Groundwater & Environmental Services, Inc.

89 Cabot Court, Suite A
Hauppauge, NY 11788

T. 800.360.9405

April 11, 2019

Michael D. MacCabe, P.E.
Senior Environmental Engineer
Division of Environmental Remediation
NYS Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7016

Re: Site Status Update Report
Former Mobil Service Station #17-EMW
304 Columbia Street
Brooklyn, New York
NYSDEC Spill #89-04339

Dear Mr. MacCabe:

Please find the enclosed *Site Status Update Report* for work performed during the 1st quarter 2019 at the Former Mobil Service Station #17-EMW ("the Site") located at 304 Columbia Street in Brooklyn, New York. During this monitoring period, the following work was performed:

Aquifer Testing

Aquifer testing, including a slug test at monitoring wells MW-13 and MW-19, and a pump test at monitoring well MW-2 was conducted on January 11th, 2019 as part of the property redevelopment planning. These tests were completed to evaluate aquifer characteristics, including estimated dewatering calculations, in advance of a proposed remedial excavation incorporated as part of a property redevelopment scope or work that will be outlined in a Remedial Action Work Plan (RAWP). The RAWP will be submitted to the New York City Department of Environmental Protection (NYCDEP) and the New York State Department of Environmental Conservation (NYSDEC).

Quarterly Groundwater Monitoring

The 1st quarter groundwater monitoring event was conducted on March 7, 2019. Sixteen (16) monitoring wells were gauged (MW-1 through MW-3, MW-5, MW-8A and MW-10 through MW-20). Sixteen (16) monitoring wells were sampled (MW-1 through MW-3, MW-5, MW-8A and MW-10 through MW-20). Samples collected were analyzed for BTEX and MTBE via EPA Method 8260. Monitoring wells MW-7A and MW-9 were inaccessible or could not be located and therefore were not gauged or sampled. LPH was detected in monitoring wells MW-1 (0.02 feet) and MW-2 (0.03 feet).

Dissolved BTEX concentrations ranged from non-detect at three (3) well (MW-3, MW-5 and MW-15) to 13,790 µg/L (MW-10). Dissolved MTBE concentrations ranged from non-detect at six (6) wells (MW-1, MW-5, MW-14, MW-16 through MW-18) to 69 µg/L (MW-10).

The next groundwater monitoring event will be conducted in June 2019 and a *Site Status Update Report* will be submitted in July 2019.

Should you have any questions or comments regarding the information provided herein, please contact Michael DeGloria at (866) 839-5195, extension 3839.

Respectfully Submitted,
Groundwater & Environmental Services, Inc.

Christina Andreotto
2019.04.11 08:27:51
-04'00'

For: Dustin Gagliano
Associate Environmental Scientist

Michael DeGloria
Michael DeGloria
2019.04.11 08:32:17
-04'00'

Michael DeGloria, P.G.
Principal Project Manager

Enclosure

Cc: Margaret Omori - ExxonMobil Environmental and Property Solutions

EXXONMOBIL ENVIRONMENTAL and PROPERTY SOLUTIONS

SITE STATUS UPDATE REPORT

Site ID:	Former Mobil Service Station #17-EMW	**Regulatory Agency:**	NYSDEC - Region 2
Site Address:	304 Columbia Street Brooklyn, New York	**Regulatory Contact:**	Michael MacCabe, P.E.
ExxonMobil Contact:	Margaret Omori	**NYSDEC Spill #(s):**	89-04339
Consultant:	Groundwater & Environmental Services, Inc. (GES)	**GES Project Manager:**	Michael DeGloria, P.G.

Report Date: April 19, 2019

Monitoring Period: 1st Quarter of 2019

Current Site Status: The Site is currently an automobile repair facility pending redevelopment under the supervision of the New York City Office of Environmental Remediation.

Work Performed:

- January 11, 2019 – Conducted slug tests at monitoring wells MW-13 and MW-19 and a pump test at monitoring well MW-2 as part of the property redevelopment planning. A memo regarding this activity including the non-hazardous waste manifest documenting the transport and disposal of groundwater generated as part of this activity is included in **Appendix C**.
- March 7, 2019 - Conducted quarterly groundwater monitoring activities which included the gauging of sixteen (16) monitoring wells (MW-1 through MW-3, MW-5, MW-8A and MW-10 through MW-20) and sampling of sixteen (16) monitoring wells (MW-1 through MW-3, MW-5, MW-8A and MW-10 through MW-20). Monitoring wells MW-7A and MW-9, could not be located or were inaccessible and therefore were not gauged or sampled. Monitoring wells MW-1 and MW-2 contained measurable product and were not sampled. Groundwater analytical results are summarized on **Table 1** and **Figure 1**. The full laboratory report is included in **Appendix D**.

Groundwater Monitoring:

Groundwater Monitoring Data	
Number of Wells:	**Total = 18** On-Site Wells: MWs (14): MW-1 through MW-3, MW-5, MW-7A, MW-11 through MW-14 and MW-16 through MW-20 Off-Site Wells: MWs (4): MW-8A, MW-9, MW-10 and MW-15 Injection Wells: IP-1 through IP-12
Gauging Frequency:	Quarterly
LPH:	0.02 feet (MW-1) and 0.03 feet (MW-2)
Groundwater Depth:	7.64 feet (MW-17) to 9.91 (MW-10) feet below TOC
Groundwater Flow:	South/southeast
Sampling Frequency:	Quarterly
Groundwater Analytical Results:	BTEX: BDL at three (3) well (MW-3, MW-5 and MW-15) to 13,790 µg/L (MW-10) MTBE: ND at six (6) wells (MW-1, MW-5, MW-14, MW-16 through MW-18) to 69 µg/L (MW-10)

Proposed Plans:

- Conduct quarterly groundwater sampling in June 2019
- Prepare a *Site Status Update Report* in July 2019 documenting quarterly Site activities
- Continue to finalize redevelopment and remedial action plans under the supervision of the New York City Office of Environmental Remediation

Attachments:

