0.00080	< 0.00012	0.00012
Bromoform	< 0.0018	0.0018	< 0.00017	0.00017
Bromomethane	< 0.00070	0.00070	< 0.00018	0.00018
1,3-Butadiene	< 0.00038	0.00038	< 0.00017	0.00017
2-Butanone	< 0.00062	0.00062	< 0.00021	0.00021
tert-Butyl Alcohol	< 0.00064	0.00064	< 0.00021	0.00021
Carbon Disulfide	< 0.00040	0.00040	< 0.00013	0.00013
Carbon Tetrachloride	< 0.00088	0.00088	< 0.00014	0.00014
Chlorobenzene	< 0.00060	0.00060	< 0.00013	0.00013
Chlorodifluoromethane	< 0.00053	0.00053	< 0.00015	0.00015
Chloroethane	< 0.00050	0.00050	< 0.00019	0.00019
Chloroform	< 0.00045	0.00045	< 0.000092	0.000092
Chloromethane	< 0.00050	0.00050	< 0.00024	0.00024
3-Chloropropene	< 0.00047	0.00047	< 0.00015	0.00015
Cumene	< 0.0012	0.0012	< 0.00024	0.00024
Dibromochloromethane	< 0.0011	0.0011	< 0.00013	0.00013
1,2-Dibromoethane	< 0.0010	0.0010	< 0.00013	0.00013
Dibromomethane	< 0.0010	0.0010	< 0.00014	0.00014
1,2-Dichlorobenzene	< 0.0012	0.0012	< 0.00020	0.00020
1,3-Dichlorobenzene	< 0.0011	0.0011	< 0.00019	0.00019
1,4-Dichlorobenzene	< 0.0010	0.0010	< 0.00017	0.00017
Dichlorodifluoromethane	< 0.00064	0.00064	< 0.00013	0.00013
1,1-Dichloroethane	< 0.00036	0.00036	< 0.000089	0.000089
1,2-Dichloroethane	< 0.00032	0.00032	< 0.000080	0.000080
1,1-Dichloroethene	< 0.00056	0.00056	< 0.00014	0.00014
cis-1,2-Dichloroethene	< 0.00048	0.00048	< 0.00012	0.00012
trans-1,2-Dichloroethene	< 0.00034	0.00034	< 0.000086	0.000086
Dichlorofluoromethane	< 0.00046	0.00046	< 0.00011	0.00011
1,2-Dichloropropane	< 0.00060	0.00060	< 0.00013	0.00013
cis-1,3-Dichloropropene	< 0.00045	0.00045	< 0.00010	0.00010
trans-1,3-Dichloropropene	< 0.00054	0.00054	< 0.00012	0.00012
1,4-Dioxane	< 0.00061	0.00061	< 0.00017	0.00017
Ethyl Acetate	< 0.00090	0.00090	< 0.00025	0.00025

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 10/15/2019 15:45

Group Number: 2067595

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
Ethyl Acrylate	< 0.00066	0.00066	< 0.00016	0.00016
Ethyl Methacrylate	< 0.00089	0.00089	< 0.00019	0.00019
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
4-Ethyltoluene	< 0.00088	0.00088	< 0.00018	0.00018
Freon 113	< 0.00084	0.00084	< 0.00011	0.00011
Freon 114	< 0.00084	0.00084	< 0.00012	0.00012
Heptane	< 0.00094	0.00094	< 0.00023	0.00023
Hexachlorobutadiene	< 0.0050	0.0050	< 0.00047	0.00047
Hexachloroethane	< 0.0026	0.0026	< 0.00027	0.00027
Hexane	< 0.00046	0.00046	< 0.00013	0.00013
2-Hexanone	< 0.00074	0.00074	< 0.00018	0.00018
Isooctane	< 0.00061	0.00061	< 0.00013	0.00013
Methyl Acrylate	< 0.00049	0.00049	< 0.00014	0.00014
Methyl Iodide	< 0.00087	0.00087	< 0.00015	0.00015
Methyl Methacrylate	< 0.00061	0.00061	< 0.00015	0.00015
Alpha Methyl Styrene	< 0.00087	0.00087	< 0.00018	0.00018
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
4-Methyl-2-pentanone	< 0.00061	0.00061	< 0.00015	0.00015
Methylene Chloride	< 0.00087	0.00087	< 0.00025	0.00025
Octane	< 0.0019	0.0019	< 0.00040	0.00040
Pentane	< 0.00038	0.00038	< 0.00013	0.00013
Propene	< 0.00028	0.00028	< 0.00016	0.00016
Styrene	< 0.00085	0.00085	< 0.00020	0.00020
1,1,1,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
1,1,2,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
Tetrachloroethene	< 0.0017	0.0017	< 0.00025	0.00025
Toluene	< 0.00045	0.00045	< 0.00012	0.00012
1,2,4-Trichlorobenzene	< 0.0028	0.0028	< 0.00038	0.00038
1,1,1-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
1,1,2-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
Trichloroethene	< 0.00097	0.00097	< 0.00018	0.00018
Trichlorofluoromethane	< 0.00084	0.00084	< 0.00015	0.00015
1,2,3-Trichloropropane	< 0.00084	0.00084	< 0.00014	0.00014
1,2,4-Trimethylbenzene	< 0.0014	0.0014	< 0.00028	0.00028
1,3,5-Trimethylbenzene	< 0.0016	0.0016	< 0.00032	0.00032
Vinyl Acetate	< 0.00056	0.00056	< 0.00016	0.00016
Vinyl Chloride	< 0.00031	0.00031	< 0.00012	0.00012
m/p-Xylene	< 0.0011	0.0011	< 0.00026	0.00026
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: F1928830AA	Sample number(s): 1167770			
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
Toluene	< 0.00045	0.00045	< 0.00012	0.00012

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 10/15/2019 15:45

Group Number: 2067595

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
m/p-Xylene	< 0.0011	0.0011	< 0.00026	0.00026
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: M1928330AA	Sample number(s): 1167770-1167771			
C1-C4 Hydrocarbons as hexane	< 20	20	< 5	5
>C4-C10 Hydrocarbons hexane	< 20	20	< 5	5

LCS/LCSD

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F1928730BA	Sample number(s): 1167771								
Acetone	0.0238	0.0233	0.0238	0.0241	98	102	70-137	4	25
Acetonitrile	0.0168	0.0162	0.0168	0.0161	96	96	67-143	0	25
Acrolein	0.0229	0.0235	0.0229	0.0248	103	108	70-135	5	25
Acrylonitrile	0.0217	0.0216	0.0217	0.0223	100	103	70-131	3	25
Benzene	0.0319	0.0327	0.0319	0.0323	102	101	70-130	1	25
Bromobenzene	0.0642	0.0651	0.0642	0.0617	101	96	70-130	5	25
Bromodichloromethane	0.0670	0.0691	0.0670	0.0657	103	98	75-134	5	25
Bromoform	0.103	0.115	0.103	0.114	111	111	60-139	1	25
Bromomethane	0.0388	0.0399	0.0388	0.0397	103	102	70-134	1	25
1,3-Butadiene	0.0221	0.0211	0.0221	0.0211	96	95	70-131	0	25
2-Butanone	0.0295	0.0291	0.0295	0.0298	99	101	70-130	2	25
tert-Butyl Alcohol	0.0303	0.0333	0.0303	0.0352	110	116	67-145	6	25
Carbon Disulfide	0.0311	0.0314	0.0311	0.0310	101	100	70-130	1	25
Carbon Tetrachloride	0.0629	0.0648	0.0629	0.0682	103	108	70-130	5	25
Chlorobenzene	0.0460	0.0450	0.0460	0.0425	98	92	76-117	6	25
Chlorodifluoromethane	0.0354	0.0370	0.0354	0.0364	105	103	70-141	2	25
Chloroethane	0.0264	0.0266	0.0264	0.0276	101	105	70-131	4	25
Chloroform	0.0488	0.0487	0.0488	0.0480	100	98	70-130	1	25
Chloromethane	0.0207	0.0201	0.0207	0.0205	97	99	70-138	2	25
3-Chloropropene	0.0313	0.0369	0.0313	0.0390	118	125	70-156	6	25
Cumene	0.0492	0.0536	0.0492	0.0523	109	106	70-131	2	25
Dibromochloromethane	0.0852	0.0882	0.0852	0.0925	104	109	74-131	5	25
1,2-Dibromoethane	0.0768	0.0765	0.0768	0.0736	100	96	70-130	4	25
Dibromomethane	0.0711	0.0680	0.0711	0.0704	96	99	70-130	3	25
1,2-Dichlorobenzene	0.0601	0.0648	0.0601	0.0618	108	103	61-139	5	25
1,3-Dichlorobenzene	0.0601	0.0653	0.0601	0.0612	109	102	64-140	7	25
1,4-Dichlorobenzene	0.0601	0.0637	0.0601	0.0604	106	100	64-137	5	25
Dichlorodifluoromethane	0.0495	0.0514	0.0495	0.0510	104	103	70-131	1	25
1,1-Dichloroethane	0.0405	0.0409	0.0405	0.0411	101	102	70-130	0	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 10/15/2019 15:45

