

October 25, 2013

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
Monitoring Period: July through September 2013
Spill# 89-04339
Former Mobil #17-EMW
304 Columbia Street
Brooklyn, New York

Dear Mr. MacCabe:

Please find the enclosed *Site Status Update Report* for work performed in July through September 2013 for 304 Columbia Street in Brooklyn, New York (NYS Spill #89-04339). During this monitoring period, the following work was performed:

Surfactant Injection and Well Installation Work Plan

GES submitted a *Surfactant Injection and Well Installation Work Plan* to the NYSDEC on July 25, 2013 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. GES received approval for the *Surfactant Injection and Well Installation Work Plan* on July 29, 2013.

Monitoring Well Installation

Two (2) monitoring wells (MW-19 and MW-20) were installed on the west-central portion of the Site on September 4, 2013 in accordance with the July 2013 *Surfactant Injection and Well Installation Work Plan*. MW-19 and MW-20 were both installed to a depth of 16 feet below grade.

Quarterly Groundwater Monitoring

The 3rd quarter groundwater monitoring event was conducted on September 4, 6 and 26, 2013. Seventeen monitoring wells were gauged (MW-1 through MW-3, MW-5, MW-7A, MW-8A, and MW-10 through MW-20) and fourteen wells (MW-3, MW-5, MW-7A, MW-8A, and MW-10 through MW-15, and MW-17 through MW-20) were sampled and analyzed for BTEX and MTBE. Monitoring wells MW-1, MW-2 and MW-16 were not sampled due to the presence of LPH at maximum measured thicknesses of 0.16 feet, 0.05 feet, and 0.23 feet, respectively. LPH was also detected at monitoring wells MW-7A, MW-13 and MW-17 at minimal thicknesses which did not preclude sample collection. Monitoring well MW-9 could not be located and therefore was not gauged or sampled. Dissolved oxygen readings were collected from monitoring wells MW-3, MW-5, MW-8A, and MW-10 through MW-15, and MW-17 through MW-20.



BTEX concentrations ranged from non-detect at two (2) wells (MW-5 and MW-7A) to 10,324 µg/L (MW-10). MTBE concentrations ranged from non-detect at six (6) wells (MW-5, MW-7A, MW-14, MW-17, MW-18 and MW-19) to 383 µg/L (MW-10).

GES will continue to perform quarterly groundwater monitoring in December 2013. The surfactant injection and recovery events proposed in the July 2013 *Surfactant Injection and Well Installation Work Plan* will be conducted in October and November 2013. The 4th quarter 2013 Site Status Update Report will be submitted in January 2014.

Should you have any questions or comments regarding the information provided herein, please contact Jessica Ferngren at (800) 360-9405 ext. 4333.

Respectfully Submitted,
Groundwater & Environmental Services, Inc.

A handwritten signature in blue ink that reads 'Jessica Ferngren'.

Jessica Ferngren
Senior Project Manager

Enclosure

cc: Laurie McCarthy-Exxon Mobil Environmental Services Company



**EXXONMOBIL ENVIRONMENTAL SERVICES COMPANY
SITE STATUS UPDATE REPORT**

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

Report Date: October 25, 2013

Monitoring Period: July through September 2013

Current Site Status: The site is currently an automobile repair facility.

Work Performed:

- 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 property. The wells were installed in accordance with the July 2013 *Surfactant Injection and Well Installation Work Plan*.
- September 4, 6 and 26, 2013 – Conducted quarterly groundwater monitoring activities which included gauging of 17 wells (MW-1 through MW-3, MW-5, MW-7A, MW-8A, and MW-10 through MW-20) and sampling of 14 wells (MW-3, MW-5, MW-7A, MW-8A, and MW-10 through MW-15, and MW-17 through MW-20). Monitoring wells MW-1, MW-2 and MW-16 were not sampled due to the presence of LPH at maximum measured thicknesses of 0.16 feet, 0.05 feet, and 0.23 feet, respectively. Monitoring well MW-9 could not be located and therefore no sample was collected. Dissolved oxygen readings were collected from monitoring wells MW-3, MW-5, MW-8A, and MW-10 through MW-15, and MW-17 through MW-20.

Groundwater Monitoring:

Number of Wells:	Total = 18 <u>On-site Wells:</u> MWs (14): MW-1 through MW-3, MW-5, MW-7A, MW-11 through MW-14 and MW-16 through MW-20* *MW-19 and MW-20 were installed in September 2013. <u>Off-site Wells:</u> MWs (4): MW-8A, MW-9, MW-10 and MW-15
Gauging Frequency:	Quarterly
LPH:	<u>9/4/2013</u> MW-16 = 0.04 feet <u>9/6/2013</u> MW-1 = 0.08 feet MW-2 = 0.05 feet <u>9/26/2013</u> MW-13 = 0.01 feet (was sampled) MW-17 = 0.04 feet (was sampled)
Groundwater Depth:	8.56 (MW-11) to 10.82 (MW-8A) feet below TOC
Groundwater Flow:	Southwesterly
Sampling Frequency:	Quarterly
Groundwater Analytical Results:	<u>BTEX</u> : ND at two (2) wells (MW-5 and MW-7A) to 10,324 µg/L (MW-10) <u>MTBE</u> : ND at six (6) wells (MW-5, MW-7A, MW-14, MW-17, MW-18 and MW-19) to 383 µg/L (MW-10)

Proposed Plans:

- Conduct surfactant injection and recovery events in accordance with the July 2013 *Surfactant Injection and Well Installation Work Plan*.
- Conduct quarterly groundwater sampling in December 2013.
- Prepare a Site Status Update Report in January 2014 documenting quarterly site activities.

Attachments:

Table 1 – Historical Groundwater Monitoring Data

Figure 1 – Groundwater Monitoring Map – September 6, 2013

Attachment A – List of Acronyms

Attachment B – Site History

Attachment C – Laboratory Analytical Results – Groundwater

TABLES

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-1	02/28/2005	100.00	8.48	91.52	8.47	0.01	91.53	-	-	-	-	-	-	-
	06/06/2005		8.41	91.59	8.40	0.01	91.60	-	-	-	-	-	-	-
	09/08/2005		9.10	90.90	9.02	0.08	90.96	-	-	-	-	-	-	-
	12/29/2005		7.95	92.05	7.94	0.01	92.06	-	-	-	-	-	-	-
	03/20/2006		8.69	91.31	8.60	0.09	91.38	-	-	-	-	-	-	-
	06/07/2006		7.65	92.35	-	-	92.35	-	-	-	-	-	-	-
	09/14/2006		7.70	92.30	7.51	0.19	92.44	-	-	-	-	-	-	-
	12/07/2006		7.88	92.12	7.62	0.26	92.32	-	-	-	-	-	-	-
	03/29/2007		8.44	91.56	8.28	0.16	91.68	-	-	-	-	-	-	-
	09/19/2007		9.03	90.97	8.68	0.35	91.23	-	-	-	-	-	-	-
	12/11/2007		9.10	90.90	9.08	0.02	90.92	-	-	-	-	-	-	-
	03/13/2008		8.46	91.54	-	-	91.54	220	79.8	830	414	1,543.8	14.9	-
	06/06/2008		8.61	91.39	-	-	91.39	271	89.1	817	481	1,658.1	17.3	-
	12/30/2008		8.24	91.76	-	-	91.76	216	67.8	539	336	1,158.8	13.2	-
	03/16/2009		9.41	90.59	-	-	90.59	215	78.8	761	474	1,528.8	9	-
	06/08/2009		8.23	91.77	-	-	91.77	24	88.4	551	692	1,355.4	ND<5	-
	07/20/2009		8.48	91.52	8.20	0.28	91.73	-	-	-	-	-	-	-
	09/24/2009		9.12	90.88	8.98	0.14	90.99	-	-	-	-	-	-	-
	12/03/2009		8.96	91.04	8.86	0.10	91.12	-	-	-	-	-	-	-
	03/03/2010		7.98	92.02	-	-	92.02	109	75.2	948	293	1,425.2	3.6	0.68
	06/07/2010		8.31	91.69	8.27	0.04	91.72	-	-	-	-	-	-	-
	09/01/2010		9.36	90.64	-	-	90.64	89.3	86.5	1,010	405	1,590.8	ND<20	-
	12/03/2010		9.13	90.87	9.10	0.03	90.89	-	-	-	-	-	-	-
	03/29/2011		8.01	91.99	7.84	0.17	92.12	-	-	-	-	-	-	-
	06/16/2011		5.53	94.47	5.13	0.40	94.77	-	-	-	-	-	-	-
	08/08/2011		9.06	90.94	8.88	0.18	91.08	-	-	-	-	-	-	-
	09/19/2011		7.75	92.25	7.37	0.38	92.54	-	-	-	-	-	-	-
	12/05/2011		8.24	91.76	8.12	0.12	91.85	-	-	-	-	-	-	-
	03/16/2012		9.32	90.68	9.29	0.03	90.70	-	-	-	-	-	-	-
	06/08/2012		8.44	91.56	-	-	91.56	33.0	29.2	199	147	408.2	ND<1.00	-
	09/07/2012		8.81	91.19	-	-	91.19	33.5	20.5	270	119	443.0	ND<1.00	0.45
	12/18/2012		8.93	91.07	-	-	91.07	33.5	25.4	363	203	624.9	ND<1.00	0.38
	03/14/2013		8.71	91.29	-	-	91.29	42.8	38.0	378	227	685.8	ND<1.00	0.67
	06/24/2013		7.59	92.41	-	-	92.41	37.5	36.0	464	224	761.5	ND<1.00	0.11
	09/06/2013		8.93	91.07	8.85	0.08	91.13	-	-	-	-	-	-	-
MW-2	02/28/2005	100.16	8.78	91.38	8.77	0.01	91.39	-	-	-	-	-	-	-
	06/06/2005		8.66	91.50	8.65	0.01	91.51	-	-	-	-	-	-	-

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HISTORICAL GROUNDWATER MONITORING DATA