Table 1 – Historical Groundwater Monitoring Summary

Table 2 – Groundwater Geochemical Parameter Data

Figure 1 – Groundwater Monitoring Map – March 7, 2018

Attachment A – List of Acronyms

Attachment B – Site History

Attachment C – Dewatering Calculations Memo

Attachment D – Laboratory Analytical Results – Groundwater

Table 1

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-1	2/28/2005	100.00	8.48	8.47	0.01	91.53	-	-	-	-	-	-	
	6/6/2005	100.00	8.41	8.40	0.01	91.60	-	-	-	-	-	-	
	9/8/2005	100.00	9.10	9.02	0.08	90.96	-	-	-	-	-	-	
	12/29/2005	100.00	7.95	7.94	0.01	92.06	-	-	-	-	-	-	
	3/20/2006	100.00	8.69	8.60	0.09	91.38	-	-	-	-	-	-	
	6/7/2006	100.00	7.65	-	-	92.35	-	-	-	-	-	-	
	9/14/2006	100.00	7.70	7.51	0.19	92.44	-	-	-	-	-	-	
	12/7/2006	100.00	7.88	7.62	0.26	92.32	-	-	-	-	-	-	
	3/29/2007	100.00	8.44	8.28	0.16	91.68	-	-	-	-	-	-	
	6/13/2007	100.00	-	-	-	-	-	-	-	-	-	-	NM
	9/19/2007	100.00	9.03	8.68	0.35	91.23	-	-	-	-	-	-	
	12/11/2007	100.00	9.10	9.08	0.02	90.92	-	-	-	-	-	-	
	3/13/2008	100.00	8.46	-	-	91.54	**220**	**79.8**	**830**	**414**	1,543.8	**14.9**	
	6/6/2008	100.00	8.61	-	-	91.39	**271**	**89.1**	**817**	**481**	1,658.1	**17.3**	
	12/30/2008	100.00	8.24	-	-	91.76	**216**	**67.8**	**539**	**336**	1,158.8	**13.2**	
	3/16/2009	100.00	9.41	-	-	90.59	**215**	**78.8**	**761**	**474**	1,528.8	9	
	6/8/2009	100.00	8.23	-	-	91.77	**24**	**88.4**	**551**	**692**	1,355.4	ND < 5	
	7/20/2009	100.00	8.48	8.20	0.28	91.73	-	-	-	-	-	-	
	9/24/2009	100.00	9.12	8.98	0.14	90.99	-	-	-	-	-	-	
	12/3/2009	100.00	8.96	8.86	0.10	91.12	-	-	-	-	-	-	
	3/3/2010	100.00	7.98	-	-	92.02	**109**	**75.2**	**948**	**293**	1,425.2	3.6	
	6/7/2010	100.00	8.31	8.27	0.04	91.72	-	-	-	-	-	-	
	9/1/2010	100.00	9.36	-	-	90.64	**89.3**	**86.5**	**1,010**	**405**	1,590.8	ND < 20	
	12/3/2010	100.00	9.13	9.10	0.03	90.89	-	-	-	-	-	-	
	3/29/2011	100.00	8.01	7.84	0.17	92.12	-	-	-	-	-	-	
	6/16/2011	100.00	5.53	5.13	0.40	94.77	-	-	-	-	-	-	
	8/8/2011	100.00	9.06	8.88	0.18	91.08	-	-	-	-	-	-	
	9/19/2011	100.00	7.75	7.37	0.38	92.54	-	-	-	-	-	-	
	12/5/2011	100.00	8.24	8.12	0.12	91.85	-	-	-	-	-	-	
	3/16/2012	100.00	9.32	9.29	0.03	90.70	-	-	-	-	-	-	
	6/8/2012	100.00	8.44	-	-	91.56	**33.0**	**29.2**	**199**	**147**	408.2	ND < 1.00	
	9/7/2012	100.00	8.81	-	-	91.19	**33.5**	**20.5**	**270**	**119**	443	ND < 1.00	
	12/18/2012	100.00	8.93	-	-	91.07	**33.5**	**25.4**	**363**	**203**	624.9	ND < 1.00	
	3/14/2013	100.00	8.71	-	-	91.29	**42.8**	**38.0**	**378**	**227**	685.8	ND < 1.00	
	6/24/2013	100.00	7.59	-	-	92.41	**37.5**	**36.0**	**464**	**224**	761.5	ND < 1.00	
	9/6/2013	100.00	8.93	8.85	0.08	91.13	-	-	-	-	-	-	
	9/26/2013	100.00	9.14	8.98	0.16	90.98	-	-	-	-	-	-	
	10/23/2013	100.00	9.41	9.37	0.04	90.62	-	-	-	-	-	-	
	11/11/2013	100.00	9.74	-	-	90.26	-	-	-	-	-	-	
	12/10/2013	100.00	9.88	-	-	90.12	**16.7**	**28.7**	**315**	**211**	571.4	ND < 1.00	
	1/21/2014	100.00	9.09	9.05	0.04	90.94	-	-	-	-	-	-	
	3/10/2014	100.00	-	-	-	-	**25.1**	**25.1**	**286**	**208**	544.2	1.43	COULD NOT GAUGE
	6/3/2014	100.00	8.10	-	-	91.90	**20.0**	ND < 20.0	**371**	**200**	591	ND < 20.0	
	10/2/2014	100.00	9.59	9.47	0.12	90.50	**33.6**	**42.7**	**484**	**321**	881.3	ND < 1.00	
	12/3/2014	100.00	8.73	-	-	91.27	**42.9**	**39.6**	**472**	**336**	890.5	ND < 5.00	SHEEN
	3/11/2015	100.00	8.41	-	-	91.59	**17.1**	**11.7**	**93.1**	**135**	256.9	ND < 1.00	
	6/18/2015	100.00	8.65	8.58	0.07	91.40	-	-	-	-	-	-	
	9/9/2015	100.00	7.98	7.90	0.08	92.08	**38.5**	**21.8**	**277**	**167**	504.3	ND < 1.00	
	12/10/2015	100.00	9.57	9.33	0.24	90.61	-	-	-	-	-	-	
	3/16/2016	100.00	8.63	8.37	0.26	91.57	-	-	-	-	-	-	
	6/15/2016	100.00	8.95	8.77	0.18	91.19	-	-	-	-	-	-	
	9/19/2016	100.00	9.50	9.35	0.15	90.61	-	-	-	-	-	-	
	12/8/2016	100.00	8.90	8.70	0.20	91.25	-	-	-	-	-	-	
	3/16/2017	100.00	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	100.00	8.15	7.82	0.33	92.10	-	-	-	-	-	-	
	9/7/2017	100.00	8.36	-	-	91.64	**42.4**	**19.2**	**287**	**193**	541.6	ND < 1.0	
	12/11/2017	100.00	9.47	9.33	0.14	90.64	-	-	-	-	-	-	
	3/26/2018	100.00	8.78	8.51	0.27	91.42	-	-	-	-	-	-	
	6/11/2018	100.00	8.72	8.62	0.10	91.36	-	-	-	-	-	-	
	9/4/2018	100.00	8.80	8.78	0.02	91.22	**52**	**36**	**390**	**310**	788	0.2	
	12/20/2018	100.00	8.30	8.14	0.16	91.82	-	-	-	-	-	-	CLEAR
	3/7/2019	100.00	8.33	8.31	0.02	91.69	**26**	**22**	**260**	**180**	488	ND (< 0.4)	
MW-2	2/28/2005	100.16	8.78	8.77	0.01	91.39	-	-	-	-	-	-	
	6/6/2005	100.16	8.66	8.65	0.01	91.51	-	-	-	-	-	-	
	9/8/2005	100.16	9.87	9.62	0.25	90.48	-	-	-	-	-	-	
	12/29/2005	100.16	8.26	8.25	0.01	91.91	-	-	-	-	-	-	
	3/20/2006	100.16	8.96	8.88	0.08	91.26	-	-	-	-	-	-	
	6/7/2006	100.16	7.73	-	-	92.43	-	-	-	-	-	-	
	9/14/2006	100.16	7.90	7.58	0.32	92.50	-	-	-	-	-	-	
	12/7/2006	100.16	8.20	7.80	0.40	92.26	-	-	-	-	-	-	
	3/29/2007	100.16	8.81	8.72	0.09	91.42	-	-	-	-	-	-	
	6/13/2007	100.16	8.15	7.72	0.43	92.33	-	-	-	-	-	-	
	9/19/2007	100.16	9.18	8.68	0.50	91.36	-	-	-	-	-	-	
	12/11/2007	100.16	9.35	9.28	0.07	90.86	-	-	-	-	-	-	
	3/13/2008	100.16	8.77	-	-	91.39	**204**	**18**	**130**	**109**	461	ND < 2	
	6/6/2008	100.16	9.10	-	-	91.06	**378**	**25**	**137**	**93.3**	633.3	**71**	
	12/30/2008	100.16	8.56	-	-	91.60	**305**	**27**	**50**	**84.4**	466.4	**37**	
	3/16/2009	100.16	9.71	-	-	90.45	**246**	**18**	**23**	**53.4**	340.4	**67**	
	6/8/2009	100.16	8.61	8.53	0.08	91.61	-	-	-	-	-	-	
	7/20/2009	100.16	9.47	8.35	1.12	91.53	-	-	-	-	-	-	
	9/24/2009	100.16	9.06	9.01	0.05	91.14	-	-	-	-	-	-	
	12/3/2009	100.16	9.75	9.05	0.70	90.94	-	-	-	-	-	-	
	3/3/2010	100.16	8.30	8.27	0.03	91.88	-	-	-	-	-	-	
	6/7/2010	100.16	9.07	8.36	0.71	91.62	-	-	-	-	-	-	
	9/1/2010	100.16	9.94	-	-	90.22	**530**	**22**	**202**	**105**	859	**155**	
	12/3/2010	100.16	9.37	-	-	90.79	**500**	**52.4**	**336**	**232**	1,120.4	**120**	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-2 (cont)	3/29/2011	100.16	8.74	8.08	0.66	91.92	-	-	-	-	-	-	
	6/16/2011	100.16	9.80	8.30	1.50	91.49	-	-	-	-	-	-	
	8/8/2011	100.16	9.43	9.06	0.37	91.01	-	-	-	-	-	-	
	9/19/2011	100.16	7.81	7.50	0.31	92.58	-	-	-	-	-	-	
	12/5/2011	100.16	9.10	8.42	0.68	91.57	-	-	-	-	-	-	
	3/16/2012	100.16	10.10	9.58	0.52	90.45	-	-	-	-	-	-	
	6/8/2012	100.16	8.75	8.72	0.03	91.43	-	-	-	-	-	-	
	9/7/2012	100.16	8.95	8.91	0.04	91.24	-	-	-	-	-	-	
	12/18/2012	100.16	10.02	9.89	0.13	90.24	-	-	-	-	-	-	
	3/14/2013	100.16	9.65	9.60	0.05	90.55	-	-	-	-	-	-	
	6/24/2013	100.16	8.30	7.95	0.35	92.12	-	-	-	-	-	-	
	9/6/2013	100.16	9.07	9.02	0.05	91.13	-	-	-	-	-	-	
	10/7/2013	100.16	9.34	-	-	90.82	-	-	-	-	-	-	
	10/23/2013	100.16	9.70	9.67	0.03	90.48	-	-	-	-	-	-	
	11/11/2013	100.16	10.05	-	-	90.11	-	-	-	-	-	-	
	12/10/2013	100.16	10.08	-	-	90.08	**258**	**18.5**	**204**	**109**	589.5	**39.1**	
	1/21/2014	100.16	9.33	-	-	90.83	-	-	-	-	-	-	
	3/10/2014	100.16	-	-	-	-	-	-	-	-	-	-	COULD NOT GAUGE
	6/3/2014	100.16	8.34	8.28	0.06	91.87	-	-	-	-	-	-	
	10/2/2014	100.16	9.76	9.64	0.12	90.49	**487**	**23.7**	**201**	**162**	873.7	2.63	
	12/3/2014	100.16	8.96	-	-	91.20	**754**	**34.5**	**353**	**177**	1,318.5	ND < 5.00	
	3/11/2015	100.16	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/18/2015	100.16	9.12	8.86	0.26	91.24	-	-	-	-	-	-	
	9/9/2015	100.16	9.67	9.12	0.55	90.90	**373**	**15.3**	**249**	**394**	1,031.3	1.51	
	12/10/2015	100.16	9.95	9.55	0.40	90.51	-	-	-	-	-	-	
	3/16/2016	100.16	9.11	8.67	0.44	91.38	-	-	-	-	-	-	
	6/15/2016	100.16	9.35	9.00	0.35	91.07	-	-	-	-	-	-	
	9/19/2016	100.16	10.12	9.67	0.45	90.38	-	-	-	-	-	-	
	12/8/2016	100.16	9.12	9.00	0.12	91.13	-	-	-	-	-	-	
	3/16/2017	100.16	9.55	9.20	0.35	90.87	**493**	**32.7**	**213**	**227**	965.7	1.17	
	6/26/2017	100.16	8.67	8.05	0.62	91.96	-	-	-	-	-	-	
	9/7/2017	100.16	9.07	8.51	0.56	91.51	-	-	-	-	-	-	
	12/11/2017	100.16	10.23	9.35	0.88	90.59	-	-	-	-	-	-	
	3/26/2018	100.16	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/11/2018	100.16	9.74	9.36	0.38	90.71	-	-	-	-	-	-	
	9/4/2018	100.16	9.56	9.50	0.06	90.65	-	-	-	-	-	-	
	12/20/2018	100.16	8.46	8.45	0.01	91.71	-	-	-	-	-	-	
	3/7/2019	100.16	8.70	8.67	0.03	91.48	**230**	**14**	**180**	**320**	744	0.3	
MW-3	2/28/2005	100.43	9.32	-	-	91.11	**120**	**38.5**	**167**	**151**	476.5	**13.1**	
	6/6/2005	100.43	9.21	-	-	91.22	**37.6**	**22.5**	**135**	**113**	308.1	3.5	
	9/8/2005	100.43	9.67	-	-	90.76	**86**	**23.5**	**47.9**	**139**	296.4	7.8	
	12/29/2005	100.43	8.50	-	-	91.93	**11.3**	0.88	**28.9**	**15.3**	56.38	0.88	
	3/20/2006	100.43	9.98	-	-	90.45	**218**	**12.1**	**94.6**	**61.9**	386.6	**24.7**	
	6/7/2006	100.43	7.51	-	-	92.92	**9.9**	2.6	**27.2**	**12.1**	51.8	ND < 1	
	9/14/2006	100.43	7.57	-	-	92.86	**17.8**	ND < 1	**20.8**	3.9	42.5	ND < 1	
	12/7/2006	100.43	7.90	-	-	92.53	**10.4**	ND < 1	**15.7**	2	28.1	0.51	
	3/29/2007	100.43	8.69	-	-	91.74	0.94	ND < 1	**5.1**	1	7.04	ND < 1	
	6/13/2007	100.43	7.95	-	-	92.48	**3.6**	ND < 1	**6.8**	0.52	10.92	ND < 1	
	9/19/2007	100.43	9.45	-	-	90.98	**61.8**	1.70	**63.2**	**7.8**	134.5	9.5	
	12/11/2007	100.43	9.75	-	-	90.68	**71.3**	**12.8**	**101**	**24.8**	209.9	7.4	
	3/13/2008	100.43	8.56	-	-	91.87	**10.8**	ND < 1	3	0.72	14.52	ND < 1	
	6/6/2008	100.43	9.46	-	-	90.97	**76.1**	**9.5**	**46.5**	**17.9**	150	**15**	
	12/30/2008	100.43	8.49	-	-	91.94	**5.8**	0.44	0.28	ND < 1	6.52	0.53	
	3/16/2009	100.43	10.02	-	-	90.41	**113**	**13.5**	**6**	**20.8**	153.3	**20.2**	
	6/8/2009	100.43	8.33	-	-	92.10	**1.7**	ND < 1	1.4	ND < 1	3.1	ND < 1	
	7/20/2009	100.43	9.39	-	-	91.04	**92**	4	**10.6**	**13.4**	120	**13.2**	
	9/24/2009	100.43	9.57	-	-	90.86	**153**	**12.1**	**79.5**	**97.3**	341.9	ND < 1	
	12/3/2009	100.43	9.60	-	-	90.83	**92.7**	**8.4**	**90.4**	**79.1**	270.6	3.1	
	3/3/2010	100.43	8.18	-	-	92.25	0.27	ND < 1	1.7	1.6	3.57	ND < 1	
	6/7/2010	100.43	9.18	-	-	91.25	**3**	0.50	**6.8**	3.2	13.5	1.2	
	9/1/2010	100.43	10.66	-	-	89.77	**49.3**	**28.8**	**164**	**170**	412.1	**25.8**	
	12/3/2010	100.43	9.58	-	-	90.85	**3.9**	2.7	**30.9**	**26.5**	64	ND < 1	
	3/29/2011	100.43	8.25	-	-	92.18	ND < 1	ND < 1	0.36	0.33	0.69	ND < 1	
	6/16/2011	100.43	8.90	-	-	91.53	**2.8**	2.1	**49.5**	**31.2**	85.6	ND < 5	
	8/8/2011	100.43	9.51	-	-	90.92	**23.1**	**17.4**	**157**	**114**	311.5	ND < 1	
	3/16/2012	100.43	9.97	-	-	90.46	**25**	**43**	**867**	**386**	1,321	ND < 1	
	6/8/2012	100.43	9.27	-	-	91.16	**14.9**	**27.0**	**389**	**208**	638.9	ND < 1.00	
	9/7/2012	100.43	9.41	-	-	91.02	**3.67**	**7.33**	**110**	**83.2**	204.2	ND < 1.00	
	12/18/2012	100.43	9.51	-	-	90.92	**19.2**	**31.6**	**378**	**278**	706.8	ND < 1.00	
	3/14/2013	100.43	9.47	-	-	90.96	**15.7**	**36.7**	**319**	**277**	648.4	1.42	
	6/24/2013	100.43	8.07	-	-	92.36	ND < 1.00	3.05	**63.9**	**68.2**	135.15	ND < 1.00	
	9/4/2013	100.43	9.72	-	-	90.71	**7.74**	**14.1**	**127**	**113**	261.84	6.86	
	9/6/2013	100.43	9.76	-	-	90.67	**7.74**	**14.1**	**127**	**113**	261.84	6.86	
	11/11/2013	100.43	10.85	-	-	89.58	-	-	-	-	-	-	
	12/10/2013	100.43	10.55	-	-	89.88	**4.18**	**18.5**	**222**	**211**	455.68	ND < 1.00	
	1/21/2014	100.43	9.78	-	-	90.65	-	-	-	-	-	-	
	3/10/2014	100.43	-	-	-	-	**1.60**	**5.32**	**75.7**	**118**	200.62	1.26	COULD NOT GAUGE
	6/3/2014	100.43	8.56	-	-	91.87	ND < 1.00	1.26	**28.3**	**43.2**	72.76	ND < 1.00	
	10/2/2014	100.43	10.29	-	-	90.14	**3.21**	4.44	**12.2**	**118**	137.85	ND < 1.00	
	12/3/2014	100.43	9.50	-	-	90.93	**1.08**	2.15	**20.8**	**61.7**	85.73	ND < 1.00	
	3/11/2015	100.43	8.19	-	-	92.24	ND < 1.00	ND < 1.00	1.63	2.95	4.58	ND < 1.00	
	6/18/2015	100.43	9.52	-	-	90.91	ND < 1.00	1.12	**5.18**	**26.4**	32.7	ND < 1.00	
	9/9/2015	100.43	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	12/10/2015	100.43	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/16/2016	100.43	9.19	-	-	91.24	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/19/2016	100.43	8.45	-	-	91.98	ND < 1.00*	ND < 1.00*	**8.66**	**11.6**	20.26	ND < 1.00	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	1	5	5	5	NS	10	
MW-3	12/8/2016	100.43	9.26	-	-	91.17	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
(cont)	3/16/2017	100.43	-	-	-	-	-	-	-	-	-	-	CNL
	6/26/2017	100.43	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	9/7/2017	100.43	8.26	-	-	92.17	ND < 0.50	ND < 1.0	1.7	0.67	2.37	ND < 1.0	
	12/11/2017	100.43	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/26/2018	100.43	8.30	-	-	92.13	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	6/11/2018	100.43	8.67	-	-	91.76	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	9/4/2018	100.43	9.11	-	-	91.32	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	ND (< 0.2)	
	12/20/2018	100.43	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/7/2019	100.43	8.29	-	-	92.14	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	4	
MW-4	2/28/2005	100.05	9.02	-	-	91.03	**50**	2.6	**11**	**25**	88.6	ND < 1	
	6/6/2005	100.05	9.18	-	-	90.87	**4.6**	ND < 1	0.49	ND < 1	5.09	ND < 1	
	12/29/2005	100.05	8.54	-	-	91.51	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/20/2006	100.05	9.16	-	-	90.89	**9.1**	ND < 1	0.62	0.59	10.31	ND < 1	
	6/7/2006	100.05	8.00	-	-	92.05	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	9/14/2006	NSD	-	-	-	-	-	-	-	-	-	-	WELL DESTROYED
MW-5	2/28/2005	101.15	8.47	-	-	92.68	0.86	ND < 1	1.6	**8.1**	10.56	3.1	
	6/6/2005	101.15	8.73	-	-	92.42	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	9/8/2005	101.15	-	-	-	-	ND < 1	ND < 1	4.7	**7.3**	12	ND < 1	NM
	12/29/2005	101.15	7.95	-	-	93.20	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/20/2006	101.15	8.63	-	-	92.52	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/7/2006	101.15	8.12	-	-	93.03	ND < 1	ND < 1	ND < 1	0.65	0.65	ND < 1	
	12/7/2006	101.15	7.97	-	-	93.18	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/29/2007	101.15	8.10	-	-	93.05	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/13/2007	101.15	7.68	-	-	93.47	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	9/19/2007	101.15	8.96	-	-	92.19	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/11/2007	101.15	9.20	-	-	91.95	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/13/2008	101.15	8.56	-	-	92.59	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/6/2008	101.15	8.85	-	-	92.30	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/30/2008	101.15	8.09	-	-	93.06	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/16/2009	101.15	9.41	-	-	91.74	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/8/2009	101.15	8.40	-	-	92.75	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	7/20/2009	101.15	8.63	-	-	92.52	-	-	-	-	-	-	
	9/24/2009	101.15	9.29	-	-	91.86	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/3/2009	101.15	9.00	-	-	92.15	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/3/2010	101.15	7.74	-	-	93.41	ND < 1	ND < 1	ND < 1	0.35	0.35	ND < 1	
	6/7/2010	101.15	8.73	-	-	92.42	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	9/1/2010	101.15	9.61	-	-	91.54	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/3/2010	101.15	9.40	-	-	91.75	ND < 1	ND < 1	ND < 1	ND < 1	BDL	0.35	
	3/29/2011	101.15	7.91	-	-	93.24	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/16/2011	101.15	8.60	-	-	92.55	ND < 1	ND < 1	ND < 1	0.25	0.25	ND < 1	
	8/8/2011	101.15	9.17	-	-	91.98	ND < 1	ND < 1	ND < 1	ND < 1	BDL	1.3	
	9/19/2011	101.15	7.64	-	-	93.51	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/5/2011	101.15	8.40	-	-	92.75	ND < 0.22	ND < 0.15	ND < 0.21	ND < 0.17	BDL	ND < 0.18	
	3/16/2012	101.15	9.37	-	-	91.78	ND < 1	ND < 1	ND < 1	ND < 3	BDL	ND < 1	
	6/8/2012	101.15	8.60	-	-	92.55	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/7/2012	101.15	9.19	-	-	91.96	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	12/18/2012	101.15	9.01	-	-	92.14	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	3/14/2013	101.15	8.42	-	-	92.73	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	6/24/2013	101.15	8.16	-	-	92.99	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/4/2013	101.15	9.21	-	-	91.94	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	9/6/2013	101.15	9.22	-	-	91.93	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	12/10/2013	101.15	9.68	-	-	91.47	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	1/21/2014	101.15	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	101.15	-	-	-	-	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	COULD NOT GAUGE
	6/3/2014	101.15	8.52	-	-	92.63	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	10/2/2014	101.15	10.11	-	-	91.04	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	12/3/2014	101.15	9.20	-	-	91.95	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	3/11/2015	101.15	8.65	-	-	92.50	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	6/18/2015	101.15	8.60	-	-	92.55	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/9/2015	101.15	8.98	-	-	92.17	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	12/10/2015	101.15	9.74	-	-	91.41	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	3/16/2016	101.15	8.44	-	-	92.71	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	6/15/2016	101.15	8.93	-	-	92.22	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/19/2016	101.15	10.31	-	-	90.84	ND < 1.00*	ND < 1.00*	ND < 1.00*	ND < 3.00*	BDL	ND < 1.00	
	12/8/2016	101.15	9.06	-	-	92.09	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	3/16/2017	101.15	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	101.15	8.30	-	-	92.85	ND < 0.50	ND < 1.0	ND < 1.0	ND < 1.0	BDL	ND < 1.0	
	9/7/2017	101.15	9.12	-	-	92.03	ND < 0.50	ND < 1.0	ND < 1.0	ND < 1.0	BDL	ND < 1.0	
	12/11/2017	101.15	9.32	-	-	91.83	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	3/26/2018	101.15	8.85	-	-	92.30	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	6/11/2018	101.15	8.92	-	-	92.23	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	9/4/2018	101.15	8.78	-	-	92.37	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	ND (< 0.2)	
	12/20/2018	101.15	7.93	-	-	93.22	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	ND (< 0.2)	
	3/7/2019	101.15	7.83	-	-	93.32	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	ND (< 0.2)	
MW-6A	2/28/2005	101.17	8.29	-	-	92.88	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/6/2005	NSD	-	-	-	-	-	-	-	-	-	-	WELL DESTROYED
MW-7A	2/28/2005	101.24	9.67	-	-	91.57	**151**	3.8	3	**8.8**	166.6	2.5	
	6/6/2005	101.24	9.59	-	-	91.65	**13**	ND < 1	ND < 1	ND < 1	13	ND < 1	
	12/29/2005	101.24	9.27	-	-	91.97	**105**	1	**5.2**	4	115.2	3.2	