Group Number: 2067595

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichloroethane	0.0405	0.0405	0.0405	0.0399	100	99	70-142	1	25
1,1-Dichloroethene	0.0396	0.0393	0.0396	0.0420	99	106	70-131	7	25
cis-1,2-Dichloroethene	0.0396	0.0384	0.0396	0.0400	97	101	70-130	4	25
trans-1,2-Dichloroethene	0.0396	0.0390	0.0396	0.0410	98	103	70-130	5	25
Dichlorofluoromethane	0.0421	0.0445	0.0421	0.0439	106	104	70-136	1	25
1,2-Dichloropropane	0.0462	0.0469	0.0462	0.0442	101	96	70-130	6	25
cis-1,3-Dichloropropene	0.0454	0.0462	0.0454	0.0466	102	103	70-130	1	25
trans-1,3-Dichloropropene	0.0454	0.0477	0.0454	0.0482	105	106	70-130	1	25
1,4-Dioxane	0.0360	0.0387	0.0360	0.0395	107	110	70-130	2	25
Ethyl Acetate	0.0360	0.0354	0.0360	0.0368	98	102	73-124	4	25
Ethyl Acrylate	0.0409	0.0410	0.0409	0.0414	100	101	71-126	1	25
Ethyl Methacrylate	0.0467	0.0507	0.0467	0.0497	109	106	67-130	2	25
Ethylbenzene	0.0434	0.0436	0.0434	0.0427	100	98	70-130	2	25
4-Ethyltoluene	0.0492	0.0547	0.0492	0.0525	111	107	69-139	4	25
Freon 113	0.0766	0.0760	0.0766	0.0741	99	97	70-130	3	25
Freon 114	0.0699	0.0707	0.0699	0.0714	101	102	70-130	1	25
Heptane	0.0410	0.0438	0.0410	0.0436	107	106	70-130	0	25
Hexachlorobutadiene	0.107	0.127	0.107	0.118	119	111	34-157	8	25
Hexachloroethane	0.0968	0.126	0.0968	0.124	130	128	38-163	1	25
Hexane	0.0352	0.0355	0.0352	0.0357	101	101	70-130	0	25
2-Hexanone	0.0410	0.0417	0.0410	0.0421	102	103	74-134	1	25
Isooctane	0.0467	0.0492	0.0467	0.0491	105	105	70-130	0	25
Methyl Acrylate	0.0352	0.0361	0.0352	0.0365	102	104	75-125	1	25
Methyl Iodide	0.0581	0.0581	0.0581	0.0616	100	106	70-130	6	25
Methyl Methacrylate	0.0409	0.0395	0.0409	0.0392	96	96	73-117	1	25
Alpha Methyl Styrene	0.0483	0.0580	0.0483	0.0564	120	117	56-142	3	25
Methyl t-Butyl Ether	0.0361	0.0372	0.0361	0.0391	103	109	70-130	5	25
4-Methyl-2-pentanone	0.0410	0.0409	0.0410	0.0412	100	101	79-131	1	25
Methylene Chloride	0.0347	0.0388	0.0347	0.0379	112	109	70-139	2	25
Octane	0.0467	0.0522	0.0467	0.0511	112	109	70-130	2	25
Pentane	0.0295	0.0274	0.0295	0.0292	93	99	70-130	6	25
Propene	0.0172	0.0164	0.0172	0.0167	95	97	78-126	2	25
Styrene	0.0426	0.0468	0.0426	0.0453	110	106	70-133	3	25
1,1,1,2-Tetrachloroethane	0.0687	0.0701	0.0687	0.0739	102	108	73-137	5	25
1,1,2,2-Tetrachloroethane	0.0687	0.0653	0.0687	0.0613	95	89	68-138	6	25
Tetrachloroethene	0.0678	0.0667	0.0678	0.0624	98	92	70-130	7	25
Toluene	0.0377	0.0374	0.0377	0.0366	99	97	70-130	2	25
1,2,4-Trichlorobenzene	0.0742	0.0927	0.0742	0.0875	125	118	31-155	6	25
1,1,1-Trichloroethane	0.0546	0.0556	0.0546	0.0540	102	99	70-130	3	25
1,1,2-Trichloroethane	0.0546	0.0547	0.0546	0.0515	100	94	76-127	6	25
Trichloroethene	0.0537	0.0527	0.0537	0.0522	98	97	70-130	1	25
Trichlorofluoromethane	0.0562	0.0553	0.0562	0.0553	99	98	70-130	0	25
1,2,3-Trichloropropane	0.0603	0.0602	0.0603	0.0558	100	93	70-136	8	25
1,2,4-Trimethylbenzene	0.0492	0.0581	0.0492	0.0562	118	114	65-146	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 10/15/2019 15:45

Group Number: 2067595

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,3,5-Trimethylbenzene	0.0492	0.0584	0.0492	0.0534	119	109	69-141	9	25
Vinyl Acetate	0.0352	0.0401	0.0352	0.0421	114	120	70-151	5	25
Vinyl Chloride	0.0256	0.0264	0.0256	0.0276	103	108	70-135	4	25
m/p-Xylene	0.0434	0.0449	0.0434	0.0427	103	98	78-119	5	25
o-Xylene	0.0434	0.0459	0.0434	0.0443	106	102	70-130	3	25
Batch number: F1928830AA	Sample number(s): 1167770								
Benzene	0.0319	0.0311	0.0319	0.0310	97	97	70-130	0	25
Ethylbenzene	0.0434	0.0420	0.0434	0.0427	97	98	70-130	2	25
Methyl t-Butyl Ether	0.0361	0.0375	0.0361	0.0402	104	111	70-130	7	25
Toluene	0.0377	0.0358	0.0377	0.0364	95	97	70-130	2	25
m/p-Xylene	0.0434	0.0428	0.0434	0.0429	99	99	78-119	0	25
o-Xylene	0.0434	0.0437	0.0434	0.0432	101	99	70-130	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 13045 Group # 2067595 Sample # 11677770-71

Client: **Arcadis**			
Project Name/#: ERP-12833	Site ID #:		
Project Manager: Jerome Oertling	P.O. #: See Site List		
Sampler: Tim Maire	PWSID #: N/A		
Phone #: 973-368-5832	Quote #: 215198		
State where samples were collected: NY	For Compliance: Yes ☐ No ☒		

Matrix: ☐ Tissue ☐ Sediment ☐ Soil; Water: ☐ Ground ☐ Surface ☐ Potable ☐ NPDES; Other: Air

Analyses Requested / Preservation and Filtration Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other: Air	Total # of Containers	BTEX/MTBE (TO-15)	C1-C4 (EPA 18 MOD/EPA 25 MOD)	>C4 - C10 (EPA 18 MOD/EPA 25 MOD)	EXTENDED LIST VOC (TO-15)	Remarks
CARBON INF	10/3/19	0745	X				X	1	X	X	X		
CARBON EFF	10/3/19	0740	X				X	1		X	X	X	

For Lab Use Only

SF #: ______

SCR #: ______

Preservation Codes

H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; F = Field Filtered; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☒ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address:

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: ______

Relinquished by:	Date	Time	Received by:	Date	Time
Tim Maire	10/3/19	1600			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: [signature]	10-4-19	1701

Relinquished by Commercial Carrier: UPS ______ FedEx ______ Other ______

Temperature upon receipt ______ °C

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 262000

Group Number(s): 2067595

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/04/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	Yes
Samples Intact:	Yes	Air Quality Flow Controllers Present:	No
Missing Samples:	No	Air Quality Returns:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Darian Jaynes

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: November 18, 2019 16:38

Project: 12833

Account #: 13045
Group Number: 2073327
PO Number: 30007639.MB000.C
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Chad Colwell
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle
Electronic Copy To	ARCADIS	Attn: Jerome Oertling

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CARBON INF Grab Air	11/06/2019 07:35	1195610
CARBON EFF Grab Air	11/06/2019 07:30	1195611

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **CARBON INF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 11/07/2019 17:27
Collection Date/Time: 11/06/2019 07:35

ARCADIS
ELLE Sample #: AQ 1195610
ELLE Group #: 2073327
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	< 20	20	< 5	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	< 20	20	< 5	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Benzene	71-43-2	0.0087	0.00064	0.0027	0.00020	2
05265	Ethylbenzene	100-41-4	< 0.0020	0.0020	< 0.00046	0.00046	2
05265	Methyl t-Butyl Ether	1634-04-4	< 0.0014	0.0014	< 0.00040	0.00040	2
05265	Toluene	108-88-3	0.14	0.00090	0.037	0.00024	2
05265	m/p-Xylene	179601-23-1	0.066	0.0036	0.015	0.00084	2
05265	o-Xylene	95-47-6	0.045	0.0025	0.010	0.00058	2

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1931630AA	11/12/2019 19:18	Jeffrey B Smith	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	D1931530AA	11/11/2019 18:37	Jacob E Bailey	2

Sample Description: CARBON EFF Grab Air
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: 12833