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304 Columbia Street
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Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-2 Con't	09/08/2005		9.87	90.29	9.62	0.25	90.48	-	-	-	-	-	-	-
	12/29/2005		8.26	91.90	8.25	0.01	91.91	-	-	-	-	-	-	-
	03/20/2006		8.96	91.20	8.88	0.08	91.26	-	-	-	-	-	-	-
	06/07/2006		7.73	92.43	-	-	92.43	-	-	-	-	-	-	-
	09/14/2006		7.90	92.26	7.58	0.32	92.50	-	-	-	-	-	-	-
	12/07/2006		8.20	91.96	7.80	0.40	92.26	-	-	-	-	-	-	-
	03/29/2007		8.81	91.35	8.72	0.09	91.42	-	-	-	-	-	-	-
	06/13/2007		8.15	92.01	7.72	0.43	92.33	-	-	-	-	-	-	-
	09/19/2007		9.18	90.98	8.68	0.50	91.36	-	-	-	-	-	-	-
	12/11/2007		9.35	90.81	9.28	0.07	90.86	-	-	-	-	-	-	-
	03/13/2008		8.77	91.39	-	-	91.39	204	18	130	109	461	ND<2	-
	06/06/2008		9.10	91.06	-	-	91.06	378	25	137	93.3	633.3	71	-
	12/30/2008		8.56	91.60	-	-	91.60	305	27	50	84.4	466.4	37	-
	03/16/2009		9.71	90.45	-	-	90.45	246	18	23	53.4	340.4	67	-
	06/08/2009		8.61	91.55	8.53	0.08	91.61	-	-	-	-	-	-	-
	07/20/2009		9.47	90.69	8.35	1.12	91.53	-	-	-	-	-	-	-
	09/24/2009		9.06	91.10	9.01	0.05	91.14	-	-	-	-	-	-	-
	12/03/2009		9.75	90.41	9.05	0.70	90.94	-	-	-	-	-	-	-
	03/03/2010		8.30	91.86	8.27	0.03	91.88	-	-	-	-	-	-	-
	06/07/2010		9.07	91.09	8.36	0.71	91.62	-	-	-	-	-	-	-
	09/01/2010		9.94	90.22	-	-	90.22	530	22	202	105	859	155	-
	12/03/2010		9.37	90.79	-	-	90.79	500	52.4	336	232	1,120.4	120	-
	03/29/2011		8.74	91.42	8.08	0.66	91.92	-	-	-	-	-	-	-
	06/16/2011		9.80	90.36	8.30	1.50	91.49	-	-	-	-	-	-	-
	08/08/2011		9.43	90.73	9.06	0.37	91.01	-	-	-	-	-	-	-
	09/19/2011		7.81	92.35	7.50	0.31	92.58	-	-	-	-	-	-	-
	12/05/2011		9.10	91.06	8.42	0.68	91.57	-	-	-	-	-	-	-
	03/16/2012		10.10	90.06	9.58	0.52	90.45	-	-	-	-	-	-	-
	06/08/2012		8.75	91.41	8.72	0.03	91.43	-	-	-	-	-	-	-
	09/07/2012		8.95	91.21	8.91	0.04	91.24	-	-	-	-	-	-	-
	12/18/2012		10.02	90.14	9.89	0.13	90.24	-	-	-	-	-	-	-
	03/14/2013		9.65	90.51	9.60	0.05	90.55	-	-	-	-	-	-	-
	06/24/2013		8.30	91.86	7.95	0.35	92.12	-	-	-	-	-	-	-
	09/06/2013		9.07	91.09	9.02	0.05	91.13	-	-	-	-	-	-	-
MW-3	02/28/2005	100.43	9.32	91.11	-	-	91.11	120	38.5	167	151	476.5	13.1	-
	06/06/2005		9.21	91.22	-	-	91.22	37.6	22.5	135	113	308.1	3.5	-
	09/08/2005		9.67	90.76	-	-	90.76	86	23.5	47.9	139	296.4	7.8	-
	12/29/2005		8.50	91.93	-	-	91.93	11.3	0.88 J	28.9	15.3	56.38	0.88 J	-
	03/20/2006		9.98	90.45	-	-	90.45	218	12.1	94.6	61.9	386.6	24.7	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-3 Con't	06/07/2006		7.51	92.92	-	-	92.92	9.9	2.6	27.2	12.1	51.8	ND<1	-
	09/14/2006		7.57	92.86	-	-	92.86	17.8	ND<1	20.8	3.9	42.5	ND<1	-
	12/07/2006		7.90	92.53	-	-	92.53	10.4	ND<1	15.7	2	28.1	0.51 J	-
	03/29/2007		8.69	91.74	-	-	91.74	0.94 J	ND<1	5.1	1	7.04	ND<1	-
	06/13/2007		7.95	92.48	-	-	92.48	3.6	ND<1	6.8	0.52 J	10.92	ND<1	-
	09/19/2007		9.45	90.98	-	-	90.98	61.8	1.70	63.2	7.8	134.50	9.5	-
	12/11/2007		9.75	90.68	-	-	90.68	71.3	12.8	101	24.8	209.9	7.4	-
	03/13/2008		8.56	91.87	-	-	91.87	10.8	ND<1	3	0.72 J	14.52	ND<1	-
	06/06/2008		9.46	90.97	-	-	90.97	76.1	9.5	46.5	17.9	150.0	15	-
	12/30/2008		8.49	91.94	-	-	91.94	5.8	0.44 J	0.28 J	ND<1	6.52	0.53 J	-
	03/16/2009		10.02	90.41	-	-	90.41	113	13.5	6	20.8	153.3	20.2	-
	06/08/2009		8.33	92.10	-	-	92.10	1.7	ND<1	1.4	ND<1	3.1	ND<1	-
	07/20/2009		9.39	91.04	-	-	91.04	92	4	10.6	13.4	120.0	13.2	2.08
	09/24/2009		9.57	90.86	-	-	90.86	153	12.1	79.5	97.3	341.9	ND<1	0.64
	12/03/2009		9.60	90.83	-	-	90.83	92.7	8.4	90.4	79.1	270.6	3.1	0.64
	03/03/2010		8.18	92.25	-	-	92.25	0.27 J	ND<1	1.7	1.6	3.57	ND<1	0.71
	06/07/2010		9.18	91.25	-	-	91.25	3	0.50 J	6.8	3.2	13.50	1.2	0.60
	09/01/2010		10.66	89.77	-	-	89.77	49.3	28.8	164	170	412.1	25.8	0.52
	12/03/2010		9.58	90.85	-	-	90.85	3.9	2.7	30.9	26.5	64.0	ND<1	0.56
	03/29/2011		8.25	92.18	-	-	92.18	ND<1	ND<1	0.36 J	0.33 J	0.69	ND<1	1.39
	06/16/2011		8.90	91.53	-	-	91.53	2.8 J	2.1 J	49.5	31.2	85.6	ND<5	5.28
	08/08/2011		9.51	90.92	-	-	90.92	23.1	17.4	157	114	311.5	ND<1	0.76
	03/16/2012		9.97	90.46	-	-	90.46	25	43	867	386	1,321	ND<1	-
	06/08/2012		9.27	91.16	-	-	91.16	14.9	27.0	389	208	638.9	ND<1.00	-
	09/07/2012		9.41	91.02	-	-	91.02	3.67	7.33	110	83.2	204.20	ND<1.00	0.41
	12/18/2012		9.51	90.92	-	-	90.92	19.2	31.6	378	278	706.8	ND<1.00	0.18
	03/14/2013		9.47	90.96	-	-	90.96	15.7	36.7	319	277	648.4	1.42	0.38
	06/24/2013		8.07	92.36	-	-	92.36	ND<1.00	3.05	63.9	68.2	135.15	ND<1.00	0.90
	09/04/2013		9.72	90.71	-	-	90.71	7.74	14.1	127	113	261.84	6.86	2.35
MW-4	02/28/2005	100.05	9.02	91.03	-	-	91.03	50	2.6	11	25	88.6	ND<1	-
	06/06/2005		9.18	90.87	-	-	90.87	4.6	ND<1	0.49 J	ND<1	5.09	ND<1	-
	12/29/2005		8.54	91.51	-	-	91.51	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/20/2006		9.16	90.89	-	-	90.89	9.1	ND<1	0.62 J	0.59 J	10.31	ND<1	-
	06/07/2006		8.00	92.05	-	-	92.05	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	09/14/2006		WELL DESTROYED	-	-	-	-	-	-	-	-	-	-	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-5	02/28/2005	101.15	8.47	92.68	-	-	92.68	0.86 J	ND<1	1.6	8.1	10.56	3.1	-
	06/06/2005		8.73	92.42	-	-	92.42	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	09/08/2005		-	-	-	-	-	ND<1	ND<1	4.7	7.3	12.0	ND<1	-
	12/29/2005		7.95	93.20	-	-	93.20	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/20/2006		8.63	92.52	-	-	92.52	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/07/2006		8.12	93.03	-	-	93.03	ND<1	ND<1	ND<1	0.65 J	0.65	ND<1	-
	12/07/2006		7.97	93.18	-	-	93.18	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/29/2007		8.10	93.05	-	-	93.05	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/13/2007		7.68	93.47	-	-	93.47	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	09/19/2007		8.96	92.19	-	-	92.19	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	12/11/2007		9.20	91.95	-	-	91.95	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/13/2008		8.56	92.59	-	-	92.59	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/06/2008		8.85	92.30	-	-	92.30	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	12/30/2008		8.09	93.06	-	-	93.06	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/16/2009		9.41	91.74	-	-	91.74	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/08/2009		8.40	92.75	-	-	92.75	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	07/20/2009		8.63	92.52	-	-	92.52	-	-	-	-	-	-	-
	09/24/2009		9.29	91.86	-	-	91.86	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	0.75
	12/03/2009		9.00	92.15	-	-	92.15	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	0.94
	03/03/2010		7.74	93.41	-	-	93.41	ND<1	ND<1	ND<1	0.35 J	0.35	ND<1	0.91
	06/07/2010		8.73	92.42	-	-	92.42	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	1.51
	09/01/2010		9.61	91.54	-	-	91.54	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	1.18
	12/03/2010		9.40	91.75	-	-	91.75	ND<1	ND<1	ND<1	ND<1	ND<4	0.35 J	0.47
	03/29/2011		7.91	93.24	-	-	93.24	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	1.41
	06/16/2011		8.60	92.55	-	-	92.55	ND<1	ND<1	ND<1	0.25 J	0.25	ND<1	1.41
	08/08/2011		9.17	91.98	-	-	91.98	ND<1	ND<1	ND<1	ND<1	ND<4	1.3	4.76
	09/19/2011		7.64	93.51	-	-	93.51	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	2
	12/05/2011		8.40	92.75	-	-	92.75	ND<0.22	ND<0.15	ND<0.21	ND<0.17	ND<0.75	ND<0.18	-
	03/16/2012		9.37	91.78	-	-	91.78	ND<1	ND<1	ND<1	ND<3	ND<6	ND<1	-
	06/08/2012		8.60	92.55	-	-	92.55	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	ND<1.00	-
	09/07/2012		9.19	91.96	-	-	91.96	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	ND<1.00	0.45
	12/18/2012		9.01	92.14	-	-	92.14	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	ND<1.00	0.21
	03/14/2013		8.42	92.73	-	-	92.73	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	ND<1.00	3.72
	06/24/2013		8.16	92.99	-	-	92.99	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	ND<1.00	2.33
	09/04/2013		9.21	91.94	-	-	91.94	ND<1.00	ND<1.00	ND<1.00	ND<2.00	ND<5.00	ND<1.00	6.18
MW-6A	02/28/2005	101.17	8.29	92.88	-	-	92.88	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/06/2005		WELL DESTROYED	-	-	-	-	-	-	-	-	-	-	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-7A	02/28/2005	101.24	9.67	91.57	-	-	91.57	151	3.8	3	8.8	166.6	2.5	-
	06/06/2005		9.59	91.65	-	-	91.65	13	ND<1	ND<1	ND<1	13	ND<1	-
	12/29/2005		9.27	91.97	-	-	91.97	105	1	5.2	4	115.2	3.2	-
	03/20/2006		9.57	91.67	-	-	91.67	9.4	ND<1	ND<1	0.46 J	9.86	0.51 J	-
	06/07/2006		8.72	92.52	-	-	92.52	328	9.2	20	49	406.2	1.8	-
	09/14/2006		8.52	92.72	-	-	92.72	4.7	ND<1	0.35 J	ND<1	5.05	ND<1	-
	12/07/2006		8.75	92.49	-	-	92.49	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	03/29/2007		9.48	91.76	-	-	91.76	291	6	8.2	17	322.2	ND<1	-
	06/13/2007		8.56	92.68	-	-	92.68	448	18	28	53	547	2.4	-
	09/19/2007		9.55	91.69	-	-	91.69	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	12/11/2007		10.27	90.97	-	-	90.97	ND<1	ND<1	ND<1	ND<1	ND<4	2.3	-
	03/13/2008		9.56	91.68	-	-	91.68	202	3.7	8.4	10	224.1	<2.0	-
	06/06/2008		9.74	91.50	-	-	91.50	4.5	ND<1	ND<1	ND<1	4.5	0.31 J	-
	12/30/2008		9.53	91.71	-	-	91.71	335	4.6	3.4	21	364.0	1.9	-
	03/16/2009		10.58	90.66	-	-	90.66	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	-
	06/08/2009		9.52	91.72	-	-	91.72	30	ND<1	ND<1	ND<1	30	ND<1	-
	07/20/2009		8.98	92.26	-	-	92.26	1	ND<1	ND<1	ND<1	1	0.48 J	10
	09/24/2009		10.07	91.17	-	-	91.17	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	0.52
	12/03/2009		10.11	91.13	-	-	91.13	ND<1	ND<1	ND<1	ND<1	ND<4	0.52 J	0.62
	03/03/2010		9.41	91.83	-	-	91.83	145	2.9	5.5	5.6	159.0	1.2	0.64
	06/07/2010		9.36	91.88	-	-	91.88	0.36 J	ND<1	ND<1	ND<1	0.36	ND<1	2.37
	09/01/2010		10.50	90.74	-	-	90.74	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	1.22
	12/03/2010		10.31	90.93	-	-	90.93	ND<1	ND<1	ND<1	ND<1	ND<4	ND<1	1.2
	03/29/2011		8.87	92.37	-	-	92.37	1.7	ND<1	ND<1	ND<1	1.7	ND<1	-
	06/16/2011		9.55	91.69	9.30	0.25	91.88	-	-	-	-	-	-	-
	08/08/2011		9.99	91.25	9.98	0.01	91.26	-	-	-	-	-	-	-
	09/19/2011		INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-
	03/16/2012		10.48	90.76	-	-	90.76	107	1.31	3.55	ND<3	111.86	1.09	-
	06/08/2012		9.76	91.48	-	-	91.48	143	4.03	25.3	7.23	179.56	1.12	-
	09/07/2012		10.02	91.22	-	-	91.22	14.4	ND<1.00	ND<1.00	ND<3.00	14.4	ND<1.00	1.24
	12/18/2012		10.13	91.11	-	-	91.11	12.9	ND<1.00	ND<1.00	ND<3.00	12.9	ND<1.00	0.53
	03/14/2013		9.85	91.39	-	-	91.39	88.8	1.84	12.4	8.73	111.77	ND<1.00	2.11
	06/24/2013		8.76	92.48	-	-	92.48	45.8	ND<1.00	3.81	ND<3.00	49.61	ND<1.00	0.17
	09/06/2013		9.99	91.25	-	-	91.25	ND<1.00	ND<1.00	ND<1.00	ND<2.00	ND<5.00	ND<1.00	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-8A	02/28/2005	100.59	10.02	90.57	-	-	90.57	1,430	369	1,020	3,180	5,999	4,720	-
	06/06/2005		9.48	91.11	-	-	91.11	1,660	391	1,150	3,960	7,161	3,980	-
	09/08/2005		10.02	90.57	-	-	90.57	2,030	447	1,200	3,880	7,557	3,640	-
	12/29/2005		9.18	91.41	-	-	91.41	434	49.3	216	675	1,374.3	250	-
	03/20/2006		9.87	90.72	-	-	90.72	2,060	467	1,220	4,040	7,787	4,730	-
	09/14/2006		8.74	91.85	-	-	91.85	2,170	510	1,380	4,320	8,380	2,370	-
	12/07/2006		8.62	91.97	-	-	91.97	1,660	430	1,350	4,570	8,010	1,980	-
	03/29/2007		9.52	91.07	-	-	91.07	1,420	341	908	2,370	5,039	2,960	-
	06/13/2007		8.55	92.04	-	-	92.04	444	155	694	1,770	3,063	380	-
	09/19/2007		9.36	91.23	-	-	91.23	1,090	267	915	2,570	4,842	1,160	-
	12/11/2007		10.13	90.46	-	-	90.46	1,530	305	1,090	3,420	6,345	1,570	-
	03/13/2008		9.69	90.90	-	-	90.90	1,580	315	1,140	3,430	6,465	1,850	-
	06/06/2008		9.35	91.24	-	-	91.24	1,230	280	1,070	2,610	5,190	806	-
	12/30/2008		9.17	91.42	-	-	91.42	82.5	21.3	131	237	471.8	22.6	-
	06/08/2009		9.18	91.41	-	-	91.41	292	64.9	348	616	1,320.9	129	-
	07/20/2009		9.10	91.49	-	-	91.49	292	72.8	324	525	1,213.8	149	1.63
	09/24/2009		10.79	89.80	-	-	89.80	984	223	909	2,320	4,436	542	1.56
	12/03/2009		9.75	90.84	-	-	90.84	1,030	235	1,060	2,240	4,565	452	0.70
	03/03/2010		9.25	91.34	-	-	91.34	691	177	762	2,070	3,700	185	0.58
	06/07/2010		9.17	91.42	-	-	91.42	1,020	213	869	2,060	4,162	766	1.02
	09/01/2010		10.18	90.41	-	-	90.41	1,520	291	1,070	3,030	5,911	939	0.97
	12/03/2010		10.00	90.59	-	-	90.59	942	253	745	1,900	3,840	555	0.91
	03/29/2011		9.46	91.13	-	-	91.13	1,070	227	831	1,860	3,988	418	0.39
	09/19/2011		8.26	92.33	-	-	92.33	779	157	533	1,060	2,529	298	1.37
	12/05/2011		9.20	91.39	-	-	91.39	1,540	222	682	1,530	3,974	637	-
	03/16/2012		10.07	90.52	-	-	90.52	2,220	386	1,410	5,250	9,266	1,100	-
	06/08/2012		9.84	90.75	-	-	90.75	808	111	434	1,200	2,553	983	10
	09/07/2012		10.00	90.59	-	-	90.59	985	154	341	953	2,433	376	1.23
	12/18/2012		10.78	89.81	-	-	89.81	1,300	231	496	2,200	4,227	336	0.18
	03/14/2013		11.08	89.51	-	-	89.51	1,160	188	551	2,360	4,259	330	0.34
	06/24/2013		9.31	91.28	-	-	91.28	991	155	482	1,930	3,558	157	0.79
	09/06/2013		10.82	89.77	-	-	89.77	1,670	306	1,250	3,790	7,016	337	0.87
MW-9	02/28/2005	100.10	9.45	90.65	-	-	90.65	ND<1	ND<1	ND<1	ND<1	ND<4	1.8	-
	06/06/2005		9.38	90.72	-	-	90.72	ND<1	ND<1	ND<1	ND<1	ND<4	1.1	-
	09/08/2005		10.01	90.09	-	-	90.09	ND<1	ND<1	0.73 J	2	2.73	7.3	-
	12/29/2005		8.88	91.22	-	-	91.22	ND<1	ND<1	ND<1	ND<1	ND<4	16.7	-
	03/20/2006		9.65	90.45	-	-	90.45	ND<1	ND<1	ND<1	ND<1	ND<4	9.8	-
	09/14/2006		8.93	91.17	-	-	91.17	0.93 J	ND<1	0.43 J	1.1	2.46	20.8	-
	12/07/2006		8.72	91.38	-	-	91.38	0.88 J	0.72 J	ND<1	3.6	5.20	45	-
	03/29/2007		9.09	91.01	-	-	91.01	ND<1	ND<1	ND<1	ND<1	ND<4	46.8	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-9 Con't	06/13/2007		8.64	91.46	-	-	91.46	4.9	1.7	ND<1	6.4	13.0	60	-
	09/19/2007		9.39	90.71	-	-	90.71	0.35 J	ND<1	ND<1	0.97 J	1.32	19.2	-
	12/11/2007		9.80	90.30	-	-	90.30	ND<1	ND<1	ND<1	ND<1	ND<4	15.7	-
	03/13/2008		8.98	91.12	-	-	91.12	ND<1	ND<1	ND<1	ND<1	ND<4	6.5	-
	06/06/2008		9.19	90.91	-	-	90.91	ND<1	ND<1	ND<1	ND<1	ND<4	6.2	-
	12/30/2008		8.75	91.35	-	-	91.35	ND<1	ND<1	ND<1	ND<1	ND<4	2.6	-
	07/20/2009		9.10	91.00	-	-	91.00	-	-	-	-	-	-	-
	09/24/2009		9.71	90.39	-	-	90.39	ND<1	ND<1	ND<1	ND<1	ND<4	2.6	1.71
	12/03/2009		9.62	90.48	-	-	90.48	ND<1	ND<1	ND<1	ND<1	ND<4	4.6	0.86
	03/03/2010		8.47	91.63	-	-	91.63	ND<1	ND<1	ND<1	ND<1	ND<4	0.32 J	0.46
	06/07/2010		9.24	90.86	-	-	90.86	ND<1	ND<1	ND<1	ND<1	ND<4	2.9	1.14
	09/01/2010		10.11	89.99	-	-	89.99	ND<1	ND<1	ND<1	ND<1	ND<4	6.7	0.75
	12/03/2010		9.90	90.20	-	-	90.20	ND<1	ND<1	ND<1	ND<1	ND<4	6.7	0.82
	03/29/2011		9.04	91.06	-	-	91.06	ND<1	ND<1	ND<1	ND<1	ND<4	1.5	0.33
	12/05/2011		9.20	90.90	-	-	90.90	ND<0.22	ND<0.15	ND<0.21	ND<0.17	ND<0.75	10.1	-
	03/16/2012		10.33	89.77	-	-	89.77	ND<1	ND<1	ND<1	ND<3	ND<6	9.21	-
	06/08/2012		9.44	90.66	-	-	90.66	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	12.6	-
	09/07/2012		9.79	90.31	-	-	90.31	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	11.0	0.73
	12/18/2012		CNL	-	-	-	-	-	-	-	-	-	-	-
	03/14/2013		INACCESSIBLE	-	-	-	-	-	-	-	-	-	-	-
	06/24/2013		CNL	-	-	-	-	-	-	-	-	-	-	-
	09/06/2013		CNL	-	-	-	-	-	-	-	-	-	-	-
MW-10	02/28/2005	100.50	9.94	90.56	-	-	90.56	5,040	763	1,520	7,160	14,483	10,300	-
	06/06/2005		9.03	91.47	-	-	91.47	823	97.6	298	1,390	2,608.6	1,560	-
	09/08/2005		9.90	90.60	-	-	90.60	2,780	331	1,000	3,840	7,951	5,030	-
	12/29/2005		8.90	91.60	-	-	91.60	754	192	942	1,900	3,788	833	-
	03/20/2006		9.54	90.96	-	-	90.96	6,220	803	1,640	6,970	15,633	10,500	-
	06/07/2006		9.01	91.49	-	-	91.49	4,580	459	1,150	4,290	10,479	6,210	-
	09/14/2006		8.58	91.92	-	-	91.92	4,900	625	1,520	5,930	12,975	6,740	-
	12/07/2006		8.52	91.98	-	-	91.98	3,070	504	2,030	7,360	12,964	1,410	-
	03/29/2007		9.40	91.10	-	-	91.10	7,050	1,180	3,550	11,900	23,680	6,820	-
	06/13/2007		8.42	92.08	-	-	92.08	1,450	231	909	2,980	5,570	466	-
	09/19/2007		9.22	91.28	-	-	91.28	3,380	445	1,400	4,500	9,725	1,310	-
	12/11/2007		11.03	89.47	-	-	89.47	3,030	411	1,360	4,010	8,811	1,750	-
	03/13/2008		9.56	90.94	-	-	90.94	4,270	530	1,520	5,160	11,480	2,470	-
	06/06/2008		9.25	91.25	-	-	91.25	3,080	414	1,510	4,450	9,454	1,260	-
	12/30/2008		9.05	91.45	-	-	91.45	903	115	649	1,500	3,167	213	-
	06/08/2009		8.97	91.53	-	-	91.53	1,110	143	658	1,440	3,351	166	-
	07/20/2009		8.98	91.52	-	-	91.52	1,050	157	593	1,250	3,050	97.1	1.47