	3/20/2006	101.24	9.57	-	-	91.67	**9.4**	ND < 1	ND < 1	0.46	9.86	0.51	
	6/7/2006	101.24	8.72	-	-	92.52	**328**	**9.2**	**20**	**49**	406.2	1.8	
	9/14/2006	101.24	8.52	-	-	92.72	**4.7**	ND < 1	0.35	ND < 1	5.05	ND < 1	
	12/7/2006	101.24	8.75	-	-	92.49	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/29/2007	101.24	9.48	-	-	91.76	**291**	**6**	**8.2**	**17**	322.2	ND < 1	
	6/13/2007	101.24	8.56	-	-	92.68	**448**	**18**	**28**	**53**	547	2.4	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-7A	9/19/2007	101.24	9.55	-	-	91.69	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
(cont)	12/11/2007	101.24	10.27	-	-	90.97	ND < 1	ND < 1	ND < 1	ND < 1	BDL	2.3	
	3/13/2008	101.24	9.56	-	-	91.68	**202**	3.7	**8.4**	**10**	224.1	ND < 2.0	
	6/6/2008	101.24	9.74	-	-	91.50	**4.5**	ND < 1	ND < 1	ND < 1	4.5	0.31	
	12/30/2008	101.24	9.53	-	-	91.71	**335**	4.6	3.4	**21**	364	1.9	
	3/16/2009	101.24	10.58	-	-	90.66	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	6/8/2009	101.24	9.52	-	-	91.72	**30**	ND < 1	ND < 1	ND < 1	30	ND < 1	
	7/20/2009	101.24	8.98	-	-	92.26	1	ND < 1	ND < 1	ND < 1	1	0.48	
	9/24/2009	101.24	10.07	-	-	91.17	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/3/2009	101.24	10.11	-	-	91.13	ND < 1	ND < 1	ND < 1	ND < 1	BDL	0.52	
	3/3/2010	101.24	9.41	-	-	91.83	**145**	2.9	**5.5**	**5.6**	159	1.2	
	6/7/2010	101.24	9.36	-	-	91.88	0.36	ND < 1	ND < 1	ND < 1	0.36	ND < 1	
	9/1/2010	101.24	10.50	-	-	90.74	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	12/3/2010	101.24	10.31	-	-	90.93	ND < 1	ND < 1	ND < 1	ND < 1	BDL	ND < 1	
	3/29/2011	101.24	8.87	-	-	92.37	**1.7**	ND < 1	ND < 1	ND < 1	1.7	ND < 1	
	6/16/2011	101.24	9.55	9.30	0.25	91.88	-	-	-	-	-	-	
	8/8/2011	101.24	9.99	9.98	0.01	91.26	-	-	-	-	-	-	
	9/19/2011	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/16/2012	101.24	10.48	-	-	90.76	**107**	1.31	3.55	ND < 3	111.86	1.09	
	6/8/2012	101.24	9.76	-	-	91.48	**143**	4.03	**25.3**	**7.23**	179.56	1.12	
	9/7/2012	101.24	10.02	-	-	91.22	**14.4**	ND < 1.00	ND < 1.00	ND < 3.00	14.4	ND < 1.00	
	12/18/2012	101.24	10.13	-	-	91.11	**12.9**	ND < 1.00	ND < 1.00	ND < 3.00	12.9	ND < 1.00	
	3/14/2013	101.24	9.85	-	-	91.39	**88.8**	1.84	**12.4**	**8.73**	111.77	ND < 1.00	
	6/24/2013	101.24	8.76	-	-	92.48	**45.8**	ND < 1.00	3.81	ND < 3.00	49.61	ND < 1.00	
	9/4/2013	101.24	9.96	9.91	0.05	91.32	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	9/6/2013	101.24	10.05	9.99	0.06	91.24	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	ND < 1.00	
	12/10/2013	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	1/21/2014	101.24	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	101.24	-	-	-	-	**9.00**	ND < 1.00	ND < 1.00	ND < 3.00	9	ND < 1.00	COULD NOT GAUGE
	6/3/2014	101.24	9.21	-	-	92.03	**2.07**	ND < 1.00	ND < 1.00	ND < 2.00	2.07	ND < 1.00	
	10/2/2014	101.24	10.60	-	-	90.64	**3.16**	ND < 1.00	ND < 1.00	ND < 2.00	3.16	ND < 1.00	
	12/3/2014	101.24	9.77	-	-	91.47	**6.83**	ND < 1.00	ND < 1.00	ND < 2.00	6.83	ND < 1.00	
	3/11/2015	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/18/2015	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	9/9/2015	101.24	10.14	-	-	91.10	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	12/10/2015	101.24	10.48	-	-	90.76	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	3/16/2016	101.24	9.48	-	-	91.76	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	6/15/2016	101.24	9.98	-	-	91.26	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	9/19/2016	101.24	10.02	-	-	91.22	ND < 1.00*	ND < 1.00*	ND < 1.00*	ND < 3.00*	BDL	ND < 1.00	
	12/8/2016	101.24	9.83	-	-	91.41	**6.27**	ND < 1.00	ND < 1.00	ND < 3.00	6.27	ND < 1.00	
	3/16/2017	101.24	10.01	-	-	91.23	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	6/26/2017	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	9/7/2017	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	12/11/2017	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/26/2018	101.24	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/11/2018	101.24	9.46	-	-	91.78	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	9/4/2018	101.24	9.90	-	-	91.34	ND < 0.2	ND < 0.2	ND < 0.4	ND < 1	BDL	ND < 0.2	
	12/20/2018	101.24	-	-	-	-	-	-	-	-	-	-	CNL
	3/7/2019	101.24	-	-	-	-	-	-	-	-	-	-	CNL
MW-8A	2/28/2005	100.59	10.02	-	-	90.57	**1,430**	**369**	**1,020**	**3,180**	5,999	**4,720**	
	6/6/2005	100.59	9.48	-	-	91.11	**1,660**	**391**	**1,150**	**3,960**	7,161	**3,980**	
	9/8/2005	100.59	10.02	-	-	90.57	**2,030**	**447**	**1,200**	**3,880**	7,557	**3,640**	
	12/29/2005	100.59	9.18	-	-	91.41	**434**	**49.3**	**216**	**675**	1,374.3	**250**	
	3/20/2006	100.59	9.87	-	-	90.72	**2,060**	**467**	**1,220**	**4,040**	7,787	**4,730**	
	9/14/2006	100.59	8.74	-	-	91.85	**2,170**	**510**	**1,380**	**4,320**	8,380	**2,370**	
	12/7/2006	100.59	8.62	-	-	91.97	**1,660**	**430**	**1,350**	**4,570**	8,010	**1,980**	
	3/29/2007	100.59	9.52	-	-	91.07	**1,420**	**341**	**908**	**2,370**	5,039	**2,960**	
	6/13/2007	100.59	8.55	-	-	92.04	**444**	**155**	**694**	**1,770**	3,063	**380**	
	9/19/2007	100.59	9.36	-	-	91.23	**1,090**	**267**	**915**	**2,570**	4,842	**1,160**	
	12/11/2007	100.59	10.13	-	-	90.46	**1,530**	**305**	**1,090**	**3,420**	6,345	**1,570**	
	3/13/2008	100.59	9.69	-	-	90.90	**1,580**	**315**	**1,140**	**3,430**	6,465	**1,850**	
	6/6/2008	100.59	9.35	-	-	91.24	**1,230**	**280**	**1,070**	**2,610**	5,190	**806**	
	12/30/2008	100.59	9.17	-	-	91.42	**82.5**	**21.3**	**131**	**237**	471.8	**22.6**	
	6/8/2009	100.59	9.18	-	-	91.41	**292**	**64.9**	**348**	**616**	1,320.9	**129**	
	7/20/2009	100.59	9.10	-	-	91.49	**292**	**72.8**	**324**	**525**	1,213.8	**149**	
	9/24/2009	100.59	10.79	-	-	89.80	**984**	**223**	**909**	**2,320**	4,436	**542**	
	12/3/2009	100.59	9.75	-	-	90.84	**1,030**	**235**	**1,060**	**2,240**	4,565	**452**	
	3/3/2010	100.59	9.25	-	-	91.34	**691**	**177**	**762**	**2,070**	3,700	**185**	
	6/7/2010	100.59	9.17	-	-	91.42	**1,020**	**213**	**869**	**2,060**	4,162	**766**	
	9/1/2010	100.59	10.18	-	-	90.41	**1,520**	**291**	**1,070**	**3,030**	5,911	**939**	
	12/3/2010	100.59	10.00	-	-	90.59	**942**	**253**	**745**	**1,900**	3,840	**555**	
	3/29/2011	100.59	9.46	-	-	91.13	**1,070**	**227**	**831**	**1,860**	3,988	**418**	
	9/19/2011	100.59	8.26	-	-	92.33	**779**	**157**	**533**	**1,060**	2,529	**298**	
	12/5/2011	100.59	9.20	-	-	91.39	**1,540**	**222**	**682**	**1,530**	3,974	**637**	
	3/16/2012	100.59	10.07	-	-	90.52	**2,220**	**386**	**1,410**	**5,250**	9,266	**1,100**	
	6/8/2012	100.59	9.84	-	-	90.75	**808**	**111**	**434**	**1,200**	2,553	**983**	
	9/7/2012	100.59	10.00	-	-	90.59	**985**	**154**	**341**	**953**	2,433	**376**	
	12/18/2012	100.59	10.78	-	-	89.81	**1,300**	**231**	**496**	**2,200**	4,227	**336**	
	3/14/2013	100.59	11.08	-	-	89.51	**1,160**	**188**	**551**	**2,360**	4,259	**330**	
	6/24/2013	100.59	9.31	-	-	91.28	**991**	**155**	**482**	**1,930**	3,558	**157**	
	9/6/2013	100.59	10.82	-	-	89.77	**1,670**	**306**	**1,250**	**3,790**	7,016	**337**	
	12/10/2013	100.59	11.44	-	-	89.15	**1,370**	**226**	**742**	**3,210**	5,548	**333**	
	1/21/2014	100.59	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	100.59	-	-	-	-	**1,860**	**299**	**989**	**3,320**	6,468	**390**	COULD NOT GAUGE
	6/3/2014	100.59	10.68	-	-	89.91	**1,400**	**251**	**361**	**909**	2,921	**278**	
	10/2/2014	100.59	11.05	-	-	89.54	**1,500**	**286**	**1,120**	**3,720**	6,626	**367**	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-8A (cont)	12/3/2014	100.59	10.01	-	-	90.58	**2,200**	**303**	**1,700**	**4,730**	8,933	**347**	
	3/11/2015	100.59	10.30	-	-	90.29	**1,480**	**326**	**1,670**	**6,450**	9,926	**429**	
	6/18/2015	100.59	9.81	-	-	90.78	**1,900**	**303**	**1,690**	**5,850**	9,743	**323**	
	9/9/2015	100.59	10.00	-	-	90.59	**1,640**	**282**	**1,150**	**3,530**	6,602	**194**	
	12/10/2015	100.59	10.33	-	-	90.26	**1,400**	**225**	**1,300**	**3,890**	6,815	**104**	
	3/16/2016	100.59	10.02	-	-	90.57	**341**	**198**	**1,400**	**3,890**	5,829	**140**	
	6/15/2016	100.59	9.86	-	-	90.73	**1,620**	**325**	**1,560**	**4,950**	8,455	**130**	
	9/19/2016	100.59	10.39	-	-	90.20	**1,490**	**281**	**1,490**	**4,830**	8,091	**109**	
	12/8/2016	100.59	9.92	-	-	90.67	**1,420**	**280**	**1,400**	**4,560**	7,660	**121**	
	3/16/2017	100.59	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	100.59	9.05	-	-	91.54	**1,490**	**339**	**1,740**	**4,560**	8,129	**38.8**	
	9/7/2017	100.59	9.47	-	-	91.12	**1,420**	**359**	**1,840**	**5,310**	8,929	ND < 25	
	12/11/2017	100.59	10.60	-	-	89.99	**1,200**	**290**	**1,600**	**4,500**	7,590	**33**	
	3/26/2018	100.59	9.88	-	-	90.71	**1,200**	**280**	**1,600**	**4,800**	7,880	**19**	
	6/11/2018	100.59	9.36	-	-	91.23	**980**	**270**	**1,500**	**4,000**	6,750	**16**	
	9/4/2018	100.59	9.68	-	-	90.91	**1,100**	**290**	**1,400**	**4,200**	6,990	**14**	
	12/20/2018	100.59	9.52	-	-	91.07	**1,000**	**320**	**1,500**	**4,100**	6,920	**19**	
	3/7/2019	100.59	9.88	-	-	90.71	**910**	**270**	**1,600**	**4,100**	6,880	**11**	
MW-9	2/28/2005	100.10	9.45	-	-	90.65	ND < 1	ND < 1	ND < 1	ND < 1	BDL	1.8	
	6/6/2005	100.10	9.38	-	-	90.72	ND < 1	ND < 1	ND < 1	ND < 1	BDL	1.1	
	9/8/2005	100.10	10.01	-	-	90.09	ND < 1	ND < 1	0.73	2	2.73	7.3	
	12/29/2005	100.10	8.88	-	-	91.22	ND < 1	ND < 1	ND < 1	ND < 1	BDL	**16.7**	
	3/20/2006	100.10	9.65	-	-	90.45	ND < 1	ND < 1	ND < 1	ND < 1	BDL	9.8	
	9/14/2006	100.10	8.93	-	-	91.17	0.93	ND < 1	0.43	1.1	2.46	**20.8**	
	12/7/2006	100.10	8.72	-	-	91.38	0.88	0.72	ND < 1	3.6	5.2	**45**	
	3/29/2007	100.10	9.09	-	-	91.01	ND < 1	ND < 1	ND < 1	ND < 1	BDL	**46.8**	
	6/13/2007	100.10	8.64	-	-	91.46	**4.9**	1.7	ND < 1	**6.4**	13	**60**	
	9/19/2007	100.10	9.39	-	-	90.71	0.35	ND < 1	ND < 1	0.97	1.32	**19.2**	
	12/11/2007	100.10	9.80	-	-	90.30	ND < 1	ND < 1	ND < 1	ND < 1	BDL	**15.7**	
	3/13/2008	100.10	8.98	-	-	91.12	ND < 1	ND < 1	ND < 1	ND < 1	BDL	6.5	
	6/6/2008	100.10	9.19	-	-	90.91	ND < 1	ND < 1	ND < 1	ND < 1	BDL	6.2	
	12/30/2008	100.10	8.75	-	-	91.35	ND < 1	ND < 1	ND < 1	ND < 1	BDL	2.6	
	7/20/2009	100.10	9.10	-	-	91.00	-	-	-	-	-	-	
	9/24/2009	100.10	9.71	-	-	90.39	ND < 1	ND < 1	ND < 1	ND < 1	BDL	2.6	
	12/3/2009	100.10	9.62	-	-	90.48	ND < 1	ND < 1	ND < 1	ND < 1	BDL	4.6	
	3/3/2010	100.10	8.47	-	-	91.63	ND < 1	ND < 1	ND < 1	ND < 1	BDL	0.32	
	6/7/2010	100.10	9.24	-	-	90.86	ND < 1	ND < 1	ND < 1	ND < 1	BDL	2.9	
	9/1/2010	100.10	10.11	-	-	89.99	ND < 1	ND < 1	ND < 1	ND < 1	BDL	6.7	
	12/3/2010	100.10	9.90	-	-	90.20	ND < 1	ND < 1	ND < 1	ND < 1	BDL	6.7	
	3/29/2011	100.10	9.04	-	-	91.06	ND < 1	ND < 1	ND < 1	ND < 1	BDL	1.5	
	12/5/2011	100.10	9.20	-	-	90.90	ND < 0.22	ND < 0.15	ND < 0.21	ND < 0.17	BDL	**10.1**	
	3/16/2012	100.10	10.33	-	-	89.77	ND < 1	ND < 1	ND < 1	ND < 3	BDL	9.21	
	6/8/2012	100.10	9.44	-	-	90.66	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**12.6**	
	9/7/2012	100.10	9.79	-	-	90.31	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**11.0**	
	12/18/2012	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	3/14/2013	100.10	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/24/2013	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	9/6/2013	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	12/10/2013	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	1/21/2014	100.10	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	100.10	-	-	-	-	-	-	-	-	-	-	COULD NOT GAUGE
	6/3/2014	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	10/2/2014	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	12/3/2014	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	3/11/2015	100.10	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/18/2015	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	9/9/2015	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	12/10/2015	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	3/16/2016	100.10	-	-	-	-	-	-	-	-	-	-	CNL
	6/26/2017	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	9/7/2017	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	12/11/2017	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	3/26/2018	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	6/11/2018	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	9/4/2018	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	12/20/2018	NSD	-	-	-	-	-	-	-	-	-	-	CNL
	3/7/2019	NSD	-	-	-	-	-	-	-	-	-	-	CNL
MW-10	2/28/2005	100.50	9.94	-	-	90.56	**5,040**	**763**	**1,520**	**7,160**	14,483	**10,300**	
	6/6/2005	100.50	9.03	-	-	91.47	**823**	**97.6**	**298**	**1,390**	2,608.6	**1,560**	
	9/8/2005	100.50	9.90	-	-	90.60	**2,780**	**331**	**1,000**	**3,840**	7,951	**5,030**	
	12/29/2005	100.50	8.90	-	-	91.60	**754**	**192**	**942**	**1,900**	3,788	**833**	
	3/20/2006	100.50	9.54	-	-	90.96	**6,220**	**803**	**1,640**	**6,970**	15,633	**10,500**	
	6/7/2006	100.50	9.01	-	-	91.49	**4,580**	**459**	**1,150**	**4,290**	10,479	**6,210**	
	9/14/2006	100.50	8.58	-	-	91.92	**4,900**	**625**	**1,520**	**5,930**	12,975	**6,740**	
	12/7/2006	100.50	8.52	-	-	91.98	**3,070**	**504**	**2,030**	**7,360**	12,964	**1,410**	
	3/29/2007	100.50	9.40	-	-	91.10	**7,050**	**1,180**	**3,550**	**11,900**	23,680	**6,820**	
	6/13/2007	100.50	8.42	-	-	92.08	**1,450**	**231**	**909**	**2,980**	5,570	**466**	
	9/19/2007	100.50	9.22	-	-	91.28	**3,380**	**445**	**1,400**	**4,500**	9,725	**1,310**	
	12/11/2007	100.50	11.03	-	-	89.47	**3,030**	**411**	**1,360**	**4,010**	8,811	**1,750**	
	3/13/2008	100.50	9.56	-	-	90.94	**4,270**	**530**	**1,520**	**5,160**	11,480	**2,470**	
	6/6/2008	100.50	9.25	-	-	91.25	**3,080**	**414**	**1,510**	**4,450**	9,454	**1,260**	
	12/30/2008	100.50	9.05	-	-	91.45	**903**	**115**	**649**	**1,500**	3,167	**213**	
	6/8/2009	100.50	8.97	-	-	91.53	**1,110**	**143**	**658**	**1,440**	3,351	**166**	
	7/20/2009	100.50	8.98	-	-	91.52	**1,050**	**157**	**593**	**1,250**	3,050	**97.1**	
	9/24/2009	100.50	9.59	-	-	90.91	**2,390**	**374**	**1,490**	**3,210**	7,464	**315**	
	12/3/2009	100.50	9.55	-	-	90.95	**3,380**	**673**	**3,900**	**3,990**	11,943	**698**	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	1	5	5	5	NS	10	
MW-10 (cont)	3/3/2010	100.50	9.25	-	-	91.25	**3,450**	**440**	**1,400**	**3,440**	8,730	**1,810**	
	6/7/2010	100.50	9.02	-	-	91.48	**3,210**	**403**	**1,260**	**2,760**	7,633	**1,380**	
	9/1/2010	100.50	10.00	-	-	90.50	**4,870**	**485**	**1,830**	**4,040**	11,225	**1,580**	
	12/3/2010	100.50	9.80	-	-	90.70	**3,950**	**496**	**1,510**	**3,180**	9,136	ND < 10	
	3/29/2011	100.50	9.35	-	-	91.15	**5,450**	**594**	**1,550**	**3,700**	11,294	**1,640**	
	6/16/2011	100.50	8.80	-	-	91.70	**5,410**	**555**	**1,450**	**3,580**	10,995	**1,160**	
	8/8/2011	100.50	9.72	-	-	90.78	**6,180**	**645**	**1,450**	**3,460**	11,735	**1,030**	
	9/19/2011	100.50	8.19	-	-	92.31	**1,810**	**162**	**497**	**957**	3,426	**191**	
	12/5/2011	100.50	9.00	-	-	91.50	**3,790**	**443**	**1,910**	**3,860**	10,003	**610**	
	3/16/2012	100.50	10.51	-	-	89.99	**5,350**	**744**	**2,220**	**5,690**	14,004	**1,210**	
	6/8/2012	100.50	9.47	-	-	91.03	**3,780**	**343**	**859**	**1,720**	6,702	**860**	
	9/7/2012	100.50	10.04	-	-	90.46	**3,930**	**334**	**738**	**2,290**	7,292	**777**	
	12/18/2012	100.50	10.83	-	-	89.67	**5,460**	**623**	**1,170**	**3,340**	10,593	**708**	
	3/14/2013	100.50	10.99	-	-	89.51	**5,030**	**469**	**1,280**	**3,010**	9,789	**712**	
	6/24/2013	100.50	8.51	-	-	91.99	**2,680**	**330**	**927**	**2,900**	6,837	**137**	
	9/6/2013	100.50	10.66	-	-	89.84	**5,290**	**524**	**1,360**	**3,150**	10,324	**383**	
	12/10/2013	100.50	11.36	-	-	89.14	**6,080**	**560**	**1,410**	**4,520**	12,570	**464**	
	1/21/2014	100.50	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	100.50	-	-	-	-	**6,990**	**680**	**1,770**	**5,550**	14,990	**657**	COULD NOT GAUGE
	6/3/2014	100.50	9.71	-	-	90.79	**3,400**	**455**	**1,250**	**3,700**	8,805	**476**	
	10/2/2014	100.50	10.90	-	-	89.60	**5,540**	**636**	**2,200**	**5,670**	14,046	**601**	SHEEN
	12/3/2014	100.50	9.91	-	-	90.59	**5,250**	**664**	**2,050**	**5,380**	13,344	**612**	
	3/11/2015	100.50	10.24	-	-	90.26	**5,880**	**766**	**2,300**	**7,140**	16,086	**309**	
	6/18/2015	100.50	9.69	-	-	90.81	**5,580**	**631**	**1,780**	**5,480**	13,471	**202**	
	9/9/2015	100.50	9.89	-	-	90.61	**4,350**	**522**	**1,550**	**5,030**	11,452	**136**	
	12/10/2015	100.50	10.23	-	-	90.27	**3,850**	**371**	**1,610**	**1,370**	7,201	**75.0**	
	3/16/2016	100.50	9.96	-	-	90.54	**4,120**	**650**	**1,740**	**4,930**	11,440	**143**	
	6/15/2016	100.50	9.74	-	-	90.76	**4,110**	**518**	**1,550**	**4,780**	10,958	**146**	
	9/19/2016	100.50	10.38	-	-	90.12	**4,990**	**591**	**1,680**	**5,020**	12,281	**114**	
	12/8/2016	100.50	9.85	-	-	90.65	**4,790**	**742**	**1,830**	**5,750**	13,112	**126**	
	3/16/2017	100.50	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	100.50	8.93	-	-	91.57	**4,210**	**641**	**2,700**	**4,900**	12,451	**86.1**	
	9/7/2017	100.50	9.36	-	-	91.14	**4,120**	**629**	**2,190**	**6,560**	13,499	ND < 20	
	12/11/2017	100.50	10.51	-	-	89.99	**4,600**	**570**	**1,800**	**5,300**	12,270	**100**	
	3/26/2018	100.50	9.84	-	-	90.66	**4,600**	**610**	**1,900**	**6,100**	13,210	**110**	
	6/11/2018	100.50	9.22	-	-	91.28	**4,500**	**600**	**1,700**	**5,200**	12,000	**90**	
	9/4/2018	100.50	9.55	-	-	90.95	**4,100**	**580**	**1,700**	**5,300**	11,680	**66**	
	12/20/2018	100.50	9.50	-	-	91.00	**4,400**	**680**	**2,000**	**5,900**	12,980	**75**	SHEEN
	3/7/2019	100.50	9.91	-	-	90.59	**4,800**	**690**	**2,000**	**6,300**	13,790	**69**	
MW-11	2/28/2005	99.62	8.14	-	-	91.48	**619**	**576**	**1,050**	**4,270**	6,515	**77**	
	6/6/2005	99.62	8.07	-	-	91.55	**616**	**410**	**1,070**	**5,050**	7,146	**71**	
	9/8/2005	99.62	8.81	8.78	0.03	90.83	-	-	-	-	-	-	
	12/29/2005	99.62	11.63	-	-	87.99	**697**	**249**	**1,170**	**3,630**	5,746	**57**	
	3/20/2006	99.62	8.13	-	-	91.49	**625**	**294**	**1,070**	**4,130**	6,119	**39**	
	6/7/2006	99.62	7.45	-	-	92.17	-	-	-	-	-	-	
	9/14/2006	99.62	7.13	7.11	0.02	92.51	-	-	-	-	-	-	
	12/7/2006	99.62	7.30	7.28	0.02	92.34	-	-	-	-	-	-	
	3/29/2007	99.62	7.94	-	-	91.68	**531**	**199**	**1,030**	**1,580**	3,340	ND < 10	
	6/13/2007	99.62	7.18	-	-	92.44	**438**	**125**	**738**	**935**	2,236	**32**	
	9/19/2007	99.62	8.11	-	-	91.51	**718**	**231**	**1,050**	**1,800**	3,799	**36**	
	12/11/2007	99.62	8.70	8.68	0.02	90.94	-	-	-	-	-	-	