Submittal Date/Time: 11/07/2019 17:27
Collection Date/Time: 11/06/2019 07:30

ARCADIS
ELLE Sample #: AQ 1195611
ELLE Group #: 2073327
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	20 J	20	6 J	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	< 20	20	< 5	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Acetone	67-64-1	0.013	0.0013	0.0056	0.00053	1
05265	Acetonitrile	75-05-8	< 0.0014	0.0014	< 0.00082	0.00082	1
05265	Acrolein	107-02-8	< 0.0013	0.0013	< 0.00057	0.00057	1
05265	Acrylonitrile	107-13-1	< 0.00043	0.00043	< 0.00020	0.00020	1
05265	Benzene	71-43-2	0.00095 J	0.00032	0.00030 J	0.00010	1
05265	Bromobenzene[1]	108-86-1	< 0.00064	0.00064	< 0.00010	0.00010	1
05265	Bromodichloromethane	75-27-4	< 0.00080	0.00080	< 0.00012	0.00012	1
05265	Bromoform	75-25-2	< 0.0018	0.0018	< 0.00017	0.00017	1
05265	Bromomethane	74-83-9	< 0.00070	0.00070	< 0.00018	0.00018	1
05265	1,3-Butadiene	106-99-0	< 0.00038	0.00038	< 0.00017	0.00017	1
05265	2-Butanone	78-93-3	0.0061	0.00065	0.0021	0.00022	1
05265	tert-Butyl Alcohol	75-65-0	< 0.00061	0.00061	< 0.00020	0.00020	1
05265	Carbon Disulfide	75-15-0	0.00078 J	0.00037	0.00025 J	0.00012	1
05265	Carbon Tetrachloride	56-23-5	< 0.00088	0.00088	< 0.00014	0.00014	1
05265	Chlorobenzene	108-90-7	< 0.00055	0.00055	< 0.00012	0.00012	1
05265	Chlorodifluoromethane[1]	75-45-6	< 0.00053	0.00053	< 0.00015	0.00015	1
05265	Chloroethane	75-00-3	< 0.00047	0.00047	< 0.00018	0.00018	1
05265	Chloroform	67-66-3	0.0049	0.00042	0.0010	0.000087	1
05265	Chloromethane	74-87-3	< 0.00047	0.00047	< 0.00023	0.00023	1
05265	3-Chloropropene	107-05-1	< 0.00050	0.00050	< 0.00016	0.00016	1
05265	Cumene	98-82-8	< 0.0012	0.0012	< 0.00025	0.00025	1
05265	Dibromochloromethane	124-48-1	< 0.0012	0.0012	< 0.00014	0.00014	1
05265	1,2-Dibromoethane	106-93-4	< 0.0010	0.0010	< 0.00013	0.00013	1
05265	Dibromomethane[1]	74-95-3	< 0.0010	0.0010	< 0.00014	0.00014	1
05265	1,2-Dichlorobenzene	95-50-1	< 0.0011	0.0011	< 0.00019	0.00019	1
05265	1,3-Dichlorobenzene	541-73-1	< 0.0011	0.0011	< 0.00018	0.00018	1
05265	1,4-Dichlorobenzene	106-46-7	< 0.0010	0.0010	< 0.00017	0.00017	1
05265	Dichlorodifluoromethane	75-71-8	0.0026 J	0.00064	0.00054 J	0.00013	1
05265	1,1-Dichloroethane	75-34-3	< 0.00039	0.00039	< 0.000096	0.000096	1
05265	1,2-Dichloroethane	107-06-2	< 0.00020	0.00020	< 0.000050	0.000050	1
05265	1,1-Dichloroethene	75-35-4	< 0.00056	0.00056	< 0.00014	0.00014	1
05265	cis-1,2-Dichloroethene	156-59-2	< 0.00044	0.00044	< 0.00011	0.00011	1
05265	trans-1,2-Dichloroethene	156-60-5	< 0.00036	0.00036	< 0.000090	0.000090	1
05265	Dichlorofluoromethane[1]	75-43-4	< 0.00051	0.00051	< 0.00012	0.00012	1
05265	1,2-Dichloropropane	78-87-5	< 0.00044	0.00044	< 0.000096	0.000096	1
05265	cis-1,3-Dichloropropene	10061-01-5	< 0.00040	0.00040	< 0.000088	0.000088	1
05265	trans-1,3-Dichloropropene	10061-02-6	< 0.00050	0.00050	< 0.00011	0.00011	1
05265	1,4-Dioxane	123-91-1	< 0.00050	0.00050	< 0.00014	0.00014	1
05265	Ethyl Acetate[1]	141-78-6	0.0031 J	0.00068	0.00087 J	0.00019	1

Sample Description: **CARBON EFF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 11/07/2019 17:27
Collection Date/Time: 11/06/2019 07:30

ARCADIS
ELLE Sample #: AQ 1195611
ELLE Group #: 2073327
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Ethyl Acrylate	140-88-5	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Ethyl Methacrylate[1]	97-63-2	< 0.00098	0.00098	< 0.00021	0.00021	1
05265	Ethylbenzene	100-41-4	0.0012 J	0.0010	0.00028 J	0.00023	1
05265	4-Ethyltoluene[1]	622-96-8	< 0.00093	0.00093	< 0.00019	0.00019	1
05265	Freon 113	76-13-1	< 0.00084	0.00084	< 0.00011	0.00011	1
05265	Freon 114	76-14-2	< 0.00084	0.00084	< 0.00012	0.00012	1
05265	Heptane	142-82-5	< 0.00098	0.00098	< 0.00024	0.00024	1
05265	Hexachlorobutadiene	87-68-3	< 0.0049	0.0049	< 0.00046	0.00046	1
05265	Hexachloroethane	67-72-1	< 0.0022	0.0022	< 0.00023	0.00023	1
05265	Hexane	110-54-3	0.0051	0.00046	0.0015	0.00013	1
05265	2-Hexanone[1]	591-78-6	< 0.00078	0.00078	< 0.00019	0.00019	1
05265	Isooctane	540-84-1	0.0016 J	0.00061	0.00035 J	0.00013	1
05265	Methyl Acrylate[1]	96-33-3	< 0.00049	0.00049	< 0.00014	0.00014	1
05265	Methyl Iodide	74-88-4	< 0.00070	0.00070	< 0.00012	0.00012	1
05265	Methyl Methacrylate	80-62-6	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Alpha Methyl Styrene[1]	98-83-9	< 0.00087	0.00087	< 0.00018	0.00018	1
05265	Methyl t-Butyl Ether	1634-04-4	< 0.00072	0.00072	< 0.00020	0.00020	1
05265	4-Methyl-2-pentanone	108-10-1	< 0.00061	0.00061	< 0.00015	0.00015	1
05265	Methylene Chloride	75-09-2	0.0014 J	0.00069	0.00040 J	0.00020	1
05265	Octane[1]	111-65-9	< 0.0021	0.0021	< 0.00046	0.00046	1
05265	Pentane[1]	109-66-0	0.23	0.0038	0.079	0.0013	10
05265	Propene[1]	115-07-1	< 0.00034	0.00034	< 0.00020	0.00020	1
05265	Styrene	100-42-5	< 0.00089	0.00089	< 0.00021	0.00021	1
05265	1,1,1,2-Tetrachloroethane[1]	630-20-6	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	1,1,2,2-Tetrachloroethane	79-34-5	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	Tetrachloroethene	127-18-4	< 0.0014	0.0014	< 0.00021	0.00021	1
05265	Toluene	108-88-3	0.0088	0.00045	0.0023	0.00012	1
05265	1,2,4-Trichlorobenzene	120-82-1	< 0.0028	0.0028	< 0.00038	0.00038	1
05265	1,1,1-Trichloroethane	71-55-6	< 0.00065	0.00065	< 0.00012	0.00012	1
05265	1,1,2-Trichloroethane	79-00-5	< 0.00052	0.00052	< 0.000096	0.000096	1
05265	Trichloroethene	79-01-6	< 0.00075	0.00075	< 0.00014	0.00014	1
05265	Trichlorofluoromethane	75-69-4	0.00082 J	0.00067	0.00015 J	0.00012	1
05265	1,2,3-Trichloropropane[1]	96-18-4	< 0.00084	0.00084	< 0.00014	0.00014	1
05265	1,2,4-Trimethylbenzene	95-63-6	0.0072 J	0.0014	0.0015 J	0.00028	1
05265	1,3,5-Trimethylbenzene	108-67-8	< 0.0016	0.0016	< 0.00032	0.00032	1
05265	Vinyl Acetate	108-05-4	< 0.00060	0.00060	< 0.00017	0.00017	1
05265	Vinyl Chloride	75-01-4	< 0.00033	0.00033	< 0.00013	0.00013	1
05265	m/p-Xylene	179601-23-1	0.0040 J	0.0018	0.00091 J	0.00042	1
05265	o-Xylene	95-47-6	0.0019 J	0.0013	0.00044 J	0.00029	1

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Description: **CARBON EFF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 11/07/2019 17:27
Collection Date/Time: 11/06/2019 07:30

ARCADIS
ELLE Sample #: **AQ 1195611**
ELLE Group #: **2073327**
Matrix: Air

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1931630AA	11/12/2019 20:14	Jeffrey B Smith	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1931230AA	11/08/2019 19:46	Jacob E Bailey	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1931230AA	11/08/2019 20:18	Jacob E Bailey	10