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-10 Con't	09/24/2009		9.59	90.91	-	-	90.91	2,390	374	1,490	3,210	7,464	315	1.53
	12/03/2009		9.55	90.95	-	-	90.95	3,380	673	3,900	3,990	11,943	698	0.52
	03/03/2010		9.25	91.25	-	-	91.25	3,450	440	1,400	3,440	8,730	1,810	1.21
	06/07/2010		9.02	91.48	-	-	91.48	3,210	403	1,260	2,760	7,633	1,380	1.27
	09/01/2010		10.00	90.50	-	-	90.50	4,870	485	1,830	4,040	11,225	1,580	2.1
	12/03/2010		9.80	90.70	-	-	90.70	3,950	496	1,510	3,180	9,136	ND<10	0.82
	03/29/2011		9.35	91.15	-	-	91.15	5,450	594	1,550	3,700	11,294	1,640	1.19
	06/16/2011		8.80	91.70	-	-	91.70	5,410	555	1,450	3,580	10,995	1,160	1.32
	08/08/2011		9.72	90.78	-	-	90.78	6,180	645	1,450	3,460	11,735	1,030	0.65
	09/19/2011		8.19	92.31	-	-	92.31	1,810	162	497	957	3,426	191	4.48
	12/05/2011		9.00	91.50	-	-	91.50	3,790	443	1,910	3,860	10,003	610	-
	03/16/2012		10.51	89.99	-	-	89.99	5,350	744	2,220	5,690	14,004	1,210	-
	06/08/2012		9.47	91.03	-	-	91.03	3,780	343	859	1,720	6,702	860	7
	09/07/2012		10.04	90.46	-	-	90.46	3,930	334	738	2,290	7,292	777	11.63
	12/18/2012		10.83	89.67	-	-	89.67	5,460	623	1,170	3,340	10,593	708	0.21
MW-11	03/14/2013		10.99	89.51	-	-	89.51	5,030	469	1,280	3,010	9,789	712	0.89
	06/24/2013		8.51	91.99	-	-	91.99	2,680	330	927	2,900	6,837	137	0.45
	09/06/2013		10.66	89.84	-	-	89.84	5,290	524	1,360	3,150	10,324	383	2.45
	02/28/2005	99.62	8.14	91.48	-	-	91.48	619	576	1,050	4,270	6,515	77	-
	06/06/2005		8.07	91.55	-	-	91.55	616	410	1,070	5,050	7,146	71	-
	09/08/2005		8.81	90.81	8.78	0.03	90.83	-	-	-	-	-	-	-
	12/29/2005		11.63	87.99	-	-	87.99	697	249	1,170	3,630	5,746	57	-
	03/20/2006		8.13	91.49	-	-	91.49	625	294	1,070	4,130	6,119	39	-
	06/07/2006		7.45	92.17	-	-	92.17	-	-	-	-	-	-	-
	09/14/2006		7.13	92.49	7.11	0.02	92.51	-	-	-	-	-	-	-
	12/07/2006		7.30	92.32	7.28	0.02	92.34	-	-	-	-	-	-	-
	03/29/2007		7.94	91.68	-	-	91.68	531	199	1,030	1,580	3,340	ND<10	-
	06/13/2007		7.18	92.44	-	-	92.44	438	125	738	935	2,236	32	-
	09/19/2007		8.11	91.51	-	-	91.51	718	231	1,050	1,800	3,799	36	-
	12/11/2007		8.70	90.92	8.68	0.02	90.94	-	-	-	-	-	-	-
	03/13/2008		8.20	91.42	-	-	91.42	336	153	860	1,530	2,879	ND<5	-
	06/06/2008		8.17	91.45	-	-	91.45	617	194	954	1,410	3,175	37	-
	12/30/2008		7.91	91.71	-	-	91.71	473	185	990	1,730	3,378	23.9	-
	03/16/2009		9.06	90.56	-	-	90.56	423	192	770	1,610	2,995	20.9	-
	06/08/2009		7.87	91.75	-	-	91.75	575	209	1,110	2,330	4,224	27.4	-
	07/20/2009		7.93	91.69	7.85	0.08	91.75	-	-	-	-	-	-	-
	09/24/2009		8.59	91.03	8.54	0.05	91.07	-	-	-	-	-	-	-
	12/03/2009		8.51	91.11	-	-	91.11	797	142	1,280	1,020	3,239	46.9	0.41