	3/13/2008	99.62	8.20	-	-	91.42	**336**	**153**	**860**	**1,530**	2,879	ND < 5	
	6/6/2008	99.62	8.17	-	-	91.45	**617**	**194**	**954**	**1,410**	3,175	**37**	
	12/30/2008	99.62	7.91	-	-	91.71	**473**	**185**	**990**	**1,730**	3,378	**23.9**	
	3/16/2009	99.62	9.06	-	-	90.56	**423**	**192**	**770**	**1,610**	2,995	**20.9**	
	6/8/2009	99.62	7.87	-	-	91.75	**575**	**209**	**1,110**	**2,330**	4,224	**27.4**	
	7/20/2009	99.62	7.93	7.85	0.08	91.75	-	-	-	-	-	-	
	9/24/2009	99.62	8.59	8.54	0.05	91.07	-	-	-	-	-	-	
	12/3/2009	99.62	8.51	-	-	91.11	**797**	**142**	**1,280**	**1,020**	3,239	**46.9**	
	3/3/2010	99.62	7.66	-	-	91.96	**518**	**110**	**1,060**	**1,010**	2,698	**23.4**	
	6/7/2010	99.62	7.94	-	-	91.68	**382**	**33.1**	**901**	**498**	1,814.1	**23.1**	
	9/1/2010	99.62	8.98	-	-	90.64	**510**	**131**	**1,300**	**1,620**	3,561	ND < 100	
	12/3/2010	99.62	8.71	-	-	90.91	**513**	**206**	**911**	**1,560**	3,190	**11.3**	
	3/29/2011	99.62	7.45	-	-	92.17	**68.3**	**7.60**	**199**	**234**	508.9	3.20	
	6/16/2011	99.62	7.71	-	-	91.91	**148**	**23.3**	**293**	**315**	779.3	2.80	
	8/8/2011	99.62	8.54	-	-	91.08	**308**	**48.5**	**380**	**385**	1,121.5	7.90	
	9/19/2011	99.62	6.98	-	-	92.64	**57**	**12.3**	**162**	**171**	402.3	1.40	
	12/5/2011	99.62	7.81	-	-	91.81	**144**	**52**	**304**	**455**	955	4	
	3/16/2012	99.62	8.98	-	-	90.64	**637**	**149**	**794**	**1,580**	3,160	**12**	
	6/8/2012	99.62	8.14	-	-	91.48	**492**	**161**	**611**	**1,090**	2,354	9.70	
	9/7/2012	99.62	8.18	-	-	91.44	**604**	**164**	**699**	**1,240**	2,707	7.61	
	12/18/2012	99.62	8.61	-	-	91.01	**587**	**184**	**702**	**1,320**	2,793	7.11	
	3/14/2013	99.62	8.40	-	-	91.22	**487**	**150**	**608**	**934**	2,179	7.78	
	6/24/2013	99.62	7.27	-	-	92.35	**403**	**113**	**495**	**447**	1,458	3.98	
	9/4/2013	99.62	8.50	-	-	91.12	**513**	**147**	**947**	**1,230**	2,837	3.54	
	9/6/2013	99.62	8.56	-	-	91.06	**513**	**147**	**947**	**1,230**	2,837	3.54	
	10/7/2013	99.62	8.76	-	-	90.86	-	-	-	-	-	-	
	10/23/2013	99.62	9.03	-	-	90.59	-	-	-	-	-	-	
	11/11/2013	99.62	9.42	-	-	90.20	-	-	-	-	-	-	
	12/10/2013	99.62	9.92	-	-	89.70	**490**	**107**	**561**	**869**	2,027	2.93	
	1/21/2014	99.62	8.65	-	-	90.97	-	-	-	-	-	-	
	3/10/2014	99.62	-	-	-	-	**435**	**86.0**	**521**	**801**	1,843	3.54	COULD NOT GAUGE
	6/3/2014	99.62	7.71	-	-	91.91	**218**	**70.6**	**287**	**468**	1,043.6	3.16	
	10/2/2014	99.62	9.00	-	-	90.62	**309**	**74.9**	**407**	**475**	1,265.9	ND < 10.0	
	12/3/2014	99.62	8.28	-	-	91.34	**241**	**61.8**	**325**	**354**	981.8	4.82	
	3/11/2015	99.62	8.32	-	-	91.30	**193**	**62.5**	**497**	**567**	1,319.5	ND < 1.00	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	1	5	5	5	NS	10	
MW-11 (cont)	6/18/2015	99.62	8.47	-	-	91.15	**246**	**63.3**	**540**	**551**	1,400.3	4.43	
	9/9/2015	99.62	7.82	-	-	91.80	**307**	**76.2**	**509**	**687**	1,579.2	ND < 1.00	
	12/10/2015	99.62	9.21	-	-	90.41	**224**	**31.8**	**546**	**438**	1,239.8	ND < 1.00	
	3/16/2016	99.62	8.31	-	-	91.31	**178**	**56.9**	**507**	**561**	1,302.9	ND < 1.00	
	6/15/2016	99.62	8.66	-	-	90.96	**314**	**70.4**	**559**	**668**	1,611.4	ND < 5.00	
	9/19/2016	99.62	9.41	-	-	90.21	**359**	**95.9**	**603**	**825**	1,882.9	ND < 5.00	
	12/8/2016	99.62	8.54	-	-	91.08	**160**	**47.3**	**426**	**497**	1,130.3	ND < 5.00	
	3/16/2017	99.62	8.87	-	-	90.75	**129**	**23.7**	**316**	**270**	738.7	ND < 5.00	
	6/26/2017	99.62	7.71	-	-	91.91	**191**	**13.3**	**348**	**328**	880.3	2.1	
	9/7/2017	99.62	8.23	-	-	91.39	**260**	**55.4**	**512**	**544**	1,371.4	2.2	
	12/11/2017	99.62	9.20	-	-	90.42	**180**	**52**	**390**	**480**	1,102	2	
	3/26/2018	99.62	8.13	-	-	91.49	**220**	**32**	**350**	**300**	902	3	
	6/11/2018	99.62	8.33	-	-	91.29	**350**	**50**	**460**	**450**	1,310	2	
	9/4/2018	99.62	8.57	-	-	91.05	**420**	**120**	**600**	**870**	2,010	1	
	12/20/2018	99.62	7.97	-	-	91.65	**400**	**120**	**690**	**1,100**	2,310	2	SHEEN
	3/7/2019	99.62	8.08	-	-	91.54	**180**	**50**	**430**	**460**	1,120	0.9	
MW-12	2/28/2005	100.85	9.38	-	-	91.47	**127**	**6.6**	**50**	**57**	240.6	**24.8**	
	6/6/2005	100.85	9.17	-	-	91.68	**250**	**8.2**	**29.2**	**51.4**	338.8	**129**	
	3/20/2006	100.85	9.17	-	-	91.68	**229**	**9**	**35.5**	**50.2**	323.7	**26.6**	
	6/7/2006	100.85	8.68	-	-	92.17	**470**	**17.4**	**81.1**	**86.8**	655.3	**96.7**	
	9/14/2006	100.85	8.13	-	-	92.72	**476**	**14**	**42.9**	**63.2**	596.1	**55**	
	12/7/2006	100.85	8.37	-	-	92.48	**225**	**7.3**	**5.1**	**22.5**	259.9	**29.4**	
	3/29/2007	100.85	9.16	-	-	91.69	**193**	3.7	4	**12.5**	213.2	**44.3**	
	6/13/2007	100.85	8.28	-	-	92.57	**274**	**8.3**	**5.8**	**24.7**	312.8	**86.5**	
	9/19/2007	100.85	9.16	-	-	91.69	**285**	**6.2**	4.2	**20.5**	315.9	**33**	
	12/11/2007	100.85	9.90	-	-	90.95	**249**	5	4.2	**17.6**	275.8	**31.6**	
	3/13/2008	100.85	9.21	-	-	91.64	**172**	3.6	**11**	**14.4**	201	ND < 1	
	6/6/2008	100.85	9.33	-	-	91.52	**134**	4.4	**8.5**	**15.8**	162.7	**20.6**	
	12/30/2008	100.85	9.22	-	-	91.63	**603**	**12.3**	**115**	**53.9**	784.2	**41**	
	3/16/2009	100.85	10.21	-	-	90.64	**144**	3.2	**32.2**	**17.7**	197.1	**12.9**	
	6/8/2009	100.85	9.16	-	-	91.69	**474**	**8.6**	**69.2**	**33.5**	585.3	**147**	
	7/20/2009	100.85	9.38	-	-	91.47	**14.5**	0.56	**15.2**	2.4	32.66	**41.9**	
	9/24/2009	100.85	9.71	-	-	91.14	**54.8**	3.1	**37.8**	**21.4**	117.1	**113**	
	12/3/2009	100.85	9.75	-	-	91.10	**120**	3.9	**52.7**	**28.5**	205.1	**88.4**	
	3/3/2010	100.85	9.15	-	-	91.70	**148**	3.6	**23.1**	**16.1**	190.8	**41.4**	
	6/7/2010	100.85	8.97	-	-	91.88	**22.9**	1.1	**8.4**	**7.2**	39.6	8.6	
	9/1/2010	100.85	10.22	-	-	90.63	**111**	2.4	**10.7**	**11.6**	135.7	**23**	
	12/3/2010	100.85	10.00	-	-	90.85	**87**	1.6	**7.5**	**7**	103.1	**20.3**	
	3/29/2011	100.85	8.53	-	-	92.32	**2.1**	ND < 1	0.34	0.32	2.76	6.7	
	6/16/2011	100.85	8.90	-	-	91.95	**3.5**	0.36	0.72	1.3	5.88	8.9	
	8/8/2011	100.85	9.70	-	-	91.15	**24**	1.4	3.5	**6.6**	35.5	**32.5**	
	9/19/2011	100.85	8.39	-	-	92.46	**2.8**	0.35	2.4	3.2	8.75	ND < 1	
	3/16/2012	100.85	10.17	-	-	90.68	**27**	1.05	**8.41**	4.22	40.68	**24**	
	6/8/2012	100.85	9.42	-	-	91.43	**30.2**	ND < 1.00	4.87	ND < 3.00	35.07	**24.3**	
	9/7/2012	100.85	9.66	-	-	91.19	**38.2**	ND < 1.00	4.92	ND < 3.00	43.12	ND < 1.00	
	12/18/2012	100.85	9.98	-	-	90.87	**50.5**	1.02	**5.07**	ND < 3.00	56.59	**13.4**	
	3/14/2013	100.85	9.58	-	-	91.27	**35.3**	ND < 1.00	**5.36**	ND < 3.00	40.66	**13.5**	
	6/24/2013	100.85	8.36	-	-	92.49	**2.76**	ND < 1.00	ND < 1.00	ND < 3.00	2.76	2.48	
	9/4/2013	100.85	9.58	-	-	91.27	**15.5**	ND < 1.00	3.19	ND < 2.00	18.69	7.88	
	9/6/2013	100.85	9.65	-	-	91.20	**15.5**	ND < 1.00	3.19	ND < 2.00	18.69	7.88	
	10/7/2013	100.85	9.98	-	-	90.87	-	-	-	-	-	-	
	12/10/2013	100.85	10.67	-	-	90.18	**34.4**	ND < 1.00	1.45	ND < 3.00	35.85	**12.1**	
	1/21/2014	100.85	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	3/10/2014	100.85	-	-	-	-	**5.71**	ND < 1.00	ND < 1.00	ND < 3.00	5.71	ND < 1.00	COULD NOT GAUGE
	6/3/2014	100.85	8.81	-	-	92.04	**2.19**	ND < 1.00	ND < 1.00	ND < 2.00	2.19	1.59	
	10/2/2014	100.85	10.25	-	-	90.60	**10.2**	ND < 1.00	ND < 1.00	ND < 2.00	10.2	5.21	
	12/3/2014	100.85	9.55	-	-	91.30	**19.9**	ND < 1.00	ND < 1.00	ND < 2.00	19.9	8.41	
	3/11/2015	100.85	9.34	-	-	91.51	**10.7**	ND < 1.00	ND < 1.00	ND < 2.00	10.7	ND < 1.00	
	6/18/2015	100.85	9.44	-	-	91.41	**1.56**	ND < 1.00	ND < 1.00	ND < 3.00	1.56	3.48	
	9/9/2015	100.85	9.76	-	-	91.09	**8.05**	ND < 1.00	ND < 1.00	ND < 3.00	8.05	ND < 1.00	
	12/10/2015	100.85	10.16	-	-	90.69	**6.74**	ND < 1.00	ND < 1.00	ND < 3.00	6.74	2.28	
	3/16/2016	100.85	9.10	-	-	91.75	**3.76**	ND < 1.00	ND < 1.00	ND < 3.00	3.76	ND < 1.00	
	6/15/2016	100.85	9.49	-	-	91.36	**9.33**	ND < 1.00	ND < 1.00	ND < 3.00	9.33	5.40	
	9/19/2016	100.85	10.35	-	-	90.50	**9.06**	ND < 1.00*	ND < 1.00*	ND < 3.00*	9.06	1.84	
	12/8/2016	100.85	9.80	-	-	91.05	**14.8**	ND < 1.00	ND < 1.00	ND < 3.00	14.8	9.59	
	3/16/2017	100.85	9.65	-	-	91.20	**1.75**	ND < 1.00	ND < 1.00	ND < 3.00	1.75	ND < 1.00	
	6/26/2017	100.85	9.65	-	-	91.20	0.39	ND < 1.0	ND < 1.0	ND < 1.0	0.39	0.58	
	9/7/2017	100.85	9.66	-	-	91.19	**3.3**	ND < 1.0	0.35	ND < 1.0	3.65	ND < 1.0	
	12/11/2017	100.85	10.18	-	-	90.67	**7**	ND < 3	ND < 3	ND < 3	7	4	
	3/26/2018	100.85	8.75	-	-	92.10	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	6/11/2018	100.85	9.08	-	-	91.77	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	0.6	
	9/4/2018	100.85	9.45	-	-	91.40	**2**	ND (< 0.2)	ND (< 0.4)	ND (< 1)	2	2	
	12/20/2018	100.85	8.73	-	-	92.12	0.9	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.9	0.7	
	3/7/2019	100.85	8.63	-	-	92.22	0.4	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.4	0.4	
MW-13	2/28/2005	100.04	8.83	6.66	2.17	92.84	-	-	-	-	-	-	
	6/6/2005	100.04	8.54	8.53	0.01	91.51	-	-	-	-	-	-	
	9/8/2005	100.04	9.37	9.16	0.21	90.83	-	-	-	-	-	-	
	12/29/2005	100.04	8.65	8.64	0.01	91.40	-	-	-	-	-	-	
	3/20/2006	100.04	6.67	6.66	0.01	93.38	-	-	-	-	-	-	
	6/7/2006	100.04	7.61	-	-	92.43	-	-	-	-	-	-	
	9/14/2006	100.04	7.34	7.32	0.02	92.72	-	-	-	-	-	-	
	12/7/2006	100.04	7.71	7.56	0.15	92.44	-	-	-	-	-	-	
	3/29/2007	100.04	8.53	-	-	91.51	**76.5**	ND < 5	ND < 5	ND < 5	76.5	9.3	
	6/13/2007	100.04	7.55	-	-	92.49	**56.1**	2.6	**172**	**56.9**	287.6	**11**	
	9/19/2007	100.04	8.53	8.51	0.02	91.53	-	-	-	-	-	-	
	12/11/2007	100.04	9.30	9.28	0.02	90.76	-	-	-	-	-	-	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-13 (cont)	3/13/2008	100.04	8.58	-	-	91.46	**179**	**6.1**	**303**	**74.7**	562.8	**13.3**	
	6/6/2008	100.04	8.70	-	-	91.34	**245**	**10.2**	**354**	**95.8**	705	**20.8**	
	12/30/2008	100.04	8.37	-	-	91.67	**226**	**20.3**	**394**	**136**	776.3	**12.3**	
	3/16/2009	100.04	9.76	-	-	90.28	**270**	**22.8**	**423**	**135**	850.8	**11.9**	
	6/8/2009	100.04	8.24	-	-	91.80	**68.6**	**6.2**	**129**	**36.8**	240.6	**11.7**	
	7/20/2009	100.04	8.31	-	-	91.73	**39**	**7.9**	**300**	**88.6**	435.5	**15.9**	
	9/24/2009	100.04	9.01	-	-	91.03	**115**	4.1	**295**	**44.1**	458.2	**10.8**	
	12/3/2009	100.04	8.96	-	-	91.08	**219**	**7**	**295**	**53**	574	**13.6**	
	3/3/2010	100.04	7.90	-	-	92.14	**31.8**	2.3	**109**	**18.5**	161.6	4.8	
	6/7/2010	100.04	8.33	-	-	91.71	**21.2**	1.7	**149**	**19.9**	191.8	**18.6**	
	9/1/2010	100.04	9.44	-	-	90.60	**541**	**120**	**884**	**1,490**	3,035	**16.9**	
	12/3/2010	100.04	9.13	-	-	90.91	**321**	**114**	**685**	**1,240**	2,360	ND < 5	
	3/29/2011	100.04	7.90	-	-	92.14	**6**	ND < 1	**8.7**	**5.2**	19.9	3	
	6/16/2011	100.04	5.30	-	-	94.74	**31.5**	2	**62**	**34.4**	129.9	**10.5**	
	8/8/2011	100.04	9.04	-	-	91.00	**212**	**40.6**	**260**	**284**	796.6	3.1	
	9/19/2011	100.04	7.36	-	-	92.68	**12.3**	2	**174**	**57.5**	245.8	1.3	
	12/5/2011	100.04	8.25	-	-	91.79	**20**	1.8	**110**	**44**	175.8	3.4	
	3/16/2012	100.04	9.44	-	-	90.60	**194**	**56**	**505**	**294**	1,049	1.71	
	6/8/2012	100.04	8.62	-	-	91.42	**135**	**38.6**	**331**	**235**	739.6	2.74	
	9/7/2012	100.04	8.92	-	-	91.12	**178**	**39.2**	**421**	**237**	875.2	ND < 1.00	
	12/18/2012	100.04	9.09	-	-	90.95	**308**	**84.5**	**663**	**452**	1,507.5	2.82	
	3/14/2013	100.04	8.92	-	-	91.12	**586**	**114**	**590**	**948**	2,238	6.10	
	6/24/2013	100.04	7.74	-	-	92.30	**117**	**38.6**	**544**	**399**	1,098.6	2.43	
	9/4/2013	100.04	8.94	8.91	0.03	91.12	-	-	-	-	-	-	
	9/6/2013	100.04	9.06	8.89	0.17	91.11	-	-	-	-	-	-	
	9/26/2013	100.04	9.16	9.15	0.01	90.89	**395**	**77.9**	**515**	**458**	1,445.9	3.87	
	10/7/2013	100.04	9.21	-	-	90.83	-	-	-	-	-	-	
	10/23/2013	100.04	9.45	-	-	90.59	-	-	-	-	-	-	
	11/11/2013	100.04	9.86	-	-	90.18	-	-	-	-	-	-	
	12/10/2013	100.04	10.02	-	-	90.02	**767**	**126**	**744**	**1,240**	2,877	**13.7**	
	1/21/2014	100.04	9.19	-	-	90.85	-	-	-	-	-	-	
	3/10/2014	100.04	-	-	-	-	**250**	**53.8**	**294**	**461**	1,058.8	2.51	COULD NOT GAUGE
	6/3/2014	100.04	8.26	-	-	91.78	**92.1**	**29.0**	**235**	**383**	739.1	1.52	
	10/2/2014	100.04	9.48	-	-	90.56	**434**	**119**	**744**	**1,290**	2,587	1.21	
	12/3/2014	100.04	8.84	-	-	91.20	**395**	**118**	**755**	**1,000**	2,268	ND < 1.00	
	3/11/2015	100.04	8.30	-	-	91.74	**129**	**69.7**	**804**	**1,040**	2,042.7	2.82	
	6/18/2015	100.04	8.67	8.62	0.05	91.41	-	-	-	-	-	-	
	9/9/2015	100.04	9.05	-	-	90.99	**619**	**117**	**762**	**715**	2,213	ND < 1.00	
	12/10/2015	100.04	9.45	9.30	0.15	90.70	-	-	-	-	-	-	
	3/16/2016	100.04	8.54	8.46	0.08	91.56	**252**	**92.6**	**820**	**620**	1,784.6	ND < 1.00	
	6/15/2016	100.04	8.85	8.80	0.05	91.23	**810**	**114**	**870**	**939**	2,733	ND < 5.00	
	9/19/2016	100.04	9.51	9.49	0.02	90.55	**971**	**165**	**985**	**1,500**	3,621	ND < 5.00	
	12/8/2016	100.04	8.86	8.79	0.07	91.23	**731**	**69.4**	**677**	**705**	2,182.4	ND < 5.00	
	3/16/2017	100.04	8.99	8.98	0.01	91.06	**491**	**84.7**	**659**	**576**	1,810.7	ND < 10.0	
	6/26/2017	100.04	7.96	7.95	0.01	92.09	**23.1**	4.8	**183**	**99.7**	310.6	1.4	
	9/7/2017	100.04	8.65	8.56	0.09	91.46	-	-	-	-	-	-	
	12/11/2017	100.04	9.34	9.31	0.03	90.72	**470**	**85**	**710**	**820**	2,085	0.8	
	3/26/2018	100.04	8.54	-	-	91.50	**94**	**29**	**290**	**450**	863	2	SHEEN
	6/11/2018	100.04	8.59	-	-	91.45	**520**	**140**	**840**	**1,200**	2,700	ND < 1	
	9/4/2018	100.04	8.73	-	-	91.31	**450**	**99**	**1,000**	**1,400**	2,949	ND < 0.4	
	12/20/2018	100.04	7.23	-	-	92.81	**71**	**23**	**500**	**320**	914	2	
	3/7/2019	100.04	8.34	-	-	91.70	**180**	**56**	**650**	**740**	1,626	0.4	
MW-14	2/28/2005	100.04	12.87	-	-	87.17	**4.2**	0.61	1.7	**6.7**	13.21	2.5	
	6/6/2005	100.04	13.02	-	-	87.02	**12.6**	1	2.4	**9.3**	25.3	ND < 1	
	3/20/2006	100.04	13.03	12.53	0.50	87.39	-	-	-	-	-	-	
	6/7/2006	100.04	8.19	8.12	0.07	91.90	-	-	-	-	-	-	
	12/7/2006	100.04	13.30	8.55	4.75	90.30	-	-	-	-	-	-	
	3/29/2007	100.04	10.52	-	-	89.52	**118**	4.8	1.4	**11.3**	135.5	ND < 1	
	6/13/2007	100.04	8.38	-	-	91.66	**125**	**5.6**	**5.4**	**41.1**	177.1	ND < 1	
	9/19/2007	100.04	10.08	-	-	89.96	**121**	5	4.1	**31.3**	161.4	ND < 1	
	12/11/2007	100.04	10.95	10.90	0.05	89.13	-	-	-	-	-	-	
	3/13/2008	100.04	9.73	-	-	90.31	**66.7**	2.7	0.76	4.6	74.76	ND < 1	
	6/6/2008	100.04	10.05	-	-	89.99	**95.5**	3.6	1.3	**5.8**	106.2	ND < 1	
	12/30/2008	100.04	9.59	-	-	90.45	**85.3**	2.5	0.51	2.1	90.41	ND < 1	
	3/16/2009	100.04	10.44	-	-	89.60	**101**	4.1	0.77	4.3	110.17	ND < 1	
	6/8/2009	100.04	9.46	-	-	90.58	**54.8**	2.3	1.2	4.2	62.5	ND < 1	
	7/20/2009	100.04	9.30	-	-	90.74	**51.6**	1.3	0.58	2.3	55.78	ND < 1	
	9/24/2009	100.04	10.00	-	-	90.04	**102**	3.8	0.90	**5.9**	112.6	ND < 1	
	12/3/2009	100.04	9.81	-	-	90.23	**147**	4.3	1.1	4.6	157	ND < 1	
	3/3/2010	100.04	8.90	-	-	91.14	**13.5**	ND < 1	ND < 1	ND < 1	13.5	ND < 1	
	6/7/2010	100.04	9.31	-	-	90.73	**50.3**	0.95	0.32	1.2	52.77	ND < 1	
	9/1/2010	100.04	10.36	-	-	89.68	**139**	3.4	1.2	3.7	147.3	ND < 1	
	12/3/2010	100.04	10.11	-	-	89.93	**114**	4	0.86	3.2	122.06	ND < 1	
	3/29/2011	100.04	8.60	-	-	91.44	**12.7**	ND < 1	ND < 1	ND < 1	12.7	ND < 1	
	6/16/2011	100.04	9.20	-	-	90.84	**41.4**	0.55	0.27	0.53	42.75	ND < 1	
	8/8/2011	100.04	9.87	-	-	90.17	**84.1**	0.77	ND < 1	ND < 1	84.87	ND < 1	
	9/19/2011	100.04	8.22	-	-	91.82	**3.8**	ND < 1	ND < 1	ND < 1	3.8	ND < 1	
	12/5/2011	100.04	9.19	-	-	90.85	**64**	0.39	0.22	0.60	65.21	ND < 0.18	
	3/16/2012	100.04	10.36	-	-	89.68	**91**	1.28	ND < 1	ND < 3	92.28	ND < 1	
	6/8/2012	100.04	9.62	-	-	90.42	**74.8**	ND < 1.00	ND < 1.00	ND < 3.00	74.8	ND < 1.00	
	9/7/2012	100.04	9.82	-	-	90.22	**117**	1.96	ND < 1.00	ND < 3.00	118.96	ND < 1.00	
	12/18/2012	100.04	9.84	-	-	90.20	**70.8**	1.60	ND < 1.00	ND < 3.00	72.4	ND < 1.00	
	3/14/2013	100.04	10.43	-	-	89.61	**20.2**	ND < 1.00	ND < 1.00	ND < 3.00	20.2	ND < 1.00	
	6/24/2013	100.04	8.50	-	-	91.54	**7.68**	ND < 1.00	ND < 1.00	ND < 3.00	7.68	ND < 1.00	
	9/4/2013	100.04	9.77	-	-	90.27	**44.2**	ND < 1.00	ND < 1.00	ND < 2.00	44.2	ND < 1.00	
	9/6/2013	100.04	9.85	-	-	90.19	**44.2**	ND < 1.00	ND < 1.00	ND < 2.00	44.2	ND < 1.00	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	1	5	5	5	NS	10	
MW-14	12/10/2013	100.04	10.56	-	-	89.48	**51.9**	ND < 1.00	ND < 1.00	ND < 3.00	51.9	ND < 1.00	
(cont)	1/21/2014	100.04	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	100.04	-	-	-	-	**8.32**	ND < 1.00	ND < 1.00	ND < 3.00	8.32	ND < 1.00	COULD NOT GAUGE
	6/3/2014	100.04	8.92	-	-	91.12	**4.91**	ND < 1.00	ND < 1.00	ND < 2.00	4.91	ND < 1.00	
	10/2/2014	100.04	10.49	-	-	89.55	**42.8**	ND < 1.00	ND < 1.00	ND < 2.00	42.8	ND < 1.00	
	12/3/2014	100.04	9.59	-	-	90.45	**20.2**	ND < 1.00	ND < 1.00	ND < 2.00	20.2	ND < 1.00	
	3/11/2015	100.04	9.34	-	-	90.70	**8.69**	ND < 1.00	ND < 1.00	ND < 2.00	8.69	ND < 1.00	
	6/18/2015	100.04	9.44	-	-	90.60	**34.2**	ND < 1.00	ND < 1.00	ND < 3.00	34.2	ND < 1.00	
	9/9/2015	100.04	9.97	-	-	90.07	**46.4**	ND < 1.00	ND < 1.00	ND < 3.00	46.4	ND < 1.00	
	12/10/2015	100.04	10.24	-	-	89.80	**38.3**	ND < 1.00	ND < 1.00	ND < 3.00	38.3	ND < 1.00	
	3/16/2016	100.04	9.28	-	-	90.76	**6.99**	ND < 1.00	ND < 1.00	ND < 3.00	6.99	ND < 1.00	
	6/15/2016	100.04	9.86	-	-	90.18	**37.1**	ND < 1.00	ND < 1.00	ND < 3.00	37.1	ND < 1.00	
	9/19/2016	100.04	10.52	-	-	89.52	**24.8**	ND < 10.0*	ND < 10.0	ND < 30.0	24.8	ND < 10.0	
	12/8/2016	100.04	9.52	-	-	90.52	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	ND < 1.00	
	3/16/2017	100.04	9.91	-	-	90.13	**4.96**	ND < 1.00	ND < 1.00	ND < 3.00	4.96	ND < 1.00	
	6/26/2017	100.04	8.79	-	-	91.25	0.51	ND < 1.0	ND < 1.0	ND < 1.0	0.51	ND < 1.0	
	9/7/2017	100.04	9.45	-	-	90.59	**3.9**	ND < 1.0	ND < 1.0	ND < 1.0	3.9	ND < 1.0	
	12/11/2017	100.04	10.10	-	-	89.94	0.8	ND < 0.5	ND < 0.5	ND < 0.5	0.8	ND < 0.5	
	3/26/2018	100.04	8.85	-	-	91.19	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	ND < 0.5	
	6/11/2018	100.04	9.47	-	-	90.57	1	ND < 0.5	ND < 0.5	ND < 0.5	1	ND < 0.5	
	9/4/2018	100.04	9.61	-	-	90.43	1	ND (< 0.2)	ND (< 0.4)	ND (< 1)	1	ND (< 0.2)	
	12/20/2018	100.04	8.70	-	-	91.34	0.9	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.9	ND (< 0.2)	
	3/7/2019	100.04	8.79	-	-	91.25	0.9	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.9	ND (< 0.2)	
MW-15	9/27/2006	100.47	10.72	-	-	89.75	**616**	**21.1**	**21.7**	**64.4**	723.2	**425**	
	12/7/2006	100.47	9.29	-	-	91.18	**522**	**16.6**	**8.2**	**54.5**	601.3	**114**	
	3/29/2007	100.47	9.81	-	-	90.66	**389**	**14**	**5.9**	**30.7**	439.6	**59.5**	
	6/13/2007	100.47	8.99	-	-	91.48	**924**	**26.7**	**6**	**56.8**	1,013.5	**191**	
	9/19/2007	100.47	9.72	-	-	90.75	**747**	**16.6**	3.5	**34.1**	801.2	**104**	