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Quality Control Summary

Client Name: ARCADIS
Reported: 11/18/2019 16:38

Group Number: 2073327

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
Batch number: D1931530AA	Sample number(s): 1195610			
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
Toluene	< 0.00045	0.00045	< 0.00012	0.00012
m/p-Xylene	< 0.0011	0.0011	< 0.00026	0.00026
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: F1931230AA	Sample number(s): 1195611			
Acetone	< 0.0013	0.0013	< 0.00053	0.00053
Acetonitrile	< 0.0014	0.0014	< 0.00083	0.00083
Acrolein	< 0.0014	0.0014	< 0.00062	0.00062
Acrylonitrile	< 0.00028	0.00028	< 0.00013	0.00013
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Bromobenzene	< 0.00064	0.00064	< 0.00010	0.00010
Bromodichloromethane	< 0.00080	0.00080	< 0.00012	0.00012
Bromoform	< 0.0018	0.0018	< 0.00017	0.00017
Bromomethane	< 0.00070	0.00070	< 0.00018	0.00018
1,3-Butadiene	< 0.00038	0.00038	< 0.00017	0.00017
2-Butanone	< 0.00062	0.00062	< 0.00021	0.00021
tert-Butyl Alcohol	< 0.00064	0.00064	< 0.00021	0.00021
Carbon Disulfide	< 0.00040	0.00040	< 0.00013	0.00013
Carbon Tetrachloride	< 0.00088	0.00088	< 0.00014	0.00014
Chlorobenzene	< 0.00060	0.00060	< 0.00013	0.00013
Chlorodifluoromethane	< 0.00053	0.00053	< 0.00015	0.00015
Chloroethane	< 0.00050	0.00050	< 0.00019	0.00019
Chloroform	< 0.00045	0.00045	< 0.000092	0.000092
Chloromethane	< 0.00050	0.00050	< 0.00024	0.00024
3-Chloropropene	< 0.00047	0.00047	< 0.00015	0.00015
Cumene	< 0.0012	0.0012	< 0.00024	0.00024
Dibromochloromethane	< 0.0011	0.0011	< 0.00013	0.00013
1,2-Dibromoethane	< 0.0010	0.0010	< 0.00013	0.00013
Dibromomethane	< 0.0010	0.0010	< 0.00014	0.00014
1,2-Dichlorobenzene	< 0.0012	0.0012	< 0.00020	0.00020
1,3-Dichlorobenzene	< 0.0011	0.0011	< 0.00019	0.00019
1,4-Dichlorobenzene	< 0.0010	0.0010	< 0.00017	0.00017
Dichlorodifluoromethane	< 0.00064	0.00064	< 0.00013	0.00013
1,1-Dichloroethane	< 0.00036	0.00036	< 0.000089	0.000089
1,2-Dichloroethane	< 0.00032	0.00032	< 0.000080	0.000080
1,1-Dichloroethene	< 0.00056	0.00056	< 0.00014	0.00014

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS
Reported: 11/18/2019 16:38

Group Number: 2073327

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
cis-1,2-Dichloroethene	< 0.00048	0.00048	< 0.00012	0.00012
trans-1,2-Dichloroethene	< 0.00034	0.00034	< 0.000086	0.000086
Dichlorofluoromethane	< 0.00046	0.00046	< 0.00011	0.00011
1,2-Dichloropropane	< 0.00060	0.00060	< 0.00013	0.00013
cis-1,3-Dichloropropene	< 0.00045	0.00045	< 0.00010	0.00010
trans-1,3-Dichloropropene	< 0.00054	0.00054	< 0.00012	0.00012
1,4-Dioxane	< 0.00061	0.00061	< 0.00017	0.00017
Ethyl Acetate	< 0.00090	0.00090	< 0.00025	0.00025
Ethyl Acrylate	< 0.00066	0.00066	< 0.00016	0.00016
Ethyl Methacrylate	< 0.00089	0.00089	< 0.00019	0.00019
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
4-Ethyltoluene	< 0.00088	0.00088	< 0.00018	0.00018
Freon 113	< 0.00084	0.00084	< 0.00011	0.00011
Freon 114	< 0.00084	0.00084	< 0.00012	0.00012
Heptane	< 0.00094	0.00094	< 0.00023	0.00023
Hexachlorobutadiene	< 0.0050	0.0050	< 0.00047	0.00047
Hexachloroethane	< 0.0026	0.0026	< 0.00027	0.00027
Hexane	< 0.00046	0.00046	< 0.00013	0.00013
2-Hexanone	< 0.00074	0.00074	< 0.00018	0.00018
Isooctane	< 0.00061	0.00061	< 0.00013	0.00013
Methyl Acrylate	< 0.00049	0.00049	< 0.00014	0.00014
Methyl Iodide	< 0.00087	0.00087	< 0.00015	0.00015
Methyl Methacrylate	< 0.00061	0.00061	< 0.00015	0.00015
Alpha Methyl Styrene	< 0.00087	0.00087	< 0.00018	0.00018
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
4-Methyl-2-pentanone	< 0.00061	0.00061	< 0.00015	0.00015
Methylene Chloride	< 0.00087	0.00087	< 0.00025	0.00025
Octane	< 0.0019	0.0019	< 0.00040	0.00040
Pentane	< 0.00038	0.00038	< 0.00013	0.00013
Propene	< 0.00028	0.00028	< 0.00016	0.00016
Styrene	< 0.00085	0.00085	< 0.00020	0.00020
1,1,1,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
1,1,2,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
Tetrachloroethene	< 0.0017	0.0017	< 0.00025	0.00025
Toluene	< 0.00045	0.00045	< 0.00012	0.00012
1,2,4-Trichlorobenzene	< 0.0028	0.0028	< 0.00038	0.00038
1,1,1-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
1,1,2-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
Trichloroethene	< 0.00097	0.00097	< 0.00018	0.00018
Trichlorofluoromethane	< 0.00084	0.00084	< 0.00015	0.00015
1,2,3-Trichloropropane	< 0.00084	0.00084	< 0.00014	0.00014
1,2,4-Trimethylbenzene	< 0.0014	0.0014	< 0.00028	0.00028
1,3,5-Trimethylbenzene	< 0.0016	0.0016	< 0.00032	0.00032
Vinyl Acetate	< 0.00056	0.00056	< 0.00016	0.00016
Vinyl Chloride	< 0.00031	0.00031	< 0.00012	0.00012

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 11/18/2019 16:38

Group Number: 2073327

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
m/p-Xylene	< 0.0011	0.0011	< 0.00026	0.00026
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: M1931630AA	Sample number(s): 1195610-1195611			
C1-C4 Hydrocarbons as hexane	< 20	20	< 5	5
>C4-C10 Hydrocarbons hexane	< 20	20	< 5	5

LCS/LCSD

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D1931530AA	Sample number(s): 1195610								
Benzene	0.0319	0.0304	0.0319	0.0321	95	101	70-130	6	25
Ethylbenzene	0.0434	0.0433	0.0434	0.0431	100	99	70-130	0	25
Methyl t-Butyl Ether	0.0361	0.0377	0.0361	0.0369	105	102	70-130	2	25
Toluene	0.0377	0.0386	0.0377	0.0378	102	100	70-130	2	25
m/p-Xylene	0.0434	0.0434	0.0434	0.0430	100	99	78-119	1	25
o-Xylene	0.0434	0.0422	0.0434	0.0426	97	98	70-130	1	25
Batch number: F1931230AA	Sample number(s): 1195611								
Acetone	0.0238	0.0256	0.0238	0.0271	108	114	70-137	6	25
Acetonitrile	0.0168	0.0190	0.0168	0.0188	113	112	67-143	1	25
Acrolein	0.0229	0.0187	0.0229	0.0208	81	91	70-135	11	25
Acrylonitrile	0.0217	0.0208	0.0217	0.0219	96	101	70-131	5	25
Benzene	0.0319	0.0392	0.0319	0.0360	123	113	70-130	9	25
Bromobenzene	0.0642	0.0787	0.0642	0.0713	122	111	70-130	10	25
Bromodichloromethane	0.0670	0.0872	0.0670	0.0806	130	120	75-134	8	25
Bromoform	0.103	0.126	0.103	0.116	122	113	60-139	8	25
Bromomethane	0.0388	0.0455	0.0388	0.0459	117	118	70-134	1	25
1,3-Butadiene	0.0221	0.0233	0.0221	0.0236	105	107	70-131	1	25
2-Butanone	0.0295	0.0294	0.0295	0.0292	100	99	70-130	1	25
tert-Butyl Alcohol	0.0303	0.0305	0.0303	0.0326	100	108	67-145	7	25
Carbon Disulfide	0.0311	0.0342	0.0311	0.0354	110	114	70-130	3	25
Carbon Tetrachloride	0.0629	0.0652	0.0629	0.0679	104	108	70-130	4	25
Chlorobenzene	0.0460	0.0512	0.0460	0.0491	111	107	76-117	4	25
Chlorodifluoromethane	0.0354	0.0406	0.0354	0.0392	115	111	70-141	4	25
Chloroethane	0.0264	0.0273	0.0264	0.0309	103	117	70-131	12	25
Chloroform	0.0488	0.0553	0.0488	0.0552	113	113	70-130	0	25
Chloromethane	0.0207	0.0212	0.0207	0.0221	102	107	70-138	5	25
3-Chloropropene	0.0313	0.0374	0.0313	0.0391	119	125	70-156	5	25
Cumene	0.0492	0.0566	0.0492	0.0526	115	107	70-131	7	25
Dibromochloromethane	0.0852	0.0982	0.0852	0.0969	115	114	74-131	1	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 11/18/2019 16:38