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-11 Con't	03/03/2010		7.66	91.96	-	-	91.96	518	110	1,060	1,010	2,698	23.4	1.18
	06/07/2010		7.94	91.68	-	-	91.68	382	33.1	901	498	1,814.1	23.1	1.09
	09/01/2010		8.98	90.64	-	-	90.64	510	131	1,300	1,620	3,561	ND<100	0.88
	12/03/2010		8.71	90.91	-	-	90.91	513	206	911	1,560	3,190	11.3	0.68
	03/29/2011		7.45	92.17	-	-	92.17	68.3	7.60	199	234	508.90	3.20	2.15
	06/16/2011		7.71	91.91	-	-	91.91	148	23.3	293	315	779.3	2.80	4.32
	08/08/2011		8.54	91.08	-	-	91.08	308	48.5	380	385	1,121.5	7.90	2.72
	09/19/2011		6.98	92.64	-	-	92.64	57	12.3	162	171	402.3	1.40	1.27
	12/05/2011		7.81	91.81	-	-	91.81	144	52	304	455	955	4	-
	03/16/2012		8.98	90.64	-	-	90.64	637	149	794	1,580	3,160	12	-
	06/08/2012		8.14	91.48	-	-	91.48	492	161	611	1,090	2,354	9.70	-
	09/07/2012		8.18	91.44	-	-	91.44	604	164	699	1,240	2,707	7.61	0.80
	12/18/2012		8.61	91.01	-	-	91.01	587	184	702	1,320	2,793	7.11	0.25
	03/14/2013		8.40	91.22	-	-	91.22	487	150	608	934	2,179	7.78	0.33
	06/24/2013		7.27	92.35	-	-	92.35	403	113	495	447	1,458	3.98	0.12
	09/04/2013		8.50	91.12	-	-	91.12	513	147	947	1,230	2,837	3.54	0.07
MW-12	02/28/2005	100.85	9.38	91.47	-	-	91.47	127	6.6	50	57	240.6	24.8	-
	06/06/2005		9.17	91.68	-	-	91.68	250	8.2	29.2	51.4	338.8	129	-
	03/20/2006		9.17	91.68	-	-	91.68	229	9	35.5	50.2	323.7	26.6	-
	06/07/2006		8.68	92.17	-	-	92.17	470	17.4	81.1	86.8	655.3	96.7	-
	09/14/2006		8.13	92.72	-	-	92.72	476	14	42.9	63.2	596.1	55	-
	12/07/2006		8.37	92.48	-	-	92.48	225	7.3	5.1	22.5	259.9	29.4	-
	03/29/2007		9.16	91.69	-	-	91.69	193	3.7	4	12.5	213.2	44.3	-
	06/13/2007		8.28	92.57	-	-	92.57	274	8.3	5.8	24.7	312.8	86.5	-
	09/19/2007		9.16	91.69	-	-	91.69	285	6.2	4.2	20.5	315.9	33	-
	12/11/2007		9.90	90.95	-	-	90.95	249	5	4.2	17.6	275.8	31.6	-
	03/13/2008		9.21	91.64	-	-	91.64	172	3.6	11	14.4	201.0	ND<1	-
	06/06/2008		9.33	91.52	-	-	91.52	134	4.4	8.5	15.8	162.7	20.6	-
	12/30/2008		9.22	91.63	-	-	91.63	603	12.3	115	53.9	784.2	41	-
	03/16/2009		10.21	90.64	-	-	90.64	144	3.2	32.2	17.7	197.1	12.9	-
	06/08/2009		9.16	91.69	-	-	91.69	474	8.6	69.2	33.5	585.3	147	-
	07/20/2009		9.38	91.47	-	-	91.47	14.5	0.56 J	15.2	2.4	32.66	41.9	3.15
	09/24/2009		9.71	91.14	-	-	91.14	54.8	3.1	37.8	21.4	117.1	113	1.56
	12/03/2009		9.75	91.10	-	-	91.10	120	3.9	52.7	28.5	205.1	88.4	1.44
	03/03/2010		9.15	91.70	-	-	91.70	148	3.6	23.1	16.1	190.8	41.4	0.98
	06/07/2010		8.97	91.88	-	-	91.88	22.9	1.1	8.4	7.2	39.6	8.6	0.80
	09/01/2010		10.22	90.63	-	-	90.63	111	2.4	10.7	11.6	135.7	23	3.10