	12/11/2007	100.47	10.29	-	-	90.18	**800**	**15.1**	2.8	**40**	857.9	**119**	
	3/13/2008	100.47	9.85	-	-	90.62	**662**	**6.4**	2.9	**15.2**	686.5	**83.4**	
	6/6/2008	100.47	9.63	-	-	90.84	**509**	**5.6**	1.2	**12.7**	528.5	**81.1**	
	12/30/2008	100.47	9.50	-	-	90.97	**164**	1.9	0.58	4.6	171.08	**16.8**	
	3/16/2009	100.47	10.69	-	-	89.78	**540**	**5.8**	1.2	**9.5**	556.5	**57.2**	
	6/8/2009	100.47	9.45	-	-	91.02	**141**	ND < 1	ND < 1	1	142	**14.8**	
	7/20/2009	100.47	9.33	-	-	91.14	**80.7**	1.2	0.93	3.7	86.53	**19.1**	
	9/24/2009	100.47	9.91	-	-	90.56	**162**	3.9	**7.3**	**8.6**	181.8	**74.5**	
	12/3/2009	100.47	9.98	-	-	90.49	**432**	**8.6**	**7.3**	**17.4**	465.3	**52.2**	
	3/3/2010	100.47	9.41	-	-	91.06	**606**	**6.4**	**8.1**	**18.5**	639	**99.2**	
	6/7/2010	100.47	9.42	-	-	91.05	**200**	3.6	**6.2**	**6.3**	216.1	**24.7**	
	9/1/2010	100.47	10.06	-	-	90.41	**194**	3.6	2.8	**5.3**	205.7	**101**	
	12/3/2010	100.47	12.20	-	-	88.27	**405**	**7.6**	**6.9**	**13.7**	433.2	**93.3**	
	3/29/2011	100.47	9.52	-	-	90.95	**119**	0.86	ND < 1	0.89	120.75	**26.8**	
	6/16/2011	100.47	9.34	-	-	91.13	**8**	ND < 1	ND < 1	ND < 1	8	3.4	
	8/8/2011	100.47	9.93	-	-	90.54	**81.1**	2.3	0.85	4.2	88.45	**45.1**	
	9/19/2011	100.47	8.49	-	-	91.98	**43.2**	1.5	0.94	4.6	50.24	**25.8**	
	12/5/2011	100.47	9.40	-	-	91.07	**5**	ND < 0.15	ND < 0.21	0.51	5.51	5.4	
	3/16/2012	100.47	10.57	-	-	89.90	**31**	ND < 1	ND < 1	ND < 3	31	**58**	
	6/8/2012	100.47	9.67	-	-	90.80	**3.89**	ND < 1.00	ND < 1.00	ND < 3.00	3.89	8.11	
	9/7/2012	100.47	9.83	-	-	90.64	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**10.2**	
	12/18/2012	100.47	9.99	-	-	90.48	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**11.3**	
	3/14/2013	100.47	10.23	-	-	90.24	**6.60**	ND < 1.00	ND < 1.00	ND < 3.00	6.6	**30.5**	
	6/24/2013	100.47	8.98	-	-	91.49	**2.91**	ND < 1.00	ND < 1.00	ND < 3.00	2.91	2.21	
	9/6/2013	100.47	10.09	-	-	90.38	**1.77**	ND < 1.00	ND < 1.00	ND < 2.00	1.77	**13.0**	
	12/10/2013	100.47	10.31	-	-	90.16	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**18.0**	
	1/21/2014	100.47	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	100.47	-	-	-	-	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	**13.0**	COULD NOT GAUGE
	6/3/2014	100.47	9.70	-	-	90.77	**1.06**	ND < 1.00	ND < 1.00	ND < 2.00	1.06	3.54	
	10/2/2014	100.47	10.62	-	-	89.85	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	8.18	
	12/3/2014	100.47	10.21	-	-	90.26	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	4.11	
	3/11/2015	100.47	10.33	-	-	90.14	ND < 1.00	ND < 1.00	ND < 1.00	ND < 2.00	BDL	9.97	
	6/18/2015	100.47	10.02	-	-	90.45	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	6.61	
	9/9/2015	100.47	10.25	-	-	90.22	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	6.55	
	12/10/2015	100.47	10.50	-	-	89.97	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	6.69	
	3/16/2016	100.47	10.12	-	-	90.35	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	3.18	
	6/15/2016	100.47	10.26	-	-	90.21	**2.49**	ND < 1.00	ND < 1.00	ND < 3.00	2.49	4.76	
	9/19/2016	100.47	10.59	-	-	89.88	ND < 1.00*	ND < 1.00*	ND < 1.00*	ND < 3.00*	BDL	8.42	
	12/8/2016	100.47	9.77	-	-	90.70	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	2.96	
	3/16/2017	100.47	9.90	-	-	90.57	**1.23**	ND < 1.00	ND < 1.00	ND < 3.00	1.23	4.17	
	6/26/2017	100.47	9.03	-	-	91.44	**1.6**	ND < 1.0	ND < 1.0	ND < 1.0	1.6	ND < 1.0	
	9/7/2017	100.47	9.63	-	-	90.84	**1.5**	ND < 1.0	0.33	0.49	2.32	0.76	
	12/11/2017	100.47	10.65	-	-	89.82	**3**	ND < 0.5	ND < 0.5	0.7	3.7	4	
	3/26/2018	100.47	9.80	-	-	90.67	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	1	
	6/11/2018	100.47	9.44	-	-	91.03	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	3	
	9/4/2018	100.47	9.73	-	-	90.74	0.8	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.8	1	
	12/20/2018	100.47	8.57	-	-	91.90	0.3	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.3	1	
	3/7/2019	100.47	9.83	-	-	90.64	ND (< 0.2)	ND (< 0.2)	ND (< 0.4)	ND (< 1)	BDL	3	
MW-16	9/27/2006	100.42	11.90	-	-	88.52	**1,600**	**159**	**1,220**	**2,520**	5,499	2.3	
	12/7/2006	100.42	18.97	10.25	8.72	87.99	-	-	-	-	-	-	
	3/29/2007	100.42	11.36	-	-	89.06	**2,320**	**87.1**	**430**	**1,110**	3,947.1	ND < 20	
	6/13/2007	100.42	10.82	10.68	0.14	89.71	-	-	-	-	-	-	
	9/19/2007	100.42	10.98	10.76	0.22	89.61	-	-	-	-	-	-	
	12/11/2007	100.42	9.80	9.77	0.03	90.64	-	-	-	-	-	-	
	3/13/2008	100.42	10.89	-	-	89.53	**1,200**	**34.1**	**146**	**303**	1,683.1	ND < 10	
	6/6/2008	100.42	10.06	-	-	90.36	**1,350**	**49.6**	**225**	**394**	2,018.6	**16.1**	
	12/30/2008	100.42	9.66	-	-	90.76	**958**	**59.8**	**393**	**662**	2,072.8	7.7	
	3/16/2009	100.42	10.70	-	-	89.72	**1,320**	**44**	**141**	**222**	1,727	3.7	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-16 (cont)	6/8/2009	100.42	9.64	-	-	90.78	**2,830**	**158**	**667**	**1,010**	4,665	ND < 20	
	7/20/2009	100.42	9.56	9.47	0.09	90.93	-	-	-	-	-	-	
	9/24/2009	100.42	9.96	9.80	0.16	90.58	-	-	-	-	-	-	
	12/3/2009	100.42	9.85	9.76	0.09	90.64	-	-	-	-	-	-	
	3/3/2010	100.42	8.90	-	-	91.52	**940**	**104**	**1,070**	**2,020**	4,134	3.5	
	6/7/2010	100.42	9.28	9.00	0.28	91.35	-	-	-	-	-	-	
	9/1/2010	100.42	10.21	-	-	90.21	**2,590**	**131**	**492**	**828**	4,041	ND < 20	
	12/3/2010	100.42	9.67	9.66	0.01	90.76	-	-	-	-	-	-	
	3/29/2011	100.42	8.45	-	-	91.97	**312**	**26.3**	**284**	**319**	941.3	ND < 2.5	
	6/16/2011	100.42	8.75	-	-	91.67	**1,490**	**76.6**	**433**	**634**	2,633.6	ND < 10	
	8/8/2011	100.42	9.44	9.41	0.03	91.00	-	-	-	-	-	-	
	9/19/2011	100.42	7.89	-	-	92.53	**68.3**	4.1	**59.9**	**77.1**	209.4	ND < 1	
	12/5/2011	100.42	8.77	-	-	91.65	**655**	**26**	**237**	**246**	1,164	ND < 0.37	
	3/16/2012	100.42	9.96	-	-	90.46	**1,400**	**59**	**157**	**342**	1,958	ND < 1	
	6/8/2012	100.42	9.22	-	-	91.20	**1,310**	**49.2**	**157**	**229**	1,745.2	ND < 1.00	
	9/7/2012	100.42	9.36	-	-	91.06	**2,060**	**81.1**	**303**	**380**	2,824.1	ND < 1.00	
	12/18/2012	100.42	9.56	-	-	90.86	**1,130**	**63.4**	**423**	**329**	1,945.4	ND < 1.00	
	3/14/2013	100.42	9.39	-	-	91.03	**1,140**	**59.3**	**159**	**261**	1,619.3	ND < 1.00	
	6/24/2013	100.42	8.23	-	-	92.19	**509**	**46.1**	**177**	**303**	1,035.1	ND < 1.00	
	9/4/2013	100.42	9.32	9.28	0.04	91.13	-	-	-	-	-	-	
	9/6/2013	100.42	9.57	9.36	0.21	91.01	-	-	-	-	-	-	
	9/26/2013	100.42	10.83	10.60	0.23	89.76	-	-	-	-	-	-	
	10/23/2013	100.42	10.08	9.83	0.25	90.53	-	-	-	-	-	-	
	11/11/2013	100.42	10.34	-	-	90.08	-	-	-	-	-	-	
	12/10/2013	100.42	10.75	-	-	89.67	**1,060**	**57.8**	**99.1**	**200**	1,416.9	1.30	
	1/21/2014	100.42	9.68	9.56	0.12	90.83	-	-	-	-	-	-	
	3/10/2014	100.42	-	-	-	-	-	-	-	-	-	-	COULD NOT GAUGE
	6/3/2014	100.42	8.72	8.64	0.08	91.76	-	-	-	-	-	-	
	10/2/2014	100.42	9.85	-	-	90.57	**1,060**	**68.5**	**495**	**1,020**	2,643.5	ND < 10.0	SHEEN
	12/3/2014	100.42	9.25	-	-	91.17	**1,380**	**86.9**	**337**	**1,390**	3,193.9	ND < 1.00	
	3/11/2015	100.42	8.99	-	-	91.43	**524**	**80.5**	**590**	**1,190**	2,384.5	ND < 1.00	
	6/18/2015	100.42	9.08	-	-	91.34	**1,330**	**128**	**586**	**1,180**	3,224	ND < 1.00	
	9/9/2015	100.42	9.52	-	-	90.90	**1,040**	**106**	**522**	**1,130**	2,798	ND < 1.00	
	12/10/2015	100.42	9.84	-	-	90.58	**1,090**	**85.6**	**347**	**678**	2,200.6	ND < 1.00	
	3/16/2016	100.42	9.05	-	-	91.37	**333**	**108**	**621**	**1,150**	2,212	ND < 1.00	
	6/15/2016	100.42	9.62	-	-	90.80	**923**	**101**	**481**	**918**	2,423	ND < 5.00	
	9/19/2016	100.42	10.03	-	-	90.39	**978**	**108**	**534**	**1,010**	2,630	ND < 5.00	
	12/8/2016	100.42	9.33	-	-	91.09	**926**	**85.4**	**502**	**1,010**	2,523.4	ND < 5.00	
	3/16/2017	100.42	9.50	-	-	90.92	**906**	**89.0**	**433**	**786**	2,214	ND < 10.0	
	6/26/2017	100.42	8.38	-	-	92.04	**715**	**56.5**	**466**	**783**	2,020.5	ND < 4.0	
	9/7/2017	100.42	8.86	8.85	0.01	91.57	**929**	**75.1**	**462**	**570**	2,036.1	ND < 5.0	
	12/11/2017	100.42	9.93	9.90	0.03	90.51	**810**	**70**	**390**	**590**	1,860	ND < 3	
	3/26/2018	100.42	8.79	-	-	91.63	**670**	**61**	**360**	**700**	1,791	ND < 0.5	
	6/11/2018	100.42	8.99	-	-	91.43	**910**	**89**	**390**	**700**	2,089	ND < 1	
	9/4/2018	100.42	9.20	-	-	91.22	**950**	**92**	**400**	**590**	2,032	ND (< 0.4)	
	12/20/2018	100.42	8.62	-	-	91.80	**690**	**62**	**330**	**530**	1,612	ND (< 2)	SHEEN
	3/7/2019	100.42	8.74	-	-	91.68	**820**	**74**	**330**	**550**	1,774	ND (< 0.4)	
MW-17	9/28/2006	100.05	10.59	-	-	89.46	**4.8**	**64.2**	**378**	**1,420**	1,867	**202**	
	12/7/2006	100.05	10.90	-	-	89.15	**19.9**	**97.6**	**335**	**1,090**	1,542.5	**29.8**	
	3/29/2007	100.05	10.18	-	-	89.87	**15.4**	**145**	**432**	**1,300**	1,892.4	**19.4**	
	6/13/2007	100.05	9.55	-	-	90.50	**11.1**	**76.9**	**228**	**695**	1,011	**21.3**	
	9/19/2007	100.05	9.71	-	-	90.34	**11.4**	**69.3**	**252**	**665**	997.7	**13.6**	
	12/11/2007	100.05	10.17	-	-	89.88	**4.8**	**32.9**	**148**	**386**	571.7	4.3	
	3/13/2008	100.05	9.17	-	-	90.88	**20.4**	**143**	**695**	**2,160**	3,018.4	8.2	
	6/6/2008	100.05	9.03	-	-	91.02	**2.6**	**14.2**	**63.7**	**178**	258.5	3.4	
	12/30/2008	100.05	8.51	-	-	91.54	**18.1**	**60.3**	**421**	**418**	917.4	2.3	
	3/16/2009	100.05	9.42	-	-	90.63	**3.8**	**20.4**	**134**	**184**	342.2	2.1	
	6/8/2009	100.05	8.19	-	-	91.86	**244**	**80.1**	**773**	**439**	1,536.1	7.7	
	7/20/2009	100.05	8.23	-	-	91.82	**27.4**	**145**	**726**	**1,100**	1,998.4	1.7	
	9/24/2009	100.05	8.93	-	-	91.12	**10.6**	**47.7**	**324**	**369**	751.3	ND < 1	
	12/3/2009	100.05	8.91	-	-	91.14	**32.7**	**161**	**854**	**1,170**	2,217.7	1.7	
	3/3/2010	100.05	8.02	-	-	92.03	**7.5**	**37.7**	**225**	**289**	559.2	1.4	
	6/7/2010	100.05	8.33	-	-	91.72	**7.6**	**35**	**259**	**274**	575.6	0.83	
	9/1/2010	100.05	9.01	-	-	91.04	**16.3**	**91.3**	**716**	**675**	1,498.6	ND < 2	
	12/3/2010	100.05	8.80	-	-	91.25	**19.8**	**103**	**757**	**881**	1,760.8	ND < 1	
	3/29/2011	100.05	7.83	-	-	92.22	**6.3**	**14.7**	**166**	**90.9**	277.9	1.2	
	6/16/2011	100.05	7.96	7.90	0.06	92.14	-	-	-	-	-	-	
	8/8/2011	100.05	8.62	8.58	0.04	91.46	-	-	-	-	-	-	
	9/19/2011	100.05	7.12	7.11	0.01	92.94	-	-	-	-	-	-	
	12/5/2011	100.05	7.86	-	-	92.19	**9.3**	**43**	**230**	**209**	491.3	1	
	3/16/2012	100.05	9.40	9.33	0.07	90.70	-	-	-	-	-	-	
	6/8/2012	100.05	8.49	-	-	91.56	**23.7**	**78.4**	**402**	**239**	743.1	ND < 1.00	
	9/7/2012	100.05	8.49	-	-	91.56	**24.6**	**89.0**	**279**	**304**	696.6	ND < 1.00	
	12/18/2012	100.05	8.62	-	-	91.43	**18.8**	**72.5**	**275**	**332**	698.3	ND < 1.00	
	3/14/2013	100.05	8.37	-	-	91.68	**3.85**	**21.2**	**80.2**	**69.1**	174.35	1.40	
	6/24/2013	100.05	7.41	-	-	92.64	**6.01**	**31.1**	**112**	**101**	250.11	1.02	
	9/4/2013	100.05	8.75	8.70	0.05	91.34	-	-	-	-	-	-	
	9/6/2013	100.05	9.74	9.70	0.04	90.34	-	-	-	-	-	-	
	9/26/2013	100.05	7.94	7.90	0.04	92.14	**4.58**	**21.3**	**84.9**	**63.5**	174.28	ND < 1.00	
	10/7/2013	100.05	7.93	-	-	92.12	-	-	-	-	-	-	
	10/23/2013	100.05	9.06	-	-	90.99	-	-	-	-	-	-	
	11/11/2013	100.05	9.52	-	-	90.53	-	-	-	-	-	-	
	12/10/2013	100.05	9.45	-	-	90.60	**10.2**	**80.4**	**562**	**719**	1,371.6	ND < 1.00	
	1/21/2014	100.05	8.75	-	-	91.30	-	-	-	-	-	-	
	3/10/2014	100.05	-	-	-	-	-	-	-	-	-	-	COULD NOT GAUGE
	6/3/2014	100.05	7.86	7.85	0.01	92.20	**16.1**	**98.6**	**288**	**412**	814.7	ND < 1.00	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	1	5	5	5	NS	10	
MW-17	10/2/2014	100.05	8.92	-	-	91.13	**32.5**	**232**	**1,230**	**1,500**	2,994.5	ND < 1.00	
(cont)	12/3/2014	100.05	8.21	-	-	91.84	**27.6**	**151**	**1,030**	**1,220**	2,428.6	ND < 1.00	
	3/11/2015	100.05	7.81	-	-	92.24	**10.2**	**77.4**	**757**	**796**	1,640.6	ND < 1.00	
	6/18/2015	100.05	8.09	-	-	91.96	**25.2**	**167**	**1,080**	**1,240**	2,512.2	ND < 1.00	
	9/9/2015	100.05	8.39	-	-	91.66	**18.8**	**120**	**832**	**1,050**	2,020.8	ND < 1.00	
	12/10/2015	100.05	8.88	-	-	91.17	**18.8**	**133**	**1,220**	**797**	2,168.8	ND < 1.00	
	3/16/2016	100.05	7.95	-	-	92.10	**15.6**	**95.5**	**708**	**757**	1,576.1	ND < 1.00	
	6/15/2016	100.05	8.31	-	-	91.74	**19.1**	**129**	**828**	**1,030**	2,006.1	ND < 5.00	
	9/19/2016	100.05	9.06	-	-	90.99	**37.7**	**159**	**1,060**	**1,190**	2,446.7	ND < 5.00	
	12/8/2016	100.05	8.26	-	-	91.79	**24.5**	**125**	**923**	**1,130**	2,202.5	ND < 5.00	
	3/16/2017	100.05	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	100.05	7.40	-	-	92.65	**5.8**	**16.6**	**12.3**	**111**	145.7	ND < 1.0	
	9/7/2017	100.05	7.86	-	-	92.19	**15.2**	**84.4**	**755**	**601**	1,455.6	ND < 2.0	
	12/11/2017	100.05	-	-	-	-	**14**	**100**	**790**	**900**	1,804	ND < 3	
	3/26/2018	100.05	7.68	-	-	92.37	**2**	**7**	**130**	**54**	193	ND < 0.5	SHEEN
	6/11/2018	100.05	7.87	-	-	92.18	**8**	**47**	**360**	**290**	705	ND < 1	
	9/4/2018	100.05	8.19	8.18	0.01	91.87	**13**	**78**	**550**	**520**	1,161	ND (< 0.2)	
	12/20/2018	100.05	7.52	-	-	92.53	**3**	**21**	**280**	**220**	524	ND (< 1)	SHEEN
	3/7/2019	100.05	7.64	-	-	92.41	**4**	**23**	**220**	**150**	397	ND (< 0.2)	
MW-18	9/28/2006	101.41	12.54	-	-	88.87	**1,470**	**137**	**499**	**1,160**	3,266	5.8	
	12/7/2006	101.41	12.76	-	-	88.65	**2,490**	**210**	**518**	**1,820**	5,038	ND < 10	
	3/29/2007	101.41	12.33	-	-	89.08	**2,190**	**170**	**510**	**1,100**	3,970	ND < 20	
	6/13/2007	101.41	11.10	-	-	90.31	**2,400**	**296**	**1,040**	**3,360**	7,096	ND < 10	
	9/19/2007	101.41	12.02	-	-	89.39	**1,820**	**114**	**397**	**951**	3,282	ND < 2.5	
	12/11/2007	101.41	13.40	-	-	88.01	**1,670**	**63.6**	**241**	**439**	2,413.6	ND < 5	
	3/13/2008	101.41	13.12	-	-	88.29	**1,770**	**94.2**	**399**	**649**	2,912.2	ND < 10	
	6/6/2008	101.41	13.24	-	-	88.17	**2,410**	**156**	**746**	**1,220**	4,532	ND < 10	
	12/30/2008	101.41	12.58	-	-	88.83	**1,970**	**80.4**	**319**	**620**	2,989.4	ND < 5	
	3/16/2009	101.41	12.85	-	-	88.56	**1,850**	**79.7**	**254**	**417**	2,600.7	ND < 5	
	6/8/2009	101.41	12.51	-	-	88.90	**1,680**	**79.8**	**302**	**480**	2,541.8	ND < 10	
	7/20/2009	101.41	12.65	-	-	88.76	**1,570**	**83.7**	**301**	**537**	2,491.7	ND < 10	
	9/24/2009	101.41	12.96	-	-	88.45	**1,010**	**48.8**	**131**	**363**	1,552.8	ND < 1	
	12/3/2009	101.41	12.76	-	-	88.65	**1,380**	**57.2**	**355**	**720**	2,512.2	ND < 5	
	3/3/2010	101.41	11.90	-	-	89.51	**1,790**	**80.6**	**400**	**548**	2,818.6	ND < 10	
	6/7/2010	101.41	12.47	-	-	88.94	**1,630**	**103**	**502**	**548**	2,783	ND < 5	
	9/1/2010	101.41	12.83	-	-	88.58	**2,580**	**102**	**347**	**637**	3,666	ND < 20	
	12/3/2010	101.41	12.87	-	-	88.54	**1,020**	**39.4**	**119**	**175**	1,353.4	ND < 10	
	3/29/2011	101.41	10.46	-	-	90.95	**746**	**34.7**	**137**	**163**	1,080.7	ND < 5	
	6/16/2011	101.41	11.00	-	-	90.41	**2,180**	**123**	**548**	**738**	3,589	ND < 10	
	8/8/2011	101.41	10.71	-	-	90.70	**2,440**	**104**	**261**	**374**	3,179	ND < 10	
	9/19/2011	101.41	10.34	-	-	91.07	**1,200**	**64.8**	**318**	**425**	2,007.8	ND < 5	
	12/5/2011	101.41	9.90	-	-	91.51	**1,620**	**65**	**287**	**345**	2,317	ND < 0.92	
	3/16/2012	101.41	10.66	-	-	90.75	**1,740**	**101**	**1,310**	**1,510**	4,661	ND < 1	
	6/8/2012	101.41	9.83	-	-	91.58	**153**	**11.9**	**109**	**137**	410.9	ND < 1.00	
	9/7/2012	101.41	10.05	-	-	91.36	**1,070**	**53.8**	**451**	**337**	1,911.8	ND < 1.00	
	12/18/2012	101.41	10.18	-	-	91.23	**944**	**52.9**	**160**	**315**	1,471.9	ND < 1.00	
	3/14/2013	101.41	9.95	-	-	91.46	**780**	**31.3**	**89.2**	**137**	1,037.5	ND < 1.00	
	6/24/2013	101.41	8.85	-	-	92.56	**382**	**26.5**	**97.3**	**188**	693.8	ND < 1.00	
	9/4/2013	101.41	10.13	-	-	91.28	**1,150**	**87.8**	**371**	**522**	2,130.8	ND < 1.00	
	9/6/2013	101.41	10.66	-	-	90.75	**1,150**	**87.8**	**371**	**522**	2,130.8	ND < 1.00	
	12/10/2013	101.41	11.01	-	-	90.40	**820**	**55.1**	**122**	**176**	1,173.1	ND < 1.00	
	1/21/2014	101.41	-	-	-	-	-	-	-	-	-	-	
	3/10/2014	101.41	-	-	-	-	**897**	**70.6**	**230**	**216**	1,413.6	ND < 1.00	COULD NOT GAUGE
	6/3/2014	101.41	9.45	-	-	91.96	**282**	**48.4**	**209**	**248**	787.4	ND < 1.00	
	10/2/2014	101.41	10.62	-	-	90.79	**858**	**65.1**	**175**	**175**	1,273.1	ND < 10.0	SHEEN
	12/3/2014	101.41	10.06	-	-	91.35	**1,300**	**102**	**330**	**404**	2,136	ND < 1.00	SHEEN
	3/11/2015	101.41	9.63	-	-	91.78	**1,220**	**104**	**520**	**376**	2,220	ND < 1.00	
	6/18/2015	101.41	9.76	-	-	91.65	**774**	**74.8**	**268**	**427**	1,543.8	ND < 1.00	
	9/9/2015	101.41	10.17	-	-	91.24	**1,340**	**89.4**	**237**	**370**	2,036.4	ND < 1.00	
	12/10/2015	101.41	10.86	-	-	90.55	**1,090**	**85.3**	**250**	**432**	1,857.3	ND < 1.00	
	3/16/2016	101.41	9.71	-	-	91.70	**302**	**77.2**	**170**	**596**	1,145.2	ND < 1.00	
	6/15/2016	101.41	10.22	-	-	91.19	**933**	**99.6**	**211**	**521**	1,764.6	ND < 5.00	
	9/19/2016	101.41	11.13	-	-	90.28	**1,110**	**130**	**255**	**716**	2,211	ND < 5.00	
	12/8/2016	101.41	10.08	-	-	91.33	**971**	**82.8**	**145**	**467**	1,665.8	ND < 5.00	
	3/16/2017	101.41	-	-	-	-	-	-	-	-	-	-	INACCESSIBLE
	6/26/2017	101.41	9.05	-	-	92.36	**96.4**	**5.3**	**10.5**	**11.2**	123.4	ND < 1.0	
	9/7/2017	101.41	9.57	-	-	91.84	**1,510**	**111**	**127**	**427**	2,175	ND < 10	
	12/11/2017	101.41	-	-	-	-	**810**	**54**	**59**	**190**	1,113	ND < 3	
	3/26/2018	101.41	9.42	-	-	91.99	**300**	**38**	**90**	**280**	708	ND < 0.5	
	6/11/2018	101.41	-	-	-	-	-	-	-	-	-	-	CNL
	9/4/2018	101.41	9.95	-	-	91.46	**880**	**81**	**93**	**210**	1,264	ND (< 0.4)	
	12/20/2018	101.41	9.33	-	-	92.08	**1,100**	**97**	**110**	**310**	1,617	ND (< 2)	SHEEN
	3/7/2019	101.41	9.37	-	-	92.04	**750**	**79**	**120**	**360**	1,309	ND (< 0.2)	
MW-19	9/6/2013	NSD	9.41	-	-	-	**39.3**	**15.8**	**171**	**58.3**	284.4	ND < 1.00	NSD
	10/7/2013	NSD	9.58	-	-	-	-	-	-	-	-	-	NSD
	10/23/2013	NSD	9.89	-	-	-	-	-	-	-	-	-	NSD
	11/11/2013	NSD	10.42	-	-	-	-	-	-	-	-	-	NSD
	12/10/2013	NSD	10.29	-	-	-	**57.5**	**18.1**	**148**	**56.2**	279.8	4.75	NSD
	1/21/2014	NSD	9.49	-	-	-	-	-	-	-	-	-	
	3/10/2014	NSD	-	-	-	-	**67.1**	**8.28**	**245**	**58.0**	378.38	2.75	COULD NOT GAUGE
	6/3/2014	NSD	8.58	-	-	-	**35.7**	4.06	**126**	**36.2**	201.96	ND < 1.00	
	10/2/2014	NSD	9.92	-	-	-	**68.9**	**12.9**	**183**	**40.5**	305.3	ND < 10.0	
	12/3/2014	NSD	9.15	-	-	-	**57.7**	**11.3**	**168**	**46.4**	283.4	ND < 1.00	
	3/11/2015	NSD	8.95	-	-	-	**28.8**	**6.76**	**102**	**32.0**	169.56	ND < 1.00	
	6/18/2015	NSD	9.08	-	-	-	**63.6**	**9.92**	**72.6**	**34.5**	180.62	2.40	
	9/9/2015	NSD	9.46	-	-	-	**52.3**	**13.7**	**89.3**	**47.9**	203.2	ND < 1.00	