Group Number: 2073327

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dibromoethane	0.0768	0.0870	0.0768	0.0812	113	106	70-130	7	25
Dibromomethane	0.0711	0.0857	0.0711	0.0808	121	114	70-130	6	25
1,2-Dichlorobenzene	0.0601	0.0721	0.0601	0.0656	120	109	61-139	9	25
1,3-Dichlorobenzene	0.0601	0.0708	0.0601	0.0674	118	112	64-140	5	25
1,4-Dichlorobenzene	0.0601	0.0692	0.0601	0.0673	115	112	64-137	3	25
Dichlorodifluoromethane	0.0495	0.0599	0.0495	0.0606	121	123	70-131	1	25
1,1-Dichloroethane	0.0405	0.0433	0.0405	0.0431	107	107	70-130	0	25
1,2-Dichloroethane	0.0405	0.0520	0.0405	0.0479	128	118	70-142	8	25
1,1-Dichloroethene	0.0396	0.0396	0.0396	0.0407	100	103	70-131	3	25
cis-1,2-Dichloroethene	0.0396	0.0380	0.0396	0.0384	96	97	70-130	1	25
trans-1,2-Dichloroethene	0.0396	0.0395	0.0396	0.0412	100	104	70-130	4	25
Dichlorofluoromethane	0.0421	0.0504	0.0421	0.0511	120	121	70-136	1	25
1,2-Dichloropropane	0.0462	0.0545	0.0462	0.0501	118	108	70-130	8	25
cis-1,3-Dichloropropene	0.0454	0.0509	0.0454	0.0508	112	112	70-130	0	25
trans-1,3-Dichloropropene	0.0454	0.0524	0.0454	0.0494	115	109	70-130	6	25
1,4-Dioxane	0.0360	0.0445	0.0360	0.0401	124	111	70-130	11	25
Ethyl Acetate	0.0360	0.0323	0.0360	0.0333	90	92	73-124	3	25
Ethyl Acrylate	0.0409	0.0390	0.0409	0.0393	95	96	71-126	1	25
Ethyl Methacrylate	0.0467	0.0464	0.0467	0.0467	99	100	67-130	1	25
Ethylbenzene	0.0434	0.0475	0.0434	0.0452	109	104	70-130	5	25
4-Ethyltoluene	0.0492	0.0569	0.0492	0.0539	116	110	69-139	5	25
Freon 113	0.0766	0.0774	0.0766	0.0798	101	104	70-130	3	25
Freon 114	0.0699	0.0758	0.0699	0.0800	108	114	70-130	5	25
Heptane	0.0410	0.0440	0.0410	0.0429	107	105	70-130	2	25
Hexachlorobutadiene	0.107	0.128	0.107	0.127	120	119	34-157	1	25
Hexachloroethane	0.0968	0.124	0.0968	0.107	128	110	38-163	15	25
Hexane	0.0352	0.0339	0.0352	0.0359	96	102	70-130	6	25
2-Hexanone	0.0410	0.0436	0.0410	0.0426	107	104	74-134	2	25
Isooctane	0.0467	0.0469	0.0467	0.0449	100	96	70-130	4	25
Methyl Acrylate	0.0352	0.0344	0.0352	0.0352	98	100	75-125	2	25
Methyl Iodide	0.0581	0.0508	0.0581	0.0560	88	96	70-130	10	25
Methyl Methacrylate	0.0409	0.0396	0.0409	0.0425	97	104	73-117	7	25
Alpha Methyl Styrene	0.0483	0.0551	0.0483	0.0501	114	104	56-142	9	25
Methyl t-Butyl Ether	0.0361	0.0356	0.0361	0.0371	99	103	70-130	4	25
4-Methyl-2-pentanone	0.0410	0.0458	0.0410	0.0428	112	104	79-131	7	25
Methylene Chloride	0.0347	0.0430	0.0347	0.0429	124	123	70-139	0	25
Octane	0.0467	0.0485	0.0467	0.0475	104	102	70-130	2	25
Pentane	0.0295	0.0245	0.0295	0.0277	83	94	70-130	12	25
Propene	0.0172	0.0174	0.0172	0.0182	101	106	78-126	4	25
Styrene	0.0426	0.0477	0.0426	0.0465	112	109	70-133	2	25
1,1,1,2-Tetrachloroethane	0.0687	0.0813	0.0687	0.0730	118	106	73-137	11	25
1,1,2,2-Tetrachloroethane	0.0687	0.0810	0.0687	0.0763	118	111	68-138	6	25
Tetrachloroethene	0.0678	0.0785	0.0678	0.0744	116	110	70-130	5	25
Toluene	0.0377	0.0388	0.0377	0.0373	103	99	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS
Reported: 11/18/2019 16:38

Group Number: 2073327

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2,4-Trichlorobenzene	0.0742	0.0894	0.0742	0.0889	120	120	31-155	1	25
1,1,1-Trichloroethane	0.0546	0.0581	0.0546	0.0581	107	107	70-130	0	25
1,1,2-Trichloroethane	0.0546	0.0650	0.0546	0.0639	119	117	76-127	2	25
Trichloroethene	0.0537	0.0595	0.0537	0.0583	111	109	70-130	2	25
Trichlorofluoromethane	0.0562	0.0604	0.0562	0.0613	107	109	70-130	2	25
1,2,3-Trichloropropane	0.0603	0.0729	0.0603	0.0649	121	108	70-136	12	25
1,2,4-Trimethylbenzene	0.0492	0.0625	0.0492	0.0585	127	119	65-146	7	25
1,3,5-Trimethylbenzene	0.0492	0.0644	0.0492	0.0597	131	121	69-141	8	25
Vinyl Acetate	0.0352	0.0381	0.0352	0.0403	108	115	70-151	6	25
Vinyl Chloride	0.0256	0.0309	0.0256	0.0308	121	121	70-135	0	25
m/p-Xylene	0.0434	0.0448	0.0434	0.0431	103	99	78-119	4	25
o-Xylene	0.0434	0.0422	0.0434	0.0414	97	95	70-130	2	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 13045 Group # 2073327 Sample # 11986[illegible]10-11

Client: **Arcadis**

Project Name/#:	ERP-12833	Site ID #:	
Project Manager:	Jerome Oertling	P.O. #:	See Site List
Sampler:	Tim Maire	PWSID #:	N/A
Phone #:	973-368-5832	Quote #:	215198

State where samples were collected: NY For Compliance: Yes ☐ No ☒

For Lab Use Only
SF #:
SCR #:

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

Matrix: ☐ Tissue ☐ Sediment ☐ Soil; Water: ☐ Ground ☐ Surface ☐ Potable ☐ NPDES; Other: Air

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil/Sediment/Tissue	Water	Other: Air	Total # of Containers	BTEX/MTBE (TO-15)	C1-C4 (EPA 18 MOD/EPA 25 MOD)	>C4 - C10 (EPA 18 MOD/EPA 25 MOD)	EXTENDED LIST VOC (TO-15)	Remarks
CARBON INF	11/6/19	0735	X				X	1	X	X	X		
CARBON EFF	11/6/19	0730	X				X	1		X	X	X	

Turnaround Time Requested (TAT) (please check): Standard ☒ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address:

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category ☐ A or ☐ B	

EDD Required? Yes ☐ No ☐ If yes, format: ______

Relinquished by:	Date	Time	Received by:	Date	Time
Tim Maire	11/6/19	1600			
			[signature]	11-7-19	1727

Relinquished by Commercial Carrier:
UPS ______ FedEx ______ Other ______

Temperature upon receipt N/A °C

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7045 0717

1.0 0.5 0.4

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Sample Administration Receipt Documentation Log

Doc Log ID: 265687

Group Number(s): 2073327

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Date:	11/07/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	Yes
Samples Intact:	Yes	Air Quality Flow Controllers Present:	No
Missing Samples:	No	Air Quality Returns:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ann-Marie Phillips

2425 New Holland Pike
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: December 29, 2019 16:35

Project: 12833

Account #: 13045
Group Number: 2080232
PO Number: 30007639.MB000.C
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Chad Colwell
Electronic Copy To	ARCADIS	Attn: Jerome Oertling
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
CARBON INF Grab Air	12/18/2019 09:05	1227425
CARBON EFF Grab Air	12/18/2019 09:00	1227426

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Analysis Report

Sample Description: **CARBON INF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 12/19/2019 20:27
Collection Date/Time: 12/18/2019 09:05

ARCADIS
ELLE Sample #: AQ 1227425
ELLE Group #: 2080232
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	20 J	20	6 J	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	20 J	20	5 J	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Benzene	71-43-2	0.0019 J	0.00064	0.00060 J	0.00020	2
05265	Ethylbenzene	100-41-4	0.18	0.0020	0.041	0.00046	2
05265	Methyl t-Butyl Ether	1634-04-4	< 0.0014	0.0014	< 0.00040	0.00040	2
05265	Toluene	108-88-3	0.14	0.00090	0.036	0.00024	2
05265	m/p-Xylene	179601-23-1	0.73	0.018	0.17	0.0042	10
05265	o-Xylene	95-47-6	0.17	0.0025	0.038	0.00058	2

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1935430AA	12/20/2019 18:53	Jeffrey B Smith	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1935730AA	12/23/2019 22:17	Jacob E Bailey	2
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1936030AA	12/26/2019 19:24	Jacob E Bailey	10

Sample Description: **CARBON EFF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 12/19/2019 20:27
Collection Date/Time: 12/18/2019 09:00