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-12 Con't	12/03/2010		10.00	90.85	-	-	90.85	87	1.6	7.5	7	103.1	20.3	3.01
	03/29/2011		8.53	92.32	-	-	92.32	2.1	ND<1	0.34 J	0.32 J	2.76	6.7	0.47
	06/16/2011		8.90	91.95	-	-	91.95	3.5	0.36 J	0.72 J	1.3	5.88	8.9	4.17
	08/08/2011		9.70	91.15	-	-	91.15	24	1.4	3.5	6.6	35.5	32.5	2.23
	09/19/2011		8.39	92.46	-	-	92.46	2.8	0.35 J	2.4	3.2	8.75	ND<1	1.5
	03/16/2012		10.17	90.68	-	-	90.68	27	1.05	8.41	4.22	40.68	24	-
	06/08/2012		9.42	91.43	-	-	91.43	30.2	ND<1.00	4.87	ND<3.00	35.07	24.3	-
	09/07/2012		9.66	91.19	-	-	91.19	38.2	ND<1.00	4.92	ND<3.00	43.12	ND<1.00	0.42
	12/18/2012		9.98	90.87	-	-	90.87	50.5	1.02	5.07	ND<3.00	56.59	13.4	0.27
	03/14/2013		9.58	91.27	-	-	91.27	35.3	ND<1.00	5.36	ND<3.00	40.66	13.5	1.81
	06/24/2013		8.36	92.49	-	-	92.49	2.76	ND<1.00	ND<1.00	ND<3.00	2.76	2.48	0.30
	09/04/2013		9.58	91.27	-	-	91.27	15.5	ND<1.00	3.19	ND<2.00	18.69	7.88	2.64
MW-13	02/28/2005	100.04	8.83	91.21	6.66	2.17	92.84	-	-	-	-	-	-	-
	06/06/2005		8.54	91.50	8.53	0.01	91.51	-	-	-	-	-	-	-
	09/08/2005		9.37	90.67	9.16	0.21	90.83	-	-	-	-	-	-	-
	12/29/2005		8.65	91.39	8.64	0.01	91.40	-	-	-	-	-	-	-
	03/20/2006		6.67	93.37	6.66	0.01	93.38	-	-	-	-	-	-	-
	06/07/2006		7.61	92.43	-	-	92.43	-	-	-	-	-	-	-
	09/14/2006		7.34	92.70	7.32	0.02	92.72	-	-	-	-	-	-	-
	12/07/2006		7.71	92.33	7.56	0.15	92.44	-	-	-	-	-	-	-
	03/29/2007		8.53	91.51	-	-	91.51	76.5	ND<5	ND<5	ND<5	76.5	9.3	-
	06/13/2007		7.55	92.49	-	-	92.49	56.1	2.6	172	56.9	287.6	11	-
	09/19/2007		8.53	91.51	8.51	0.02	91.53	-	-	-	-	-	-	-
	12/11/2007		9.30	90.74	9.28	0.02	90.76	-	-	-	-	-	-	-
	03/13/2008		8.58	91.46	-	-	91.46	179	6.1	303	74.7	562.8	13.3	-
	06/06/2008		8.70	91.34	-	-	91.34	245	10.2	354	95.8	705.0	20.8	-
	12/30/2008		8.37	91.67	-	-	91.67	226	20.3	394	136	776.3	12.3	-
	03/16/2009		9.76	90.28	-	-	90.28	270	22.8	423	135	850.8	11.9	-
	06/08/2009		8.24	91.80	-	-	91.80	68.6	6.2	129	36.8	240.6	11.7	-
	07/20/2009		8.31	91.73	-	-	91.73	39	7.9	300	88.6	435.5	15.9	1.98
	09/24/2009		9.01	91.03	-	-	91.03	115	4.1	295	44.1	458.2	10.8	0.74
	12/03/2009		8.96	91.08	-	-	91.08	219	7	295	53	574	13.6	1.03
	03/03/2010		7.90	92.14	-	-	92.14	31.8	2.3	109	18.5	161.6	4.8	0.59
	06/07/2010		8.33	91.71	-	-	91.71	21.2	1.7	149	19.9	191.8	18.6	0.94
	09/01/2010		9.44	90.60	-	-	90.60	541	120	884	1,490	3,035	16.9	0.81
	12/03/2010		9.13	90.91	-	-	90.91	321	114	685	1,240	2,360	ND<5	0.66
	03/29/2011		7.90	92.14	-	-	92.14	6	ND<1	8.7	5.2	19.9	3	1.08
	06/16/2011		5.30	94.74	-	-	94.74	31.5	2	62	34.4	129.9	10.5	3.23