HISTORICAL GROUNDWATER MONITORING SUMMARY

Former Mobil Service Station # 17-EMW
304 Columbia Street
Brooklyn, New York

Well	Date	Casing Elevation (ft)	Depth to Water (ft)	Depth to Product (ft)	Product Thickness (ft)	Adjusted Groundwater Elevation (ft)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes, Total (ug/L)	Total BTEX (ug/L)	MTBE (ug/L)	Comments
						NYSDEC TOGS 1.1.1 WQS	**1**	**5**	**5**	**5**	**NS**	**10**	
MW-19 (cont)	12/10/2015	NSD	9.82	-	-	-	**38.3**	**13.9**	**105**	**58.5**	215.7	ND < 1.00	
	3/16/2016	NSD	8.93	-	-	-	**40.5**	**12.8**	**123**	**52.8**	229.1	ND < 1.00	NSD
	6/15/2016	NSD	9.31	-	-	-	**43.0**	**10.3**	**87.6**	**57.2**	198.1	ND < 1.00	NSD
	9/19/2016	NSD	10.03	-	-	-	**50.9**	**19.1**	**72.0**	**68.2**	210.2	ND < 1.00	NSD
	12/8/2016	NSD	9.20	-	-	-	**39.8**	**11.0**	**49.5**	**50.3**	150.6	ND < 1.00	
	3/16/2017	NSD	9.47	-	-	-	**45.7**	**12.4**	**46.5**	**46.9**	151.5	ND < 1.00	
	6/26/2017	NSD	8.33	-	-	-	**13.8**	2.4	**18.5**	**13.9**	48.6	ND < 1.0	
	9/7/2017	NSD	8.86	-	-	-	**41.0**	**10.1**	**21.7**	**42.6**	115.4	ND < 1.0	
	12/11/2017	NSD	-	-	-	-	**33**	**12**	**13**	**47**	105	ND < 1	
	3/26/2018	NSD	8.74	-	-	-	**17**	**6**	**27**	**32**	82	ND < 0.5	
	6/11/2018	NSD	8.93	-	-	-	**43**	**14**	**58**	**54**	169	ND < 0.5	
	9/4/2018	NSD	9.24	-	-	-	**45**	**16**	**28**	**51**	140	0.4	
	12/20/2018	NSD	8.55	-	-	-	**28**	**13**	**60**	**48**	149	ND (< 2)	
	3/7/2019	NSD	8.70	-	-	-	**18**	**8**	**41**	**47**	114	0.5	
MW-20	9/6/2013	NSD	9.34	-	-	-	**44.5**	3.65	**44.6**	**15.4**	108.15	**29.2**	NSD
	10/7/2013	NSD	9.58	-	-	-	-	-	-	-	-	-	NSD
	10/23/2013	NSD	9.82	-	-	-	-	-	-	-	-	-	NSD
	11/11/2013	NSD	10.20	-	-	-	-	-	-	-	-	-	NSD
	12/10/2013	NSD	10.24	-	-	-	**145**	2.62	**89.1**	**21.1**	257.82	**47.4**	NSD
	1/21/2014	NSD	9.35	-	-	-	-	-	-	-	-	-	
	3/10/2014	NSD	-	-	-	-	**19.8**	ND < 1.00	2.63	ND < 3.00	22.43	**10.5**	COULD NOT GAUGE
	6/3/2014	NSD	8.38	-	-	-	**3.99**	ND < 1.00	ND < 1.00	ND < 2.00	3.99	2.97	
	10/2/2014	NSD	9.83	-	-	-	**5.98**	ND < 1.00	2.57	ND < 2.00	8.55	8.10	
	12/3/2014	NSD	9.11	-	-	-	**10.9**	ND < 1.00	**7.94**	4.12	22.96	6.57	
	3/11/2015	NSD	8.89	-	-	-	**50.1**	1.34	**5.24**	3.19	59.87	**14.5**	
	6/18/2015	NSD	9.04	-	-	-	**4.01**	ND < 1.00	ND < 1.00	ND < 3.00	4.01	3.64	
	9/9/2015	NSD	9.44	-	-	-	**4.15**	ND < 1.00	ND < 1.00	ND < 3.00	4.15	7.68	
	12/10/2015	NSD	9.74	-	-	-	**5.91**	ND < 1.00	ND < 1.00	ND < 3.00	5.91	5.26	
	3/16/2016	NSD	8.72	-	-	-	**1.65**	ND < 1.00	ND < 1.00	ND < 3.00	1.65	1.64	NSD
	6/15/2016	NSD	9.22	-	-	-	**3.71**	ND < 1.00	ND < 1.00	ND < 3.00	3.71	4.22	NSD
	9/19/2016	NSD	9.94	-	-	-	**8.53**	ND < 1.00*	ND < 1.00*	ND < 3.00*	8.53	6.90	NSD
	12/8/2016	NSD	9.17	-	-	-	**3.22**	ND < 1.00	ND < 1.00	ND < 3.00	3.22	5.14	
	3/16/2017	NSD	9.30	-	-	-	ND < 1.00	ND < 1.00	ND < 1.00	ND < 3.00	BDL	1.82	
	6/26/2017	NSD	8.22	-	-	-	0.74	ND < 1.0	ND < 1.0	ND < 1.0	0.74	1.9	
	9/7/2017	NSD	8.77	-	-	-	**2.4**	ND < 1.0	ND < 1.0	ND < 1.0	2.4	6.3	
	12/11/2017	NSD	-	-	-	-	**7**	ND < 0.5	ND < 0.5	ND < 0.5	7	8	
	3/26/2018	NSD	8.38	-	-	-	1	ND < 0.5	ND < 0.5	ND < 0.5	1	2	
	6/11/2018	NSD	8.78	-	-	-	ND < 0.5	ND < 0.5	ND < 0.5	ND < 0.5	BDL	3	
	9/4/2018	NSD	9.14	-	-	-	0.7	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.7	3	
	12/20/2018	NSD	8.33	-	-	-	0.6	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.6	3	
	3/7/2019	NSD	8.52	-	-	-	0.8	ND (< 0.2)	ND (< 0.4)	ND (< 1)	0.8	2	

NOTES:
TOGS 1.1.1 WQS = Ambient Water Quality Standards Guidance Values and Groundwater Effluent Limitations, amended April 2000
- = Not analyzed or measured
BDL = Below detection limit
BOLD = Value exceeds regulatory limits
BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes
CNL = Could Not Locate
DRY = Insufficient water for sampling
ft = Feet
J = Estimated value
mg/L = Milligrams/Liter
MTBE = Methyl tertiary butyl ether
ND < # = Not detected. Where an analyte is not detected, a reporting limit is given.
NS = No Standard
NSD = No Survey Data
NYSDEC = New York State Department of Environmental Conservation
µg/L = Micrograms per liter
NA = Not Analyzed
NM = Field Data Not Measured

(2/28/2005-3/7/2019)

Table 2

Table 2

GROUNDWATER GEOCHEMICAL PARAMETER DATA

Former Mobil Service Station #17-EMW
304 Columbia Street
Brooklyn, New York

Well ID	Date	DO (mg/L)	Total BTEX (µg/L)	ORC Sock Status
MW-1	3/26/2018	-	NS	None
	6/11/2018	-	NS	
	9/4/2018	0.35	788	
	12/20/2018	-	NS	
	3/7/2019	-	488	
MW-2	3/26/2018	-	NS	None
	6/11/2018	-	NS	
	9/4/2018	-	NS	
	12/20/2018	-	NS	
	3/7/2019	-	744	
MW-3	3/26/2018	-	BDL	None
	6/11/2018	0.52	BDL	
	9/4/2018	1.27	BDL	
	12/20/2018	-	NS	
	3/7/2019	9.18	BDL	
MW-5	3/26/2018	-	BDL	None
	6/11/2018	0.73	BDL	
	9/4/2018	2.58	BDL	
	12/20/2018	2.15	BDL	
	3/7/2019	3.82	BDL	
MW-7A	3/26/2018	-	NS	None
	6/11/2018	0.38	BDL	
	9/4/2018	0.49	BDL	
	12/20/2018	-	NS	
	3/7/2019	-	NS	
MW-8A	3/26/2018	-	7,880	None
	6/11/2018	0.46	6,750	
	9/4/2018	0.37	6,990	
	12/20/2018	0.62	6,920	
	3/7/2019	3.03	6,880	
MW-9	3/26/2018	-	NS	None
	6/11/2018	-	NS	
	9/4/2018	-	NS	
	12/20/2018	-	NS	
	3/7/2019	-	NS	
MW-10	3/26/2018	-	13,210	None
	6/11/2018	0.41	12,000	
	9/4/2018	0.76	11,680	
	12/20/2018	1.21	12,980	
	3/7/2019	1.30	13,790	
MW-11	3/26/2018	-	902	None
	6/11/2018	0.56	1,310	
	9/4/2018	0.85	2,010	
	12/20/2018	0.28	2,310	
	3/7/2019	3.24	1,120	
MW-12	3/26/2018	-	BDL	None
	6/11/2018	0.25	BDL	
	9/4/2018	0.90	2	
	12/20/2018	1.21	1	
	3/7/2019	3.19	0.4	

Table 2

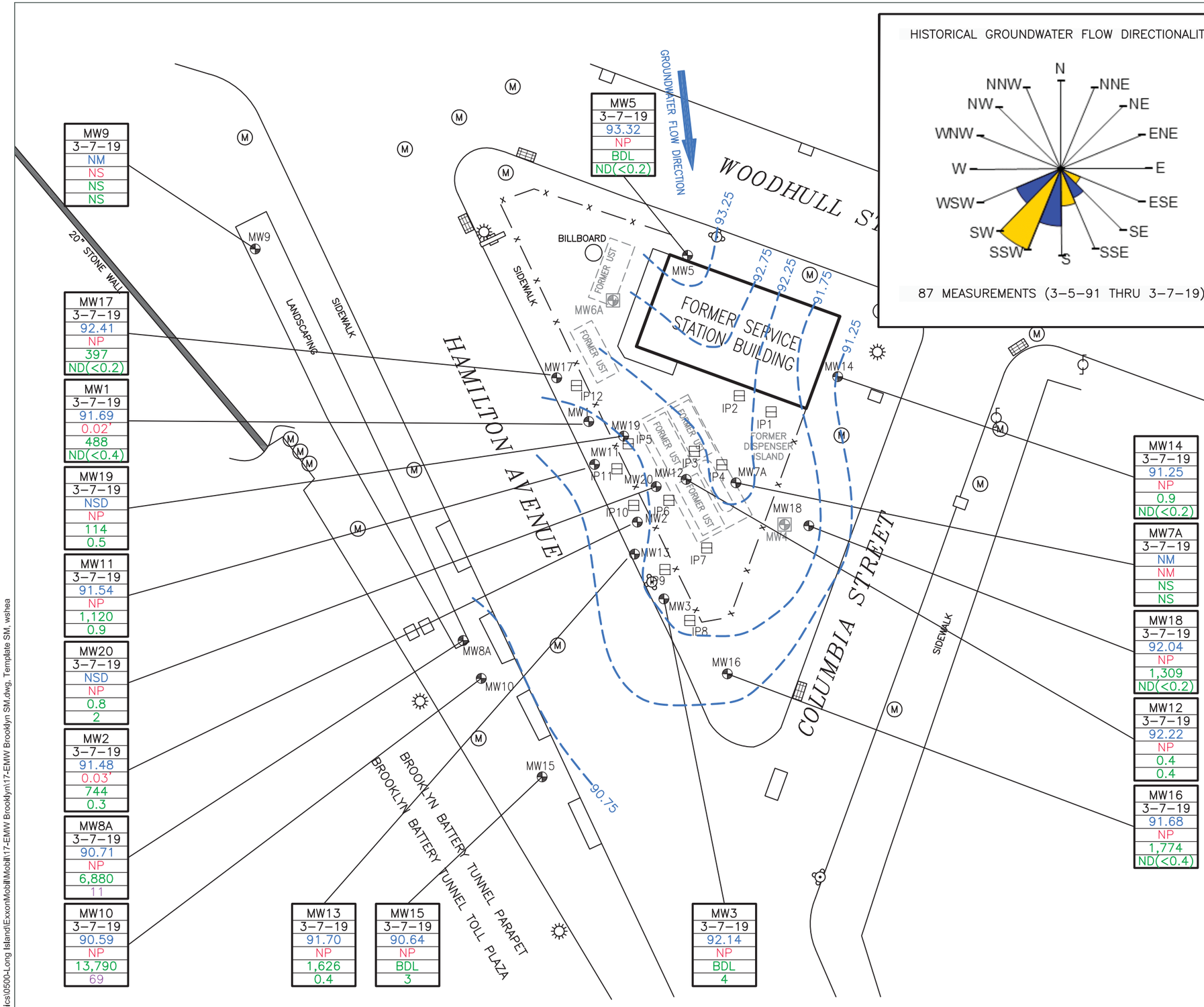
GROUNDWATER GEOCHEMICAL PARAMETER DATA

Former Mobil Service Station #17-EMW
304 Columbia Street
Brooklyn, New York

Well ID	Date	DO (mg/L)	Total BTEX (µg/L)	ORC Sock Status
MW-13	3/26/2018	-	863	None
	6/11/2018	0.46	2,700	
	6/11/2018	0.85	2,949	
	12/20/2018	0.63	914	
	3/7/2019	2.54	1,626	
MW-14	3/26/2018	-	BDL	None
	6/11/2018	0.42	1.0	
	9/4/2018	1.33	1	
	12/20/2018	1.57	0.9	
	3/7/2019	6.24	0.9	
MW-15	3/26/2018	-	BDL	None
	6/11/2018	0.38	BDL	
	9/4/2018	1.02	0.8	
	12/20/2018	0.88	0.3	
	3/7/2019	1.97	BDL	
MW-16	3/26/2018	-	1,791	None
	6/11/2018	0.39	2,089	
	9/4/2018	1.57	2,032	
	12/20/2018	0.3	1,612	
	3/7/2019	1.97	1,774	
MW-17	3/26/2018	-	193	None
	6/11/2018	0.44	705	
	9/4/2018	1.28	1,161	
	12/20/2018	0.63	524	
	3/7/2019	1.55	397	
MW-18	3/26/2018	-	708	None
	6/11/2018	-	NS	
	9/4/2018	1.58	1,264	
	12/20/2018	1.04	1,617	
	3/7/2019	1.95	1,309	
MW-19	3/26/2018	-	82	None
	6/11/2018	0.38	169	
	9/4/2018	0.62	140	
	12/20/2018	0.38	149	
	3/7/2019	1.83	114	
MW-20	3/26/2018	-	1	None
	6/11/2018	0.53	BDL	
	9/4/2018	0.93	0.7	
	12/20/2018	2.53	0.6	
	3/7/2019	3.49	0.8	

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
µg/L = Micrograms per liter
- = Data not available or measured
BDL = Below Detection Limit
NS = Not Sampled

Figure 1



HISTORICAL GROUNDWATER FLOW DIRECTIONALITY

87 MEASUREMENTS (3-5-91 THRU 3-7-19)

LEGEND

—x—	FENCE
	CATCH BASIN
M	UTILITY MANHOLE
	UTILITY POLE
	LIGHT POLE
	FIRE HYDRANT
	MONITORING WELL
	ABANDONED/DESTROYED MONITORING WELL
	INJECTION POINT
MW1 / 3-7-19 / 91.69 / 0.02' / 488 / ND(<0.4)	WELL IDENTIFICATION / SAMPLE DATE / GROUNDWATER ELEVATION (feet) / LPH THICKNESS (feet) / BTEX CONCENTRATION (ug/L) / MTBE CONCENTRATION (ug/L)
ug/L	MICROGRAMS PER LITER
LPH	LIQUID PHASE HYDROCARBONS
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES
MTBE	METHYL *tert* -BUTYL ETHER
NSD	NO SURVEY DATA
NP	NO PRODUCT
NS	NOT SAMPLED
NM	NOT MEASURED
ND	NON DETECT
<#	WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN
	GROUNDWATER CONTOUR (feet) DASHED WHERE INFERRED

NOTE:

VALUE SHADED PURPLE INDICATES ONE OR MORE COMPOUNDS EXCEED REGULATORY LIMITS.

MW7A AND MW9 COULD NOT BE LOCATED.

STATE OF NEW YORK
MICHAEL C. DeGLORIA
LICENSED PROFESSIONAL GEOLOGIST
000220

Groundwater Monitoring Map
March 7, 2019

Former Mobil Service Station 17-EMW
304 Columbia Street
Brooklyn, New York

Drawn W.G.S.
Designed D.G.
Approved

Date 4/4/19
Figure 1

Scale In Feet
0 30

GES
Groundwater & Environmental Services, Inc.

M:\Graphics\0500-Long Island\ExxonMobil\Mobil\17-EMW Brooklyn\17-EMW Brooklyn SM.dwg, Template SM, wshea

Attachment A

LIST OF ACRONYMS

AS:	Air Sparge
BTEX:	Benzene, Toluene, Ethylbenzene and Total Xylenes
Cat-Ox :	Catalytic Oxidizer
COC :	Chemical of Concern
CP-51 SCG :	Soil quality standards as defined by the NYSDEC Commissioner
	Policy 51/ Soil Cleanup Guidance, amended October 21, 2010 (updated soil cleanup levels to TAGM 4046)
DO :	Dissolved Oxygen
DTW :	Depth to Water
EPA	Environmental Protection Agency
ESA :	Environmental Site Assessment
eV :	Electron Volt
F&T :	Fate and Transport
ft bgs	Feet Below Ground Surface
GES :	Groundwater & Environmental Services, Inc.
GPR :	Ground Penetrating Radar
HIT :	High Intensity Targeted
HVE :	High Vacuum Extraction
IP :	Injection Point
IRM :	Interim Remedial Measure
ISCO :	In-situ Chemical Oxidation
lbs/hr	Pounds Per Hour
LNAPL :	Light Non-Aqueous Phase Liquids
LPH :	Liquid Phase Hydrocarbons
mg/L :	Milligrams per liter
MNA :	Monitored Natural Attenuation
MPE :	Multi-Phase Extraction
MTBE :	Methyl Tertiary Butyl Ether

mV :	Millivolts
MW :	Monitoring Well
ND :	Not Detected
NYCDEP :	New York City Department of Environmental Protection
NYSDEC :	New York State Department of Environmental Conservation
O&M :	Operations and Maintenance
ORP :	Oxidation-Reduction Potential
PID :	Photo-Ionization Detector
ppmv :	Parts Per Million by Volume
P&T :	Pump and Treat
RAP	Remedial Action Plan
RSCOs :	Recommended Soil Cleanup Objectives as defined by TAGM 4046
SRS :	Sensitive Receptor Survey
STARS :	Spills Technology and Remediation Series #1, amended August 1992
STIP :	Stipulation Agreement.
SVE :	Soil Vapor Extraction
SVOCs :	Semi Volatile Organic Compounds
TAGM :	Technical and Administrative Guidance Memorandum (#4046): Determination of Soil Cleanup Objectives, amended January 24, 1994
TOC :	Top of Casing
µg/kg :	Micrograms per kilogram
µg/L :	Micrograms per liter
UST :	Underground Storage Tank
VGAC :	Vapor-Phase Granulated Activated Carbon
VEGE :	Vacuum Enhanced Groundwater Extraction
VOCs :	Volatile Organic Compounds
WQS :	Groundwater quality standards as defined by the June 1998 Technical and Operation Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations and the April 2000 Addendum.

Attachment B

SITE HISTORY

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

The site is currently an automobile repair facility. There are currently three (3) closed New York State Department of Environmental Conservation (NYSDEC) Spills associated with the site:

- NYSDEC Spill #93-12498 was opened on January 24, 1994 in response to a tank test failure. The spill was closed on May 14, 2003.

- NYSDEC Spill #05-02047 was opened on May 19, 2005 in response to a used oil spill. The spill was closed on April 26, 2010.

- NYSDEC Spill #06-10200 was opened on December 7, 2006 in response to an unknown spill event. The spill was closed on April 26, 2010.

There is one (1) active NYSDEC Spill associated with the site:

- NYSDEC Spill #89-04339 was opened on August 1, 1989 during UST removal activities. The spill remains open.

Information pertaining to the active spill, along with historical investigation and remedial activities conducted at the site, has been summarized below.

- July 1989 – A tank removal and replacement event was conducted on behalf of Mobil Oil Corporation. Fifteen (15) underground storage tanks (USTs) were removed from the site and four new USTs were installed. Petroleum-impacted soil and liquid phase hydrocarbons (LPH) were discovered during tank removal activities. Approximately 650 tons of petroleum-impacted soil was excavated and disposed at a state-certified landfill.

- August 1, 1989 – Spill #89-04339 was assigned to the site by the NYSDEC.

- July 25, 1990 – A site assessment was conducted at the site. Five (5) monitoring wells were installed (W-1 through W-5). LPH was present in wells W-2 and W-3.

- December 1996 – A subsurface investigation was conducted prior to site divestment, and included the installation of three (3) direct-push soil borings.

- April 22 through 25, 1997 – Site divestment activities were conducted and included the removal of one (1) 1,000-gallon waste oil UST, one (1) 4,000-gallon abandoned single-walled steel gasoline tank, two (2) 4,000-gallon double-walled gasoline fiberglass tanks, one (1) 4,000-gallon abandoned double-walled fiberglass gasoline tank, one (1) pump island, all associated piping, and three (3) hydraulic lifts. Approximately 235.06 tons of petroleum-contaminated soil was excavated and disposed at a state-certified landfill. Seven (7) on-site monitoring wells were destroyed during tank closure activities and site renovations.