ARCADIS
ELLE Sample #: AQ 1227426
ELLE Group #: 2080232
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
07090	C1-C4 Hydrocarbons as hexane[1]	n.a.	20 J	20	6 J	5	1
07090	>C4-C10 Hydrocarbons hexane[1]	n.a.	< 20	20	< 5	5	1
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Acetone	67-64-1	0.018	0.0013	0.0075	0.00053	1
05265	Acetonitrile	75-05-8	< 0.0014	0.0014	< 0.00082	0.00082	1
05265	Acrolein	107-02-8	< 0.0013	0.0013	< 0.00057	0.00057	1
05265	Acrylonitrile	107-13-1	< 0.00043	0.00043	< 0.00020	0.00020	1
05265	Benzene	71-43-2	0.0022 J	0.00032	0.00070 J	0.00010	1
05265	Bromobenzene[1]	108-86-1	< 0.00064	0.00064	< 0.00010	0.00010	1
05265	Bromodichloromethane	75-27-4	< 0.00080	0.00080	< 0.00012	0.00012	1
05265	Bromoform	75-25-2	< 0.0018	0.0018	< 0.00017	0.00017	1
05265	Bromomethane	74-83-9	< 0.00070	0.00070	< 0.00018	0.00018	1
05265	1,3-Butadiene	106-99-0	< 0.00038	0.00038	< 0.00017	0.00017	1
05265	2-Butanone	78-93-3	0.010	0.00065	0.0035	0.00022	1
05265	tert-Butyl Alcohol	75-65-0	< 0.00061	0.00061	< 0.00020	0.00020	1
05265	Carbon Disulfide	75-15-0	< 0.00037	0.00037	< 0.00012	0.00012	1
05265	Carbon Tetrachloride	56-23-5	< 0.00088	0.00088	< 0.00014	0.00014	1
05265	Chlorobenzene	108-90-7	< 0.00055	0.00055	< 0.00012	0.00012	1
05265	Chlorodifluoromethane[1]	75-45-6	< 0.00053	0.00053	< 0.00015	0.00015	1
05265	Chloroethane	75-00-3	< 0.00047	0.00047	< 0.00018	0.00018	1
05265	Chloroform	67-66-3	0.0051	0.00042	0.0011	0.000087	1
05265	Chloromethane	74-87-3	< 0.00047	0.00047	< 0.00023	0.00023	1
05265	3-Chloropropene	107-05-1	< 0.00050	0.00050	< 0.00016	0.00016	1
05265	Cumene	98-82-8	< 0.0012	0.0012	< 0.00025	0.00025	1
05265	Dibromochloromethane	124-48-1	< 0.0012	0.0012	< 0.00014	0.00014	1
05265	1,2-Dibromoethane	106-93-4	< 0.0010	0.0010	< 0.00013	0.00013	1
05265	Dibromomethane[1]	74-95-3	< 0.0010	0.0010	< 0.00014	0.00014	1
05265	1,2-Dichlorobenzene	95-50-1	< 0.0011	0.0011	< 0.00019	0.00019	1
05265	1,3-Dichlorobenzene	541-73-1	< 0.0011	0.0011	< 0.00018	0.00018	1
05265	1,4-Dichlorobenzene	106-46-7	< 0.0010	0.0010	< 0.00017	0.00017	1
05265	Dichlorodifluoromethane	75-71-8	0.0028 J	0.00064	0.00056 J	0.00013	1
05265	1,1-Dichloroethane	75-34-3	< 0.00039	0.00039	< 0.000096	0.000096	1
05265	1,2-Dichloroethane	107-06-2	< 0.00020	0.00020	< 0.000050	0.000050	1
05265	1,1-Dichloroethene	75-35-4	< 0.00056	0.00056	< 0.00014	0.00014	1
05265	cis-1,2-Dichloroethene	156-59-2	< 0.00044	0.00044	< 0.00011	0.00011	1
05265	trans-1,2-Dichloroethene	156-60-5	< 0.00036	0.00036	< 0.000090	0.000090	1
05265	Dichlorofluoromethane[1]	75-43-4	< 0.00051	0.00051	< 0.00012	0.00012	1
05265	1,2-Dichloropropane	78-87-5	< 0.00044	0.00044	< 0.000096	0.000096	1
05265	cis-1,3-Dichloropropene	10061-01-5	< 0.00040	0.00040	< 0.000088	0.000088	1
05265	trans-1,3-Dichloropropene	10061-02-6	< 0.00050	0.00050	< 0.00011	0.00011	1
05265	1,4-Dioxane	123-91-1	< 0.00050	0.00050	< 0.00014	0.00014	1
05265	Ethyl Acetate[1]	141-78-6	< 0.00068	0.00068	< 0.00019	0.00019	1

Sample Description: **CARBON EFF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 12/19/2019 20:27
Collection Date/Time: 12/18/2019 09:00

ARCADIS
ELLE Sample #: AQ 1227426
ELLE Group #: 2080232
Matrix: Air

CAT No.	Analysis Name	CAS Number	Final Result	MDL	Final Result	MDL	DF
Volatiles in Air	**EPA TO-15**		**mg/m3**	**mg/m3**	**ppm(v)**	**ppm(v)**	
05265	Ethyl Acrylate	140-88-5	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Ethyl Methacrylate[1]	97-63-2	< 0.00098	0.00098	< 0.00021	0.00021	1
05265	Ethylbenzene	100-41-4	< 0.0010	0.0010	< 0.00023	0.00023	1
05265	4-Ethyltoluene[1]	622-96-8	< 0.00093	0.00093	< 0.00019	0.00019	1
05265	Freon 113	76-13-1	0.0013 J	0.00084	0.00017 J	0.00011	1
05265	Freon 114	76-14-2	< 0.00084	0.00084	< 0.00012	0.00012	1
05265	Heptane	142-82-5	0.0024 J	0.00098	0.00059 J	0.00024	1
05265	Hexachlorobutadiene	87-68-3	< 0.0049	0.0049	< 0.00046	0.00046	1
05265	Hexachloroethane	67-72-1	< 0.0022	0.0022	< 0.00023	0.00023	1
05265	Hexane	110-54-3	0.021	0.00046	0.0060	0.00013	1
05265	2-Hexanone[1]	591-78-6	< 0.00078	0.00078	< 0.00019	0.00019	1
05265	Isooctane	540-84-1	0.014	0.00061	0.0029	0.00013	1
05265	Methyl Acrylate[1]	96-33-3	< 0.00049	0.00049	< 0.00014	0.00014	1
05265	Methyl Iodide	74-88-4	< 0.00070	0.00070	< 0.00012	0.00012	1
05265	Methyl Methacrylate	80-62-6	< 0.00066	0.00066	< 0.00016	0.00016	1
05265	Alpha Methyl Styrene[1]	98-83-9	< 0.00087	0.00087	< 0.00018	0.00018	1
05265	Methyl t-Butyl Ether	1634-04-4	< 0.00072	0.00072	< 0.00020	0.00020	1
05265	4-Methyl-2-pentanone	108-10-1	< 0.00061	0.00061	< 0.00015	0.00015	1
05265	Methylene Chloride	75-09-2	< 0.00069	0.00069	< 0.00020	0.00020	1
05265	Octane[1]	111-65-9	< 0.0021	0.0021	< 0.00046	0.00046	1
05265	Pentane[1]	109-66-0	0.39	0.0038	0.13	0.0013	10
05265	Propene[1]	115-07-1	< 0.00034	0.00034	< 0.00020	0.00020	1
05265	Styrene	100-42-5	< 0.00089	0.00089	< 0.00021	0.00021	1
05265	1,1,1,2-Tetrachloroethane[1]	630-20-6	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	1,1,2,2-Tetrachloroethane	79-34-5	< 0.00096	0.00096	< 0.00014	0.00014	1
05265	Tetrachloroethene	127-18-4	0.0033 J	0.0014	0.00048 J	0.00021	1
05265	Toluene	108-88-3	0.019	0.00045	0.0050	0.00012	1
05265	1,2,4-Trichlorobenzene	120-82-1	< 0.0028	0.0028	< 0.00038	0.00038	1
05265	1,1,1-Trichloroethane	71-55-6	< 0.00065	0.00065	< 0.00012	0.00012	1
05265	1,1,2-Trichloroethane	79-00-5	< 0.00052	0.00052	< 0.000096	0.000096	1
05265	Trichloroethene	79-01-6	< 0.00075	0.00075	< 0.00014	0.00014	1
05265	Trichlorofluoromethane	75-69-4	0.0023 J	0.00067	0.00041 J	0.00012	1
05265	1,2,3-Trichloropropane[1]	96-18-4	< 0.00084	0.00084	< 0.00014	0.00014	1
05265	1,2,4-Trimethylbenzene	95-63-6	0.0020 J	0.0014	0.00041 J	0.00028	1
05265	1,3,5-Trimethylbenzene	108-67-8	< 0.0016	0.0016	< 0.00032	0.00032	1
05265	Vinyl Acetate	108-05-4	< 0.00060	0.00060	< 0.00017	0.00017	1
05265	Vinyl Chloride	75-01-4	< 0.00033	0.00033	< 0.00013	0.00013	1
05265	m/p-Xylene	179601-23-1	0.0028 J	0.0018	0.00063 J	0.00042	1
05265	o-Xylene	95-47-6	< 0.0013	0.0013	< 0.00029	0.00029	1

The sample was collected in a Tedlar bag which is not the container referenced in the EPA method.