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-13 Con't	08/08/2011		9.04	91.00	-	-	91.00	212	40.6	260	284	796.6	3.1	7.89
	09/19/2011		7.36	92.68	-	-	92.68	12.3	2	174	57.5	245.8	1.3	8.73
	12/05/2011		8.25	91.79	-	-	91.79	20	1.8	110	44	175.8	3.4	-
	03/16/2012		9.44	90.60	-	-	90.60	194	56	505	294	1,049	1.71	-
	06/08/2012		8.62	91.42	-	-	91.42	135	38.6	331	235	739.6	2.74	-
	09/07/2012		8.92	91.12	-	-	91.12	178	39.2	421	237	875.2	ND<1.00	0.31
	12/18/2012		9.09	90.95	-	-	90.95	308	84.5	663	452	1,507.5	2.82	0.21
	03/14/2013		8.92	91.12	-	-	91.12	586	114	590	948	2,238	6.10	0.42
	06/24/2013		7.74	92.30	-	-	92.30	117	38.6	544	399	1,098.6	2.43	0.33
	09/26/2013		9.16	90.88	9.15	0.01	90.89	395	77.9	515	458	1,445.9	3.87	1-2
MW-14	02/28/2005	100.04	12.87	87.17	-	-	87.17	4.2	0.61 J	1.7	6.7	13.21	2.5	-
	06/06/2005		13.02	87.02	-	-	87.02	12.6	1	2.4	9.3	25.3	ND<1	-
	03/20/2006		13.03	87.01	12.53	0.50	87.39	-	-	-	-	-	-	-
	06/07/2006		8.19	91.85	8.12	0.07	91.90	-	-	-	-	-	-	-
	12/07/2006		13.30	86.74	8.55	4.75	90.30	-	-	-	-	-	-	-
	03/29/2007		10.52	89.52	-	-	89.52	118	4.8	1.4	11.3	135.5	ND<1	-
	06/13/2007		8.38	91.66	-	-	91.66	125	5.6	5.4	41.1	177.1	ND<1	-
	09/19/2007		10.08	89.96	-	-	89.96	121	5	4.1	31.3	161.4	ND<1	-
	12/11/2007		10.95	89.09	10.90	0.05	89.13	-	-	-	-	-	-	-
	03/13/2008		9.73	90.31	-	-	90.31	66.7	2.7	0.76 J	4.6	74.76	ND<1	-
	06/06/2008		10.05	89.99	-	-	89.99	95.5	3.6	1.3	5.8	106.2	ND<1	-
	12/30/2008		9.59	90.45	-	-	90.45	85.3	2.5	0.51 J	2.1	90.41	ND<1	-
	03/16/2009		10.44	89.60	-	-	89.60	101	4.1	0.77 J	4.3	110.17	ND<1	-
	06/08/2009		9.46	90.58	-	-	90.58	54.8	2.3	1.2	4.2	62.5	ND<1	-
	07/20/2009		9.30	90.74	-	-	90.74	51.6	1.3	0.58 J	2.3	55.78	ND<1	3.2
	09/24/2009		10.00	90.04	-	-	90.04	102	3.8	0.90 J	5.9	112.60	ND<1	0.69
	12/03/2009		9.81	90.23	-	-	90.23	147	4.3	1.1	4.6	157.0	ND<1	0.47
	03/03/2010		8.90	91.14	-	-	91.14	13.5	ND<1	ND<1	ND<1	13.5	ND<1	0.71
	06/07/2010		9.31	90.73	-	-	90.73	50.3	0.95 J	0.32 J	1.2	52.77	ND<1	0.59
	09/01/2010		10.36	89.68	-	-	89.68	139	3.4	1.2	3.7	147.3	ND<1	0.44
	12/03/2010		10.11	89.93	-	-	89.93	114	4	0.86 J	3.2	122.06	ND<1	0.39
	03/29/2011		8.60	91.44	-	-	91.44	12.7	ND<1	ND<1	ND<1	12.7	ND<1	1.89
	06/16/2011		9.20	90.84	-	-	90.84	41.4	0.55 J	0.27 J	0.53 J	42.75	ND<1	2.4
	08/08/2011		9.87	90.17	-	-	90.17	84.1	0.77 J	ND<1	ND<1	84.87	ND<1	2.42
	09/19/2011		8.22	91.82	-	-	91.82	3.8	ND<1	ND<1	ND<1	3.8	ND<1	1.08
	12/05/2011		9.19	90.85	-	-	90.85	64	0.39	0.22	0.60	65.21	ND<0.18	-
	03/16/2012		10.36	89.68	-	-	89.68	91	1.28	ND<1	ND<3	92.28	ND<1	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-14 Con't	06/08/2012		9.62	90.42	-	-	90.42	74.8	ND<1.00	ND<1.00	ND<3.00	74.8	ND<1.00	-
	09/07/2012		9.82	90.22	-	-	90.22	117	1.96	ND<1.00	ND<3.00	118.96	ND<1.00	3.35
	12/18/2012		9.84	90.20	-	-	90.20	70.8	1.60	ND<1.00	ND<3.00	72.40	ND<1.00	0.16
	03/14/2013		10.43	89.61	-	-	89.61	20.2	ND<1.00	ND<1.00	ND<3.00	20.2	ND<1.00	2.84
	06/24/2013		8.50	91.54	-	-	91.54	7.68	ND<1.00	ND<1.00	ND<3.00	7.68	ND<1.00	0.23
	09/04/2013		9.77	90.27	-	-	90.27	44.2	ND<1.00	ND<1.00	ND<2.00	44.2	ND<1.00	4.42
MW-15	09/27/2006	100.47	10.72	89.75	-	-	89.75	616	21.1	21.7	64.4	723.2	425	-
	12/07/2006		9.29	91.18	-	-	91.18	522	16.6	8.2	54.5	601.3	114	-
	03/29/2007		9.81	90.66	-	-	90.66	389	14	5.9	30.7	439.6	59.5	-
	06/13/2007		8.99	91.48	-	-	91.48	924	26.7	6	56.8	1,013.5	191	-
	09/19/2007		9.72	90.75	-	-	90.75	747	16.6	3.5	34.1	801.2	104	-
	12/11/2007		10.29	90.18	-	-	90.18	800	15.1	2.8 J	40	857.9	119	-
	03/13/2008		9.85	90.62	-	-	90.62	662	6.4	2.9 J	15.2	686.5	83.4	-
	06/06/2008		9.63	90.84	-	-	90.84	509	5.6	1.2	12.7	528.5	81.1	-
	12/30/2008		9.50	90.97	-	-	90.97	164	1.9	0.58 J	4.6	171.08	16.8	-
	03/16/2009		10.69	89.78	-	-	89.78	540	5.8	1.2	9.5	556.5	57.2	-
	06/08/2009		9.45	91.02	-	-	91.02	141	ND<1	ND<1	1	142	14.8	-
	07/20/2009		9.33	91.14	-	-	91.14	80.7	1.2	0.93 J	3.7	86.53	19.1	1.46
	09/24/2009		9.91	90.56	-	-	90.56	162	3.9	7.3	8.6	181.8	74.5	1.11
	12/03/2009		9.98	90.49	-	-	90.49	432	8.6	7.3	17.4	465.3	52.2	0.77
	03/03/2010		9.41	91.06	-	-	91.06	606	6.4	8.1	18.5	639.0	99.2	0.81
	06/07/2010		9.42	91.05	-	-	91.05	200	3.6	6.2	6.3	216.1	24.7	1.08
	09/01/2010		10.06	90.41	-	-	90.41	194	3.6	2.8	5.3	205.7	101	1.61
	12/03/2010		12.20	88.27	-	-	88.27	405	7.6	6.9	13.7	433.2	93.3	0.72
	03/29/2011		9.52	90.95	-	-	90.95	119	0.86 J	ND<1	0.89 J	120.75	26.8	0.34
	06/16/2011		9.34	91.13	-	-	91.13	8	ND<1	ND<1	ND<1	8	3.4	0.90
	08/08/2011		9.93	90.54	-	-	90.54	81.1	2.3	0.85 J	4.2	88.45	45.1	0.93
	09/19/2011		8.49	91.98	-	-	91.98	43.2	1.5	0.94 J	4.6	50.24	25.8	0.81
	12/05/2011		9.40	91.07	-	-	91.07	5	ND<0.15	ND<0.21	0.51	5.51	5.4	-
	03/16/2012		10.57	89.90	-	-	89.90	31	ND<1	ND<1	ND<3	31	58	-
	06/08/2012		9.67	90.80	-	-	90.80	3.89	ND<1.00	ND<1.00	ND<3.00	3.89	8.11	-
	09/07/2012		9.83	90.64	-	-	90.64	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	10.2	0.79
	12/18/2012		9.99	90.48	-	-	90.48	ND<1.00	ND<1.00	ND<1.00	ND<3.00	ND<6.00	11.3	0.47
	03/14/2013		10.23	90.24	-	-	90.24	6.60	ND<1.00	ND<1.00	ND<3.00	6.60	30.5	1.75
	06/24/2013		8.98	91.49	-	-	91.49	2.91	ND<1.00	ND<1.00	ND<3.00	2.91	2.21	0.94
	09/06/2013		10.09	90.38	-	-	90.38	1.77	ND<1.00	ND<1.00	ND<2.00	1.77	13.0	1.76