- March 25 and April 6, 1998 – A subsurface investigation was conducted which included the installation of four (4) groundwater monitoring wells (MW-1 through MW-3 and MW-5).

- October 11, 1999 – An Environmental Site Assessment was conducted and included the installation of five (5) soil borings (B-1 through B-5) to varying depths between 8 and 34 feet below ground surface (bgs).

- May 10 and 15, 2002 – A *Site Investigation Work Plan* was submitted for proposed delineation and included the installation of ten (10) on-site soil borings and four (4) off-site soil borings (along the north side of Hamilton Avenue) using a direct-push drill rig to 16 feet bgs with groundwater sampling.

- June 24, 2002 – The NYSDEC approved the *Site Investigation Work Plan* and proposed schedules submitted on May 10 and 15, 2002. The NYSDEC requested four (4) additional soil borings along Columbia Street and two additional soil borings along Woodhull Street. The NYSDEC also requested a Sensitive Receptor Survey (SRS) and UST investigation of the former tank field to evaluate the existence and/or proper abandonment of 1,000-gallon USTs from 1997.

- July 22 through 26, 2002 – A subsurface investigation was conducted and included the installation of six (6) on-site soil borings (SB-1, SB-2, SB-4, SB-7, SB-8, and SB-9) and ten (10) off-site soil borings (SB-11 through SB-20).

- December 2, 2002 – A *Subsurface Investigation Report (SIR)* was submitted to the NYSDEC for fieldwork completed in July 2002. Recommendations were made for additional off-site borings/monitoring wells along Hamilton Avenue.

- February 10, 2003 – NYSDEC and ExxonMobil visited the site to discuss proposed monitoring well locations.

- February 21, 2003 – A revised proposed monitoring well/soil boring location map was submitted to the NYSDEC via email in accordance with site discussions on February 10, 2003.

- March 20, 2003 – A letter was received from the NYSDEC to ExxonMobil approving the on- and off-site boring and monitoring well locations submitted on the February 21, 2003 revised map.

- May 12, 2003 – A subsurface investigation was conducted which included the installation of five (5) monitoring wells (MW-6A, MW-7A, MW-8A, MW-9 and MW-10).

- September 16, 2003 – A *Corrective Action Plan (CAP)* was submitted which included a proposed pilot test and future remedial plan.

- September 25, 2003 – The NYSDEC requested the CAP be expanded to include details of the pilot test and the possible installation of additional wells.

- November 18, 2003 – Letter from the NYSDEC approving the amended CAP.

- February 9, 2004 – A subsurface investigation was conducted which included the installation of three (3) soil borings which were completed as monitoring wells (MW-11 through MW-13).

- February 27, 2004 – A high vacuum dual-phase extraction (HVDPE)/enhanced fluid recovery (EFR) event was conducted. During the event, preliminary data was collected to conduct an HVDPE/EFR pilot test.

- November 4, 2004 – A supplemental subsurface investigation was conducted in which one (1) soil boring was installed and completed as a monitoring well (MW-14).

- January 2005 through March 2006 – Enhanced fluid recovery events (EFR) were conducted on a monthly basis. A passive bailer was installed in monitoring well (MW-14) on September 23, 2005. Monitoring wells MW-6, MW-7, and MW-8 were destroyed during construction activities and MW-6A was destroyed in March 2005 during construction for a billboard sign.

- June 2008 – Subsurface investigation was conducted to further evaluate current soil and groundwater hydrocarbon concentrations for additional on- and off-site delineation.

- June 15 through 16, 2009 – Chemical oxidation injections were performed where approximately 1,800 gallons of sodium persulfate and 2,700 gallons of ISOTEC's patented catalyst were injected into twelve injection points located on site (IP-1 through IP-12).

- June 22 and 23, 2010 - Approximately 1,680 gallons of a diluted EnviroClean surfactant solution was injected at MW-1, MW-2, MW-3, MW-13, and MW-16 in order to address LPH observed at the site prior to continuation of chemical injections. On June 24, 25, and 28, 2010, approximately 710 gallons of fluids were recovered during EFR events from the five injection wells.

- July 26 through 28 and August 2 through 4, 2010 – Surfactant injection and recovery events were performed. A diluted EnviroClean surfactant solution was injected at MW-1 through MW-3, MW-13, and MW-16. Approximately 836 gallons of fluids were recovered during EFR events from the five injection wells.

- December 6 through 9, 2010 –An In-Situ Chemical Oxidation (ISCO) pilot test was conducted targeting off-site areas within the eastern sidewalk along Hamilton Avenue and onsite areas within the former gasoline UST area. Twelve injection points were installed. A total of 7,200 gallons of sodium persulfate (at approximately 10.0% concentration) activated with chelated iron catalyst (ASP), including 2,400 gallons of catalyst and 4,800 gallons of oxidizer, were injected.

- August 15 and August 18, 2011 – An ISCO event was conducted targeting off-site areas within the eastern sidewalk along Hamilton Avenue and on-site areas within the former gasoline underground storage tank (UST) area. A total of 7,200 gallons of Activated Sodium Persulfate (ASP), including 2,400 gallons of catalyst and 4,800 gallons of oxidizer, were injected.

- July 9 through 11, 2012 – A Limited Off-Site Investigation was conducted within the eastern sidewalk along Hamilton Avenue to delineate soil impacts. Vertical Delineation: Soil analytical data results reported concentrations of STARS list compounds above CP-51 soil cleanup levels ranging from 8 to 20 feet below ground surface. Groundwater was encountered between 7 and 10 feet below ground surface within the recently advanced boring locations. This is evidence of a saturated smear zone that exists below the eastern sidewalk of Hamilton Avenue. Horizontal Delineation: Soil analytical data results reported concentrations of STARS list compounds above CP-51 soil cleanup levels within soil borings SB103 through SB107. Soil borings could not be completed south of SB107 due to underground utility obstructions. MW-17, located north of SB103, has contained measurable LPH within the last year. Horizontal delineation of soil impacts extend from SB101 south to MW-16 where increases of BTEX and MTBE have been reported in groundwater within the last year.

- December 18, 2012 – A Site Conceptual Model (SCM) and Remedial Alternatives Analysis (RAA) Report was submitted to NYSDEC.

- July 25, 2013 – A *Surfactant Injection and Well Installation Work Plan* was submitted to the NYSDEC detailing a proposed plan to conduct on-site surfactant injection/extraction activities to reduce the presence of liquid-phase hydrocarbons (LPH) in the vicinity of the western property boundary.

- July 29, 2013 – GES received approval of the July 2013 *Surfactant Injection and Well Installation Work Plan*.

- August 2, 2013 – An Underground Injection Control (UIC) Notification letter was submitted to the U.S. Environmental Protection Agency (EPA) requesting permission to conduct remedial activities at the Site involving the injection of surfactant solution into the subsurface. A copy of the letter was forwarded to the NYSDEC.

- August 29 and September 4, 2013 – Well installation activities were conducted which included the installation of two (2) monitoring wells (MW-19 and MW-20) on the west-central portion of the Site. The wells were installed in accordance with the July 2013 *Surfactant Injection and Well Installation Work Plan*.

- October 7 through 11, 2013 – A surfactant injection and extraction event was conducted at the Site to reduce the presence of LPH along the western property boundary. On October 7, 2013, 750 gallons of surfactant solution were injected into monitoring wells MW-1, MW-2, MW-11, MW-17, MW-19 and MW-20. Between October 8 and 11 of 2013, a total of 1,022 gallons of fluids were extracted from the same monitoring wells.

- October 15, 2013 – A *Monitoring Well Installation Report* was submitted to the NYSDEC detailing the August and September 2013 well installation activities.

- November 11 through 14, 2013 – A surfactant injection and extraction event was conducted at the Site. On November 11, 2013, a total of 500 gallons of surfactant solution was injected into monitoring wells MW-1, MW-2, MW-13 and MW-16. Between November 12 and 14 of 2013, a total of 1,008 gallons of fluids were extracted from the same monitoring wells.

- January 21, 2014 – Conducted post-surfactant injection groundwater monitoring activities which included the gauging of nine (9) monitoring wells (MW-1 through MW-3, MW-11, MW-13, MW-16, MW-17, MW-19 and MW-20). Monitoring well MW-12 was not gauged as it was inaccessible. LPH was detected in two (2) monitoring wells (MW-1 and MW-16).

- September 8 through 12, 2014 - Conducted a Surfactant Enhanced Groundwater Extraction Event which included the injection of approximately 500 gallons of surfactant into monitoring wells MW-1, MW-2, MW-11, MW-13, MW-16 and MW-17 on September 8, 2014 and the extraction of approximately 1,059 gallons of surfactant/groundwater mixture from these wells between September 9 through 12, 2014.

- December 8 through 12, 2014 – Conducted a Surfactant Enhanced Groundwater Extraction Event which included the injection of approximately 500 gallons of surfactant into monitoring wells MW-1, MW-2, MW-11, MW-13, MW-16 and MW-17 on December 8, 2014 and the extraction of approximately 1,450 gallons of surfactant/groundwater mixture from these wells between December 9 through 12, 2014.

- October 31, 2016 – GES submitted an Exposure Assessment Report to the NYSDEC which concluded that impacted soils and groundwater at the Site have been actively targeted by aggressive remediation techniques, the remaining on-Site and off-Site impacts are stable or decreasing and it has been demonstrated that there is no risk of exposure to residual soil and groundwater impacts for the residential properties up-gradient from the Site.

- January 11, 2019 – GES conducted slug tests at monitoring wells MW-13 and MW-19 and a pump test at monitoring well MW-2 as part of the property redevelopment planning.

Attachment C

Groundwater & Environmental Services, Inc.

89 Cabot Court, Suite A
Hauppauge, NY 11788

T. 800.360.9405

Memo: De-watering Calculations

Site: Former Mobil Service Station #17-EMW
304 Columbia Street
Brooklyn, New York

The depth to groundwater in the vicinity of the proposed excavation area in the sidewalk adjacent to the site long Hamilton Avenue is approximately 8 feet below ground surface (bgs). The total proposed excavation area is approximately 70 feet long, 15 feet wide, and 15 feet deep.

Hydraulic conductivity (K) testing (slug testing) was completed at the site on January 11, 2019. Slug tests were completed at monitoring wells MW-13 and MW-19. A falling head slug test was completed at each monitoring well. One (1) rising head slug test was also complete at monitoring well MW-19. Recorded slug test data was evaluated using AQTESOLV Pro software. Calculated hydraulic conductivity values are as follows:

- MW-13 (slug out): 8.992×10^{-4} cm/sec
- MW-19 (slug out): 5.026×10^{-4} cm/sec
- MW-19 (slug in): 3.017×10^{-4} cm/sec

The solution used to calculate hydraulic conductivity was Bouwer-Rice (1976) for an unconfined aquifer. Slug test results for the rising/falling head tests performed at monitoring wells MW-13 and MW-19 are included in **Attachment A**.

GES utilized the average K value from the three slug tests (5.678×10^{-4} cm/sec) to calculate a range of possible dewatering flow rates required for the excavation.

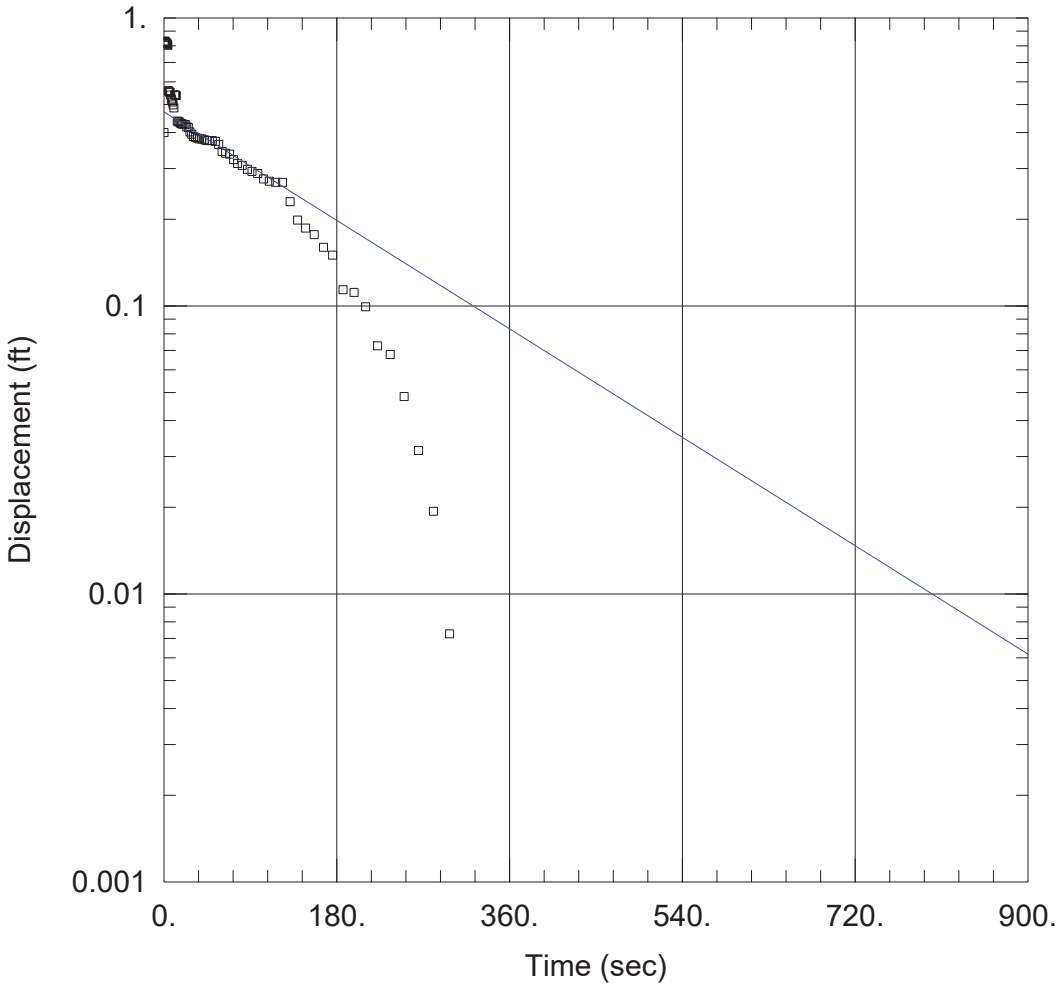
Two methods to calculate dewatering rates were evaluated, one utilizes a constant low gradient assumption across the excavation surface area of 0.1 ft/ft, the second method utilizes a gradient of 1 ft/ft into the bottom of the excavation and a gradient of 0.5 ft/ft in through the sidewalls. A summary of the estimated dewatering flow rates utilizing the two methods is detailed below.

All dewatering rates detailed below are based on excavations WITHOUT SHORING. The intended use of shoring around the excavation to support the sidewalls and utilities will decrease the actual dewatering flow rate needed from the rates shown below:

Length of excavation dewatering needed (cell length)	Minimum Dewatering Flow Rate (gpm)	Maximum Dewatering Flow Rate (gpm)
70 feet (1 cell)	1.9 gpm	13.75 gpm
35 feet (2 cells)	1.0 gpm	7.3 gpm
25 feet (3 cells)	0.8 gpm	5.5 gpm

The on-site 4 hour pump testing at monitoring well MW-2 (in the excavation area) indicated that a constant flow rate of 0.25 gpm was required to maintain a drawdown in the extraction well of 6.75 feet (to 15.2' bgs). After the pump test, groundwater levels returned to static levels at 15 minutes following deactivation of the pump. Drawdown of 0.17 feet (at a distance of 9.5 feet from the extraction well) and 0.07 feet (at a distance of 13.5 feet from the extraction well) was observed during pumping at monitoring well MW-2 (a 2" diameter well).

Attachment A



MW-13 SLUG OUT

Data Set: \...\MW-13 Out.aqt
Date: 01/15/19 Time: 13:28:50

PROJECT INFORMATION

Company: GES
Client: EM
Location: Brooklyn, NY
Test Well: MW-13
Test Date: 1/11/2019

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 0.1

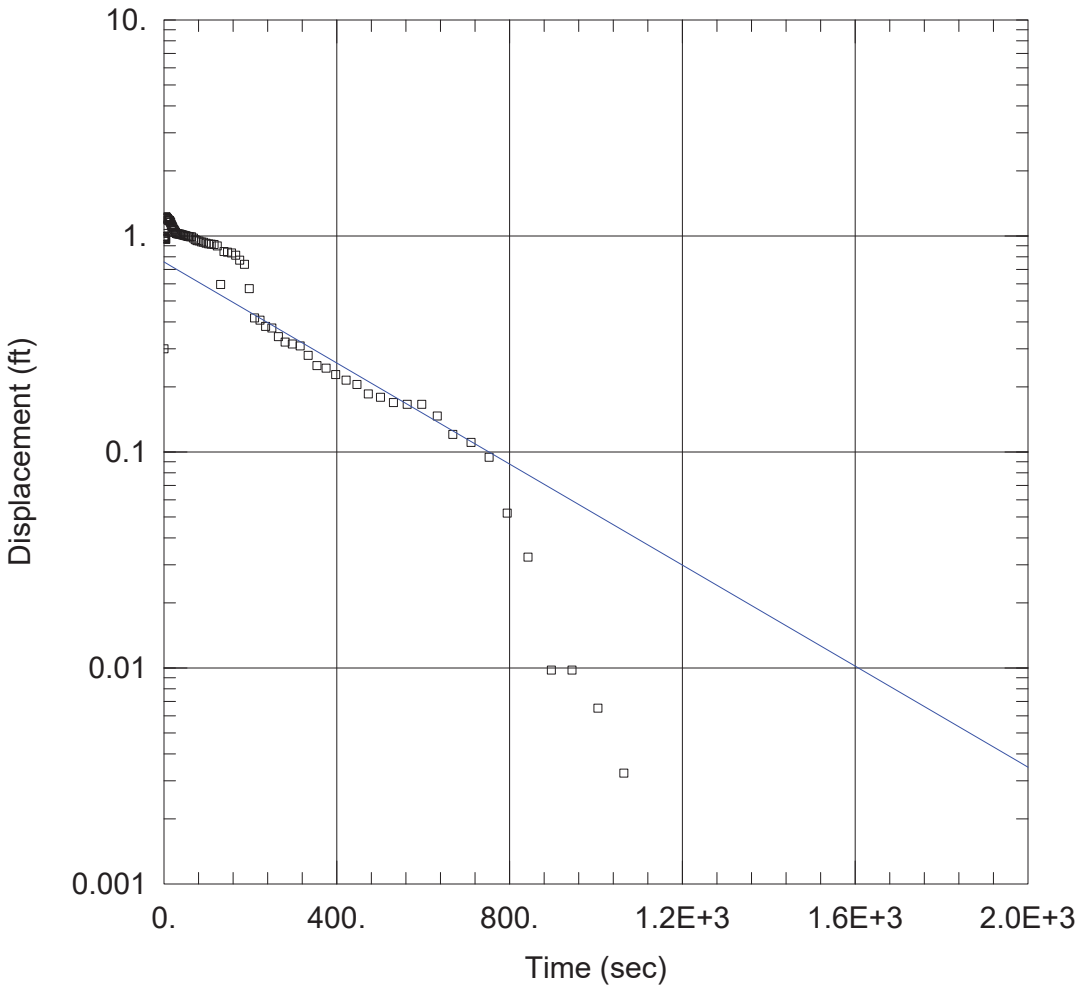
WELL DATA (MW-13)

Initial Displacement: 0.4 ft
Total Well Penetration Depth: 10.3 ft
Casing Radius: 0.086 ft
Static Water Column Height: 10.3 ft
Screen Length: 10.3 ft
Well Radius: 0.33 ft
Gravel Pack Porosity: 0.35

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0008992 cm/sec y0 = 0.4717 ft



MW-19 SLUG OUT

Data Set: \...\MW-19 Out.aqt
Date: 01/15/19 Time: 12:42:30

PROJECT INFORMATION

Company: GES
Client: EM
Location: Brooklyn, NY
Test Well: MW-19
Test Date: 1/11/2019

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 0.1

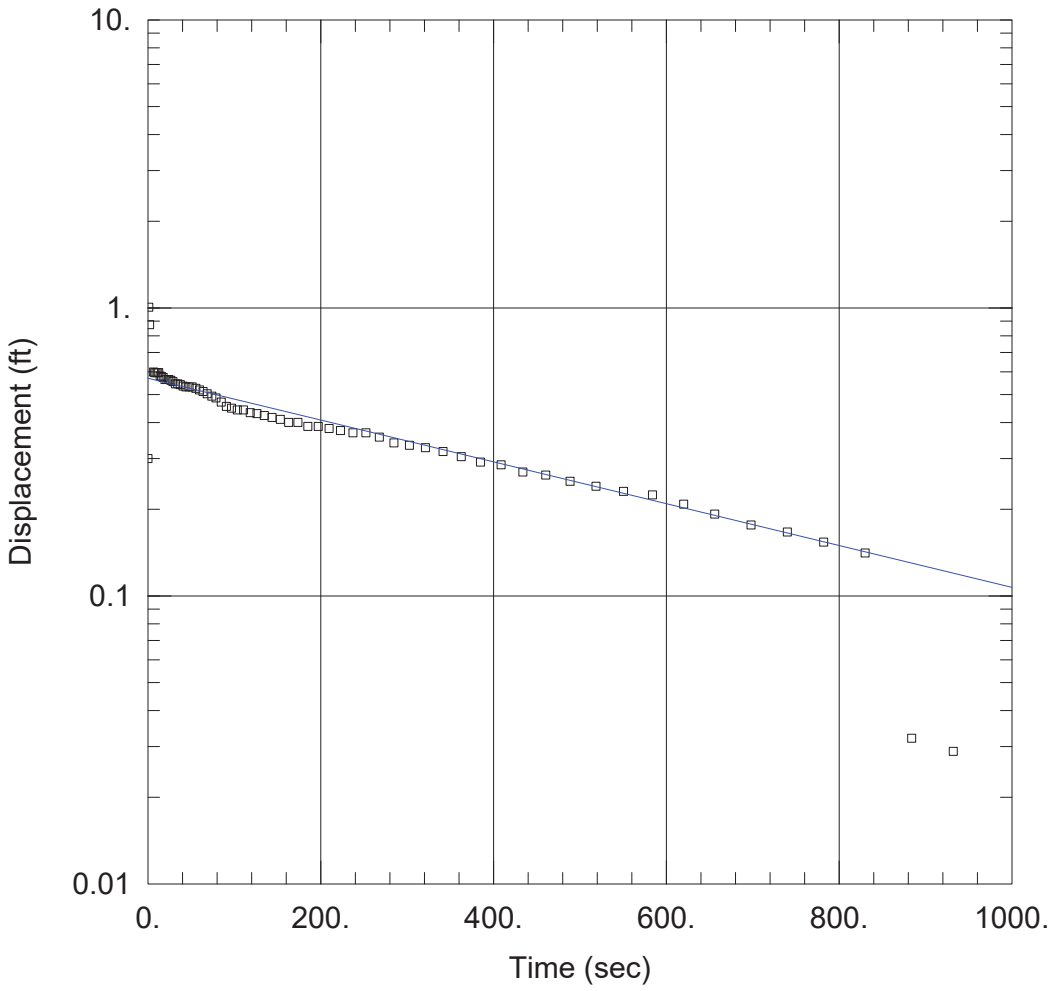
WELL DATA (MW-19)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 10.3 ft
Casing Radius: 0.086 ft
Static Water Column Height: 10.3 ft
Screen Length: 10.3 ft
Well Radius: 0.33 ft
Gravel Pack Porosity: 0.35

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0005026 cm/sec y0 = 0.7575 ft



MW-19 SLUG IN

Data Set: \...\MW-19 In.aqt
Date: 01/15/19 Time: 12:27:39

PROJECT INFORMATION

Company: GES
Client: EM
Location: Brooklyn, NY
Test Well: MW-19
Test Date: 8/20/2018

AQUIFER DATA

Saturated Thickness: 50. ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA (MW-19)

Initial Displacement: 0.3 ft
Total Well Penetration Depth: 10.8 ft
Casing Radius: 0.086 ft
Static Water Column Height: 10.8 ft
Screen Length: 10.8 ft
Well Radius: 0.33 ft
Gravel Pack Porosity: 0.35

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.0003017 cm/sec y0 = 0.5702 ft

Please print or type
(Form designed for use on elite (12-pitch)(typewriter.)