MDL = Method Detection Limit

Sample Description: **CARBON EFF Grab Air**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 12/19/2019 20:27
Collection Date/Time: 12/18/2019 09:00

ARCADIS
ELLE Sample #: AQ 1227426
ELLE Group #: 2080232
Matrix: Air

Sample Comments

State of New York Certification No. 10670

[1] = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07090	BTEX/MTBE/Hydrocarbons by GC	EPA 18 mod/EPA 25 mod	1	M1935430AA	12/20/2019 19:22	Jeffrey B Smith	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1936030AA	12/26/2019 19:59	Jacob E Bailey	1
05265	TO-15 VOA Ext. List Tedlar	EPA TO-15	1	F1936030AA	12/26/2019 20:34	Jacob E Bailey	10

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Quality Control Summary

Client Name: ARCADIS
Reported: 12/29/2019 16:35

Group Number: 2080232

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
Batch number: F1935730AA	Sample number(s): 1227425			
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
Toluene	< 0.00045	0.00045	< 0.00012	0.00012
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: F1936030AA	Sample number(s): 1227425-1227426			
Acetone	< 0.0013	0.0013	< 0.00053	0.00053
Acetonitrile	< 0.0014	0.0014	< 0.00083	0.00083
Acrolein	< 0.0014	0.0014	< 0.00062	0.00062
Acrylonitrile	< 0.00028	0.00028	< 0.00013	0.00013
Benzene	< 0.00035	0.00035	< 0.00011	0.00011
Bromobenzene	< 0.00064	0.00064	< 0.00010	0.00010
Bromodichloromethane	< 0.00080	0.00080	< 0.00012	0.00012
Bromoform	< 0.0018	0.0018	< 0.00017	0.00017
Bromomethane	< 0.00070	0.00070	< 0.00018	0.00018
1,3-Butadiene	< 0.00038	0.00038	< 0.00017	0.00017
2-Butanone	< 0.00062	0.00062	< 0.00021	0.00021
tert-Butyl Alcohol	< 0.00064	0.00064	< 0.00021	0.00021
Carbon Disulfide	< 0.00040	0.00040	< 0.00013	0.00013
Carbon Tetrachloride	< 0.00088	0.00088	< 0.00014	0.00014
Chlorobenzene	< 0.00060	0.00060	< 0.00013	0.00013
Chlorodifluoromethane	< 0.00053	0.00053	< 0.00015	0.00015
Chloroethane	< 0.00050	0.00050	< 0.00019	0.00019
Chloroform	< 0.00045	0.00045	< 0.000092	0.000092
Chloromethane	< 0.00050	0.00050	< 0.00024	0.00024
3-Chloropropene	< 0.00047	0.00047	< 0.00015	0.00015
Cumene	< 0.0012	0.0012	< 0.00024	0.00024
Dibromochloromethane	< 0.0011	0.0011	< 0.00013	0.00013
1,2-Dibromoethane	< 0.0010	0.0010	< 0.00013	0.00013
Dibromomethane	< 0.0010	0.0010	< 0.00014	0.00014
1,2-Dichlorobenzene	< 0.0012	0.0012	< 0.00020	0.00020
1,3-Dichlorobenzene	< 0.0011	0.0011	< 0.00019	0.00019
1,4-Dichlorobenzene	< 0.0010	0.0010	< 0.00017	0.00017
Dichlorodifluoromethane	< 0.00064	0.00064	< 0.00013	0.00013
1,1-Dichloroethane	< 0.00036	0.00036	< 0.000089	0.000089
1,2-Dichloroethane	< 0.00032	0.00032	< 0.000080	0.000080
1,1-Dichloroethene	< 0.00056	0.00056	< 0.00014	0.00014
cis-1,2-Dichloroethene	< 0.00048	0.00048	< 0.00012	0.00012

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 12/29/2019 16:35

Group Number: 2080232

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
trans-1,2-Dichloroethene	< 0.00034	0.00034	< 0.000086	0.000086
Dichlorofluoromethane	< 0.00046	0.00046	< 0.00011	0.00011
1,2-Dichloropropane	< 0.00060	0.00060	< 0.00013	0.00013
cis-1,3-Dichloropropene	< 0.00045	0.00045	< 0.00010	0.00010
trans-1,3-Dichloropropene	< 0.00054	0.00054	< 0.00012	0.00012
1,4-Dioxane	< 0.00061	0.00061	< 0.00017	0.00017
Ethyl Acetate	< 0.00090	0.00090	< 0.00025	0.00025
Ethyl Acrylate	< 0.00066	0.00066	< 0.00016	0.00016
Ethyl Methacrylate	< 0.00089	0.00089	< 0.00019	0.00019
Ethylbenzene	< 0.00083	0.00083	< 0.00019	0.00019
4-Ethyltoluene	< 0.00088	0.00088	< 0.00018	0.00018
Freon 113	< 0.00084	0.00084	< 0.00011	0.00011
Freon 114	< 0.00084	0.00084	< 0.00012	0.00012
Heptane	< 0.00094	0.00094	< 0.00023	0.00023
Hexachlorobutadiene	< 0.0050	0.0050	< 0.00047	0.00047
Hexachloroethane	< 0.0026	0.0026	< 0.00027	0.00027
Hexane	< 0.00046	0.00046	< 0.00013	0.00013
2-Hexanone	< 0.00074	0.00074	< 0.00018	0.00018
Isooctane	< 0.00061	0.00061	< 0.00013	0.00013
Methyl Acrylate	< 0.00049	0.00049	< 0.00014	0.00014
Methyl Iodide	< 0.00087	0.00087	< 0.00015	0.00015
Methyl Methacrylate	< 0.00061	0.00061	< 0.00015	0.00015
Alpha Methyl Styrene	< 0.00087	0.00087	< 0.00018	0.00018
Methyl t-Butyl Ether	< 0.00054	0.00054	< 0.00015	0.00015
4-Methyl-2-pentanone	< 0.00061	0.00061	< 0.00015	0.00015
Methylene Chloride	< 0.00087	0.00087	< 0.00025	0.00025
Octane	< 0.0019	0.0019	< 0.00040	0.00040
Pentane	< 0.00038	0.00038	< 0.00013	0.00013
Propene	< 0.00028	0.00028	< 0.00016	0.00016
Styrene	< 0.00085	0.00085	< 0.00020	0.00020
1,1,1,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
1,1,2,2-Tetrachloroethane	< 0.0010	0.0010	< 0.00015	0.00015
Tetrachloroethene	< 0.0017	0.0017	< 0.00025	0.00025
Toluene	< 0.00045	0.00045	< 0.00012	0.00012
1,2,4-Trichlorobenzene	< 0.0028	0.0028	< 0.00038	0.00038
1,1,1-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
1,1,2-Trichloroethane	< 0.00065	0.00065	< 0.00012	0.00012
Trichloroethene	< 0.00097	0.00097	< 0.00018	0.00018
Trichlorofluoromethane	< 0.00084	0.00084	< 0.00015	0.00015
1,2,3-Trichloropropane	< 0.00084	0.00084	< 0.00014	0.00014
1,2,4-Trimethylbenzene	< 0.0014	0.0014	< 0.00028	0.00028
1,3,5-Trimethylbenzene	< 0.0016	0.0016	< 0.00032	0.00032
Vinyl Acetate	< 0.00056	0.00056	< 0.00016	0.00016
Vinyl Chloride	< 0.00031	0.00031	< 0.00012	0.00012
m/p-Xylene	< 0.0011	0.0011	< 0.00026	0.00026

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 12/29/2019 16:35

Group Number: 2080232

Method Blank (continued)

Analysis Name	Result mg/m3	MDL mg/m3	Result ppm(v)	MDL ppm(v)
o-Xylene	< 0.00083	0.00083	< 0.00019	0.00019
Batch number: M1935430AA	Sample number(s): 1227425-1227426			
C1-C4 Hydrocarbons as hexane	< 20	20	< 5	5
>C4-C10 Hydrocarbons hexane	< 20	20	< 5	5

LCS/LCSD

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F1935730AA	Sample number(s): 1227425								
Benzene	0.0319	0.0368	0.0319	0.0351	115	110	70-130	5	25
Ethylbenzene	0.0434	0.0488	0.0434	0.0495	112	114	70-130	1	25
Methyl t-Butyl Ether	0.0361	0.0369	0.0361	0.0373	102	104	70-130	1	25
Toluene	0.0377	0.0410	0.0377	0.0416	109	110	70-130	1	25
o-Xylene	0.0434	0.0496	0.0434	0.0494	114	114	70-130	0	25
Batch number: F1936030AA	Sample number(s): 1227425-1227426								
Acetone	0.0238	0.0263	0.0238	0.0268	111	113	70-137	2	25
Acetonitrile	0.0168	0.0193	0.0168	0.0197	115	118	67-143	2	25
Acrolein	0.0229	0.0231	0.0229	0.0231	101	101	70-135	0	25
Acrylonitrile	0.0217	0.0231	0.0217	0.0241	106	111	70-131	4	25
Benzene	0.0319	0.0368	0.0319	0.0378	115	118	70-130	3	25
Bromobenzene	0.0642	0.0696	0.0642	0.0731	108	114	70-130	5	25
Bromodichloromethane	0.0670	0.0756	0.0670	0.0764	113	114	75-134	1	25
Bromoform	0.103	0.105	0.103	0.103	102	99	60-139	2	25
Bromomethane	0.0388	0.0414	0.0388	0.0424	107	109	70-134	2	25
1,3-Butadiene	0.0221	0.0244	0.0221	0.0255	110	115	70-131	4	25
2-Butanone	0.0295	0.0305	0.0295	0.0328	103	111	70-130	7	25
tert-Butyl Alcohol	0.0303	0.0289	0.0303	0.0297	95	98	67-145	3	25
Carbon Disulfide	0.0311	0.0341	0.0311	0.0344	110	111	70-130	1	25
Carbon Tetrachloride	0.0629	0.0597	0.0629	0.0614	95	98	70-130	3	25
Chlorobenzene	0.0460	0.0492	0.0460	0.0511	107	111	76-117	4	25
Chlorodifluoromethane	0.0354	0.0397	0.0354	0.0403	112	114	70-141	1	25
Chloroethane	0.0264	0.0292	0.0264	0.0288	110	109	70-131	1	25
Chloroform	0.0488	0.0520	0.0488	0.0544	106	111	70-130	4	25
Chloromethane	0.0207	0.0230	0.0207	0.0233	112	113	70-138	1	25
3-Chloropropene	0.0313	0.0380	0.0313	0.0409	121	131	70-156	7	25
Cumene	0.0492	0.0514	0.0492	0.0524	105	107	70-131	2	25
Dibromochloromethane	0.0852	0.0865	0.0852	0.0903	102	106	74-131	4	25
1,2-Dibromoethane	0.0768	0.0854	0.0768	0.0873	111	114	70-130	2	25
Dibromomethane	0.0711	0.0755	0.0711	0.0775	106	109	70-130	3	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 12/29/2019 16:35

Group Number: 2080232

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,2-Dichlorobenzene	0.0601	0.0652	0.0601	0.0697	108	116	61-139	7	25
1,3-Dichlorobenzene	0.0601	0.0668	0.0601	0.0710	111	118	64-140	6	25
1,4-Dichlorobenzene	0.0601	0.0647	0.0601	0.0678	108	113	64-137	5	25
Dichlorodifluoromethane	0.0495	0.0557	0.0495	0.0571	113	115	70-131	2	25
1,1-Dichloroethane	0.0405	0.0439	0.0405	0.0457	108	113	70-130	4	25
1,2-Dichloroethane	0.0405	0.0477	0.0405	0.0489	118	121	70-142	2	25
1,1-Dichloroethene	0.0396	0.0418	0.0396	0.0425	105	107	70-131	2	25
cis-1,2-Dichloroethene	0.0396	0.0404	0.0396	0.0414	102	104	70-130	2	25
trans-1,2-Dichloroethene	0.0396	0.0415	0.0396	0.0427	105	108	70-130	3	25
Dichlorofluoromethane	0.0421	0.0502	0.0421	0.0509	119	121	70-136	1	25
1,2-Dichloropropane	0.0462	0.0520	0.0462	0.0556	113	120	70-130	7	25
cis-1,3-Dichloropropene	0.0454	0.0473	0.0454	0.0482	104	106	70-130	2	25
trans-1,3-Dichloropropene	0.0454	0.0502	0.0454	0.0510	111	112	70-130	2	25
1,4-Dioxane	0.0360	0.0388	0.0360	0.0404	108	112	70-130	4	25
Ethyl Acetate	0.0360	0.0350	0.0360	0.0362	97	101	73-124	3	25
Ethyl Acrylate	0.0409	0.0394	0.0409	0.0411	96	100	71-126	4	25
Ethyl Methacrylate	0.0467	0.0449	0.0467	0.0469	96	101	67-130	5	25
Ethylbenzene	0.0434	0.0460	0.0434	0.0475	106	109	70-130	3	25
4-Ethyltoluene	0.0492	0.0553	0.0492	0.0566	113	115	69-139	2	25
Freon 113	0.0766	0.0775	0.0766	0.0796	101	104	70-130	3	25
Freon 114	0.0699	0.0766	0.0699	0.0785	110	112	70-130	2	25
Heptane	0.0410	0.0425	0.0410	0.0446	104	109	70-130	5	25
Hexachlorobutadiene	0.107	0.104	0.107	0.116	98	109	34-157	11	25
Hexachloroethane	0.0968	0.0929	0.0968	0.0861	96	89	38-163	8	25
Hexane	0.0352	0.0382	0.0352	0.0390	108	111	70-130	2	25
2-Hexanone	0.0410	0.0421	0.0410	0.0451	103	110	74-134	7	25
Isooctane	0.0467	0.0480	0.0467	0.0503	103	108	70-130	5	25
Methyl Acrylate	0.0352	0.0350	0.0352	0.0374	99	106	75-125	7	25
Methyl Iodide	0.0581	0.0580	0.0581	0.0591	100	102	70-130	2	25
Methyl Methacrylate	0.0409	0.0400	0.0409	0.0434	98	106	73-117	8	25
Alpha Methyl Styrene	0.0483	0.0534	0.0483	0.0533	110	110	56-142	0	25
Methyl t-Butyl Ether	0.0361	0.0347	0.0361	0.0351	96	97	70-130	1	25
4-Methyl-2-pentanone	0.0410	0.0426	0.0410	0.0460	104	112	79-131	8	25
Methylene Chloride	0.0347	0.0431	0.0347	0.0445	124	128	70-139	3	25
Octane	0.0467	0.0498	0.0467	0.0528	106	113	70-130	6	25
Pentane	0.0295	0.0294	0.0295	0.0304	100	103	70-130	3	25
Propene	0.0172	0.0187	0.0172	0.0186	109	108	78-126	1	25
Styrene	0.0426	0.0460	0.0426	0.0472	108	111	70-133	3	25
1,1,1,2-Tetrachloroethane	0.0687	0.0678	0.0687	0.0718	99	105	73-137	6	25
1,1,2,2-Tetrachloroethane	0.0687	0.0836	0.0687	0.0869	122	127	68-138	4	25
Tetrachloroethene	0.0678	0.0715	0.0678	0.0738	105	109	70-130	3	25
Toluene	0.0377	0.0402	0.0377	0.0410	107	109	70-130	2	25
1,2,4-Trichlorobenzene	0.0742	0.0801	0.0742	0.0873	108	118	31-155	9	25
1,1,1-Trichloroethane	0.0546	0.0542	0.0546	0.0563	99	103	70-130	4	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 12/29/2019 16:35

Group Number: 2080232

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/m3	LCS Conc mg/m3	LCSD Spike Added mg/m3	LCSD Conc mg/m3	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,2-Trichloroethane	0.0546	0.0644	0.0546	0.0667	118	122	76-127	4	25
Trichloroethene	0.0537	0.0541	0.0537	0.0583	101	108	70-130	7	25
Trichlorofluoromethane	0.0562	0.0590	0.0562	0.0602	105	107	70-130	2	25
1,2,3-Trichloropropane	0.0603	0.0704	0.0603	0.0730	117	121	70-136	4	25
1,2,4-Trimethylbenzene	0.0492	0.0556	0.0492	0.0578	113	118	65-146	4	25
1,3,5-Trimethylbenzene	0.0492	0.0589	0.0492	0.0601	120	122	69-141	2	25
Vinyl Acetate	0.0352	0.0398	0.0352	0.0410	113	116	70-151	3	25
Vinyl Chloride	0.0256	0.0282	0.0256	0.0284	110	111	70-135	1	25
m/p-Xylene	0.0434	0.0443	0.0434	0.0459	102	106	78-119	3	25
o-Xylene	0.0434	0.0421	0.0434	0.0431	97	99	70-130	2	25

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 13045 Group # 2080232 Sample # 1227425-26

Client:	Arcadis		
Project Name/#:	ERP-12833	Site ID #:	
Project Manager:	Jerome Oertling	P.O. #:	See Site List
Sampler:	Tim Maike	PWSID #:	N/A
Phone #:	973-368-5832	Quote #:	215198

State where samples were collected: ____ For Compliance: Yes ☐ No ☒

Matrix: Tissue ☐, Sediment ☐, Soil ☐; Water: Ground ☐, Surface ☐, Potable ☐, NPDES ☐; Other: Air

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil/Sediment/Tissue	Water	Other: Air	Total # of Containers	BTEX/MTBE (TO-15)	C1-C4 (EPA 18 MOD/EPA 25 MOD)	>C4 - C10 (EPA 18 MOD/EPA 25 MOD)	EXTENDED LIST VOC (TO-15)						Remarks
CARBON INF	12/18/19	0905	X				X	1	X	X	X							
CARBON EFF	12/18/19	0900	X				X	1		X	X	X						

Preservation and Filtration Codes

For Lab Use Only
SF #: ____
SCR #: ____

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
F = Field Filtered O = Other

Turnaround Time Requested (TAT) (please check): Standard ☒ Rush ☐
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:
Rush results requested by (please check): E-Mail ☐ Phone ☐
E-mail Address:
Phone:

Data Package Options (please check if required)
Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type VI (Raw Data Only) ☐ TX TRRP-13 ☐
NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☐ No ☐ If yes, format: ____

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	12/18/19	1600			
			[signature]	12-19-19	1037

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt N/A °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

7045 0717

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Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 270470

Group Number(s):

Client: Arcadis

2000232

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Date:	12/19/2019
Number of Packages:	1	Number of Projects:	2

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	N/A	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	Yes
Samples Intact:	Yes	Air Quality Flow Controllers Present:	No
Missing Samples:	No	Air Quality Returns:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Ann-Marie Phillips

2425 New Holland Pike
Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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