LORCO PETROLEUM SERVICES
450 SOUTH FRONT STREET, ELIZABETH, NJ 07202

A002EF D **NON-HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest Document No. 042300

2. Page 1 of 1

NHZ 1042300

3. Generator's Name and Mailing Address
ExxonMobil Oil Corp. C/O
16 MOUNT EBO ROAD, SUITE 21
BREWSTER, NY 10509

ID#
Former mobil
304 Columbia Street
Brooklyn, NJ

4. Generator's Phone (866) 839-5159

5. Transporter 1 Company Name
LORCO PETROLEUM SERVICES

6. US EPA ID Number
N J R 0 0 0 0 2 3 0 3 6

A. Transporter's Phone
908-820-8800

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address
LORCO PETROLEUM SERVICES
450 SOUTH FRONT STREET
ELIZABETH, NJ 07202

10. US EPA ID Number
N J R 0 0 0 0 2 3 0 3 6

C. Facility's Phone
908-820-8800

11. Waste Shipping Name and Description	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol
a. UST GROUND WATER, NON-RCRA NON-DOT REGULATED	001	TT	70	G
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

24- HOUR EMERGENCY RESPONSE #908-820-8800

DECAL # 402679
EGR# 128

TRUCK # 109

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: [illegible] on behalf of Exxon Mobil
Signature: ON BEHALF OF EXXONMOBIL Oil Corp
Month 10 Day 11 Year 19

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: H MANGONES
Signature:
Month 10 Day 11 Year 19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Chabel Ramirez
Signature: Chabel Ramirez
Month 11 Day 11 Year 19

GENERATOR
TRANSPORTER
FACILITY

ORIGINAL-RETURN TO GENERATOR

Attachment D

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:

ExxonMobil c/o GES NY
440 Creamery Way
Suite 500
Exton PA 19341

Report Date: March 18, 2019 19:51

Project: 17-EMW Brooklyn

Account #: 42339
Group Number: 2032697
PO Number: 632223
State of Sample Origin: NY

Electronic Copy To	GES NY	Attn: NE Region
Electronic Copy To	GES NY	Attn: Dustin Gagliano
Electronic Copy To	ExxonMobil c/o GES NY	Attn: Michael DeGloria

Respectfully Submitted,

Megan A. Moeller
Senior Specialist

(717) 556-7261

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-3 Grab Groundwater	03/07/2019 12:40	1004254
MW-5 Grab Groundwater	03/07/2019 08:00	1004255
MW-20 Grab Groundwater	03/07/2019 08:10	1004256
MW-12 Grab Groundwater	03/07/2019 08:35	1004257
MW-14 Grab Groundwater	03/07/2019 08:45	1004258
MW-15 Grab Groundwater	03/07/2019 09:10	1004259
MW-19 Grab Groundwater	03/07/2019 09:20	1004260
MW-1 Grab Groundwater	03/07/2019 12:05	1004261
MW-17 Grab Groundwater	03/07/2019 09:50	1004262
MW-11 Grab Groundwater	03/07/2019 10:00	1004263
MW-18 Grab Groundwater	03/07/2019 10:35	1004264
MW-8A Grab Groundwater	03/07/2019 10:45	1004265
MW-10 Grab Groundwater	03/07/2019 11:15	1004266
MW-16 Grab Groundwater	03/07/2019 11:25	1004267
MW-13 Grab Groundwater	03/07/2019 12:00	1004268
MW-2 Grab Groundwater	03/07/2019 12:50	1004269
Trip Blank Water	02/26/2019	1004270

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

Sample Description: **MW-3 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 12:40

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004254
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	4	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190721AA	03/14/2019 00:09	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190721AA	03/14/2019 00:08	Kevin D Kelly	1

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

Sample Description: **MW-5 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 08:00

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004255
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/13/2019 18:45	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/13/2019 18:44	Kevin D Kelly	1

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

Sample Description: **MW-20 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 08:10

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004256
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	0.8 J	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	2	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/13/2019 23:04	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/13/2019 23:03	Kevin D Kelly	1

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

Sample Description: **MW-12 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 08:35

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004257
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	0.4 J	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.4 J	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/13/2019 23:30	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/13/2019 23:29	Kevin D Kelly	1

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

Sample Description: **MW-14 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 08:45

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004258
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	0.9 J	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/13/2019 23:56	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/13/2019 23:55	Kevin D Kelly	1

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

Sample Description: **MW-15 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 09:10

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004259
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	3	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/14/2019 00:22	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/14/2019 00:21	Kevin D Kelly	1

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

Sample Description: **MW-19 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 09:20

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004260
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	18		0.2	1	1
11997	Ethylbenzene	100-41-4	41		0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.5	J	0.2	1	1
11997	Toluene	108-88-3	8		0.2	1	1
11997	Xylene (Total)	1330-20-7	47		1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190731AA	03/15/2019 00:24	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190731AA	03/15/2019 00:23	Kevin D Kelly	1

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

Sample Description: **MW-1 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 12:05

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004261
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	26	0.4	2	2
11997	Ethylbenzene	100-41-4	260	0.8	2	2
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.4	2	2
11997	Toluene	108-88-3	22	0.4	2	2
11997	Xylene (Total)	1330-20-7	180	2	10	2

Reporting limits were raised due to interference from the sample matrix.

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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/14/2019 01:39	Kevin D Kelly	2
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/14/2019 01:38	Kevin D Kelly	2

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

Sample Description: **MW-17 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 09:50

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004262
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	4	0.2	1	1
11997	Ethylbenzene	100-41-4	220	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	23	0.2	1	1
11997	Xylene (Total)	1330-20-7	150	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/14/2019 00:48	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/14/2019 00:47	Kevin D Kelly	1

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

Sample Description: **MW-11 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 10:00

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004263
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	180		0.2	1	1
11997	Ethylbenzene	100-41-4	430		2	5	5
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.9	J	0.2	1	1
11997	Toluene	108-88-3	50		0.2	1	1
11997	Xylene (Total)	1330-20-7	460		1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	P190722AA	03/14/2019 02:31	Kevin D Kelly	5
11997	BTEX/MTBE	SW-846 8260C	1	P190731AA	03/15/2019 00:50	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	P190722AA	03/14/2019 02:30	Kevin D Kelly	5
01163	GC/MS VOA Water Prep	SW-846 5030C	2	P190731AA	03/15/2019 00:49	Kevin D Kelly	1

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

Sample Description: **MW-18 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 10:35

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004264
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	750	1	5	5
11997	Ethylbenzene	100-41-4	120	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	79	0.2	1	1
11997	Xylene (Total)	1330-20-7	360	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 00:16	Patrick T Herres	5
11997	BTEX/MTBE	SW-846 8260C	1	5190761AA	03/17/2019 15:30	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 00:15	Patrick T Herres	5
01163	GC/MS VOA Water Prep	SW-846 5030C	2	5190761AA	03/17/2019 15:29	Patrick T Herres	1

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

Sample Description: **MW-8A Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 10:45

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004265
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	910	2	10	10
11997	Ethylbenzene	100-41-4	1,600	4	10	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	11	2	10	10
11997	Toluene	108-88-3	270	2	10	10
11997	Xylene (Total)	1330-20-7	4,100	10	50	10

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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 01:04	Patrick T Herres	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 01:03	Patrick T Herres	10

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

Sample Description: **MW-10 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 11:15

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004266
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	4,800	20	100	100
11997	Ethylbenzene	100-41-4	2,000	4	10	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	69	2	10	10
11997	Toluene	108-88-3	690	2	10	10
11997	Xylene (Total)	1330-20-7	6,300	100	500	100

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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 01:52	Patrick T Herres	10
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 02:16	Patrick T Herres	100
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 01:51	Patrick T Herres	10
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190722AA	03/14/2019 02:15	Patrick T Herres	100

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

Sample Description: **MW-16 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 11:25

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004267
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	820	4	20	20
11997	Ethylbenzene	100-41-4	330	0.8	2	2
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.4	2	2
11997	Toluene	108-88-3	74	0.4	2	2
11997	Xylene (Total)	1330-20-7	550	2	10	2

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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 02:40	Patrick T Herres	2
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 03:03	Patrick T Herres	20
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 02:39	Patrick T Herres	2
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190722AA	03/14/2019 03:02	Patrick T Herres	20

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

Sample Description: **MW-13 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 12:00

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004268
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	180		0.2	1	1
11997	Ethylbenzene	100-41-4	650		4	10	10
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.4	J	0.2	1	1
11997	Toluene	108-88-3	56		0.2	1	1
11997	Xylene (Total)	1330-20-7	740		10	50	10

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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 03:27	Patrick T Herres	1
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 03:51	Patrick T Herres	10
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 03:26	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	W190722AA	03/14/2019 03:50	Patrick T Herres	10

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

Sample Description: **MW-2 Grab Groundwater**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 03/07/2019 12:50

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004269
ELLE Group #: 2032697
Matrix: Groundwater

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**	
11997	Benzene	71-43-2	230		0.2	1	1
11997	Ethylbenzene	100-41-4	180		0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	0.3	J	0.2	1	1
11997	Toluene	108-88-3	14		0.2	1	1
11997	Xylene (Total)	1330-20-7	320		1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/14/2019 04:15	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/14/2019 04:14	Patrick T Herres	1

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

Sample Description: **Trip Blank Water**
17-EMW - Brooklyn, NY

Project Name: **17-EMW Brooklyn**

Submittal Date/Time: 03/08/2019 10:00
Collection Date/Time: 02/26/2019

ExxonMobil c/o GES NY
ELLE Sample #: WW 1004270
ELLE Group #: 2032697
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**	
11997	Benzene	71-43-2	N.D.	0.2	1	1
11997	Ethylbenzene	100-41-4	N.D.	0.4	1	1
11997	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.2	1	1
11997	Toluene	108-88-3	N.D.	0.2	1	1
11997	Xylene (Total)	1330-20-7	N.D.	1	5	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
11997	BTEX/MTBE	SW-846 8260C	1	W190722AA	03/13/2019 22:41	Patrick T Herres	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	W190722AA	03/13/2019 22:40	Patrick T Herres	1

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

Quality Control Summary

Client Name: ExxonMobil c/o GES NY
Reported: 03/18/2019 19:51

Group Number: 2032697

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: 5190761AA	Sample number(s): 1004264		
Ethylbenzene	N.D.	0.4	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: P190721AA	Sample number(s): 1004254		
Benzene	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: P190722AA	Sample number(s): 1004255-1004259,1004261-1004263		
Benzene	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: P190731AA	Sample number(s): 1004260,1004263		
Benzene	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	1	5
Batch number: W190722AA	Sample number(s): 1004264-1004270		
Benzene	N.D.	0.2	1
Ethylbenzene	N.D.	0.4	1
Methyl Tertiary Butyl Ether	N.D.	0.2	1
Toluene	N.D.	0.2	1
Xylene (Total)	N.D.	1	5

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max

*- 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.

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Quality Control Summary

Client Name: ExxonMobil c/o GES NY
Reported: 03/18/2019 19:51

Group Number: 2032697

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: 5190761AA	Sample number(s): 1004264								
Ethylbenzene	20	20.45			102		80-120		
Methyl Tertiary Butyl Ether	20	19.14			96		69-122		
Toluene	20	19.63			98		80-120		
Xylene (Total)	60	61.44			102		80-120		
Batch number: P190721AA	Sample number(s): 1004254								
Benzene	20	19.53			98		80-120		
Ethylbenzene	20	19.79			99		80-120		
Methyl Tertiary Butyl Ether	20	18.77			94		69-122		
Toluene	20	19.97			100		80-120		
Xylene (Total)	60	59.89			100		80-120		
Batch number: P190722AA	Sample number(s): 1004255-1004259,1004261-1004263								
Benzene	20	19.54			98		80-120		
Ethylbenzene	20	20.06			100		80-120		
Methyl Tertiary Butyl Ether	20	18.96			95		69-122		
Toluene	20	20.18			101		80-120		
Xylene (Total)	60	60.7			101		80-120		
Batch number: P190731AA	Sample number(s): 1004260,1004263								
Benzene	20	20.07			100		80-120		
Ethylbenzene	20	20.53			103		80-120		
Methyl Tertiary Butyl Ether	20	18.58			93		69-122		
Toluene	20	20.64			103		80-120		
Xylene (Total)	60	62.07			103		80-120		
Batch number: W190722AA	Sample number(s): 1004264-1004270								
Benzene	20	20.72			104		80-120		
Ethylbenzene	20	21.98			110		80-120		
Methyl Tertiary Butyl Ether	20	20.23			101		69-122		
Toluene	20	22.54			113		80-120		
Xylene (Total)	60	66.64			111		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: P190722AA	Sample number(s): 1004255-1004259,1004261-1004263 UNSPK: 1004255									
Benzene	N.D.	20	21.17	20	21.9	106	110	80-120	3	30

*- 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: ExxonMobil c/o GES NY
Reported: 03/18/2019 19:51

Group Number: 2032697

MS/MSD (continued)

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
Ethylbenzene	N.D.	20	21.69	20	22.15	108	111	80-120	2	30
Methyl Tertiary Butyl Ether	N.D.	20	19.91	20	20.42	100	102	69-122	3	30
Toluene	N.D.	20	22.26	20	22.64	111	113	80-120	2	30
Xylene (Total)	N.D.	60	64.91	60	66.91	108	112	80-120	3	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: 5190761AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1004264	100	94	95	107
Blank	108	100	90	97
LCS	103	97	95	108
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: P190721AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1004254	98	102	111	101
Blank	99	105	109	100
LCS	102	108	102	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: P190722AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1004255	99	103	112	102
1004256	100	104	110	105
1004257	100	101	111	103
1004258	98	101	110	104
1004259	100	100	111	104
1004261	99	102	109	101
1004262	99	101	108	103
Blank	99	103	111	102
LCS	100	104	103	99

*- 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: ExxonMobil c/o GES NY
Reported: 03/18/2019 19:51

Group Number: 2032697

Surrogate Quality Control (continued)

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: P190722AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
MS	100	107	102	98
MSD	100	104	103	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: P190731AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1004260	99	102	109	102
1004263	98	104	109	115
Blank	100	104	109	100
LCS	101	104	102	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: W190722AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1004265	96	93	102	95
1004266	96	90	104	97
1004267	96	92	106	99
1004268	94	89	107	100
1004269	93	83	106	95
1004270	94	97	103	94
Blank	94	95	103	93
LCS	96	97	105	97
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-42339 G. 2032697 S. 1004254-70

CHAIN OF CUSTODY

Client: ExxonMobil

PAGE 1 OF 2

FED-EX Tracking #	Bottle Order Control #
Lab Quote #	Lab Job #

CLIENT/REPORTING INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
Groundwater & Environmental Services, Inc. 89 Cabot Ct, Hauppauge, NY 11788 **Project Manager:** Michael DeGloria **Phone #:** 800-360-9405 PM Email: NERegion@gesonline.com fax **866-902-2187**	**Project Name:** EM 17-EMW, Brooklyn **Project Address:** 304 Columbia Street, Brooklyn, NY **Project PSID #:** 750742	Groundwater & Environmental Services, Inc. ges-invoices@gesonline.com ATTN: Accounts Payable **Invoice Instructions (Project #/ Phase / Task / Altorg)** 0501442/06/206/1105 EM Agreement #A2604415

Sampler(s) Name: Brian J. Dunn — Sampler(s) Name: Liam Maher

Lab Sample #	Field ID / Point of Collection (Sys_loc_code)	Depth Interval (ft)	Date Sampled	Time Sampled	Sampler	Matrix	Total # Bottles	number of preserved bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Amber	REQUESTED ANALYSIS (see Test Code sheet): MTBE & BTEX Via EPA Method 8260								LAB USE ONLY
	MW-3		3/7/19	1240	BD/LM	WG	3	3									X								
	MW-5			0800		WG		3									X								
	~~MW-20~~			0840		~~WG~~		~~3~~									~~X~~	BB							
	~~MW-7A~~					~~WG~~		~~3~~									~~X~~	BD							
	MW-9					WG		3									X								
	MW-12		3/7/19	0835	BD/LM	WG	3	3									X								
	MW-14			0845		WG		3									X								
	MW-15			0910		WG		3									X								
	MW-19			0920		WG		3									X								
	MW-1			1205		WG		3									X								
	MW-17			0950		WG		3									X								
	MW-11			1000		WG		3									X								

Turnaround Time (Business Days) — **Approved By (Lab PM) / Date**

- [x] Standard 14 Days _____/_____
- [ ] 1 day RUSH _____/_____
- [ ] Other _____ _____/_____

Laboratory Information

Lab: Eurofins Lancaster Laboratories Environmental, LLC
Address: 2425 New Holland Pike, Lancaster PA 17601
Phone: 717-656-2300
Lab PM: Megan Moeller
Lab PM Email: MeganMoeller@eurofinsus.com

Data Deliverable Information

- [x] Commercial 'A' (Level 1) = Results Only
- [ ] Commercial 'B' (Level 2) = Results + QC Summary
- [ ] FULLT1 (Level 3 & 4)
- [ ] NJ Reduced = Results + QC Summary + Partial Raw Data
- [ ] Commercial 'C'
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format _____
- [ ] Other _____

Please Email the EQ EDD Package to ges@equisonline.com & neregion@gesonline.com

EQEDD Name: EM 17-EMW, Brooklyn_LabReport#.1810.EQEDD.zip

Email results to NERegion@gesonline.com, dgagliano@gesonline.com & mdegloria@gesonline.com

Sample Custody must be documented below each time samples change possession, including courier.

	Relinquished By Sampler:	Date / Time:	Received By:
1	Brian J. Dunn	3/7/19 1500	FED EX
2	Relinquished By:	Date / Time:	Received By:
3	Relinquished By:	Date / Time:	Received By:

Custody Seal Number: [x] Intact [ ] Not Intact — [ ] Preserved where applicable [x] On Ice — Cooler Temp 0.9°C

A·42339 G.2032697 S·1004254-70

CHAIN OF CUSTODY

PAGE 2 OF 2

FED-EX Tracking #	Bottle Order Control #
Lab Quote #	Lab Job #

CLIENT/REPORTING INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
Groundwater & Environmental Services, Inc. 89 Cabot Ct, Hauppauge, NY 11788 **Project Manager:** Michael DeGloria **Phone #:** 800-360-9405 PM Email: NERegion@gesonline.com fax **866-902-2187**	**Project Name:** EM 17-EMW, Brooklyn **Project Address:** 304 Columbia Street, Brooklyn, NY **Project PSID #:** 750742	Groundwater & Environmental Services, Inc. ap@gesonline.com ATTN: Accounts Payable **Invoice Instructions (Project #/ Phase / Task / Altorg)** 0501442/06/206/1105 EM Agreement #A2604415

Sampler(s) Name: Brian S. Dunn   Sampler(s) Name: Liam Maher

REQUESTED ANALYSIS (see Test Code sheet) — number of preserved bottles

Lab Sample #	Field ID / Point of Collection (Sys_loc_code)	Depth Interval (ft)	Date Sampled	Time Sampled	Sampler	Matrix	Total # Bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Amber	MTBE & BTEX Via EPA Method 8260	LAB USE ONLY
	MW-18		3/7/19	1025	BD/LM	WG	3	3									X	
	MW-8A		↓	1045	↓	WG	↓	3									X	
	MW-10		↓	1115	↓	WG	↓	3									X	
	MW-16		↓	1125	↓	WG	↓	3									X	
	MW-13		↓	1200	↓	WG	↓	3									X	
	MW-2		↓	1253	↓	WG	↓	3									X	
	TRIP BLANK		2/26/19	—	KG	WG	2	2									X	

Turnaround Time (Business Days) — Approved By (Lab PM) / Date
- [x] Standard 14 Days ____/____
- [ ] 1 day RUSH ____/____
- [ ] Other ____ ____/____

Laboratory Information
- **Lab:** Eurofins Lancaster Laboratories Environmental, LLC
- **Address:** 2425 New Holland Pike, Lancaster PA 17601
- **Phone:** 717-656-2300
- **Lab PM:** Megan Moeller
- **Lab PM Email:** MeganMoeller@eurofinsus.com

Data Deliverable Information
- [x] Commercial 'A' (Level 1) = Results Only
- [ ] Commercial 'B' (Level 2) = Results + QC Summary
- [ ] FULLT1 (Level 3 & 4)
- [ ] NJ Reduced = Results + QC Summary + Partial Raw Data
- [ ] Commercial 'C'
- [ ] *NJ Data of Known Quality Protocol Reporting*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] EDD Format ____
- [ ] Other ____

Please Email the EQ EDD Package to ges@equisonline.com & neregion@gesonline.com

EQEDD Name: EM 17-EMW, Brooklyn_LabReport#.1810.EQEDD.zip

Sample Custody must be documented below each time samples change possession, including courier.

Relinquished By Sampler:	Date / Time:	Received By:
1 Brian S. Dunn	1 3/7/19 1500	1 FED EX
Relinquished By: 2	Date / Time: 2	Received By: 2
Relinquished By: 3	Date / Time: 3	Received By: 3 [signature]

Custody Seal Number: [x] Intact [ ] Not Intact [ ] Preserved where applicable [x] On Ice Cooler Temp 0.9°C

Email results to NERegion@gesonline.com, dgagliano@gesonline.com & mdegloria@gesonline.com

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Sample Administration Receipt Documentation Log

Doc Log ID: 243089

Group Number(s): 2032697

Client: GES

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	03/08/2019 10:00
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:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	Yes		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Melvin Sanchez (8943) at 18:14 on 03/08/2019

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	DT131	0.9	DT	Wet	Y	Bagged	N

Missing Sample Details

Sample ID on COC	Comments
MW-9	

General Comments: Received MW-20 that was crossed off on COC.

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.

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.