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-16	09/27/2006	100.42	11.90	88.52	-	-	88.52	1,600	159	1,220	2,520	5,499	2.3 J	-
	12/07/2006		18.97	81.45	10.25	8.72	87.99	-	-	-	-	-	-	-
	03/29/2007		11.36	89.06	-	-	89.06	2,320	87.1	430	1,110	3,947.1	ND<20	-
	06/13/2007		10.82	89.60	10.68	0.14	89.71	-	-	-	-	-	-	-
	09/19/2007		10.98	89.44	10.76	0.22	89.61	-	-	-	-	-	-	-
	12/11/2007		9.80	90.62	9.77	0.03	90.64	-	-	-	-	-	-	-
	03/13/2008		10.89	89.53	-	-	89.53	1,200	34.1	146	303	1,683.1	ND<10	-
	06/06/2008		10.06	90.36	-	-	90.36	1,350	49.6	225	394	2,018.6	16.1	-
	12/30/2008		9.66	90.76	-	-	90.76	958	59.8	393	662	2,072.8	7.7	-
	03/16/2009		10.70	89.72	-	-	89.72	1,320	44	141	222	1,727	3.7	-
	06/08/2009		9.64	90.78	-	-	90.78	2,830	158	667	1,010	4,665	ND<20	-
	07/20/2009		9.56	90.86	9.47	0.09	90.93	-	-	-	-	-	-	-
	09/24/2009		9.96	90.46	9.80	0.16	90.58	-	-	-	-	-	-	-
	12/03/2009		9.85	90.57	9.76	0.09	90.64	-	-	-	-	-	-	-
	03/03/2010		8.90	91.52	-	-	91.52	940	104	1,070	2,020	4,134	3.5 J	0.71
	06/07/2010		9.28	91.14	9.00	0.28	91.35	-	-	-	-	-	-	-
	09/01/2010		10.21	90.21	-	-	90.21	2,590	131	492	828	4,041	ND<20	-
	12/03/2010		9.67	90.75	9.66	0.01	90.76	-	-	-	-	-	-	-
	03/29/2011		8.45	91.97	-	-	91.97	312	26.3	284	319	941.3	ND<2.5	1.37
	06/16/2011		8.75	91.67	-	-	91.67	1,490	76.6	433	634	2,633.6	ND<10	1.89
	08/08/2011		9.44	90.98	9.41	0.03	91.00	-	-	-	-	-	-	-
	09/19/2011		7.89	92.53	-	-	92.53	68.3	4.1	59.9	77.1	209.4	ND<1	1.12
	12/05/2011		8.77	91.65	-	-	91.65	655	26	237	246	1,164	ND<0.37	-
	03/16/2012		9.96	90.46	-	-	90.46	1,400	59	157	342	1,958	ND<1	-
	06/08/2012		9.22	91.20	-	-	91.20	1,310	49.2	157	229	1,745.2	ND<1.00	-
	09/07/2012		9.36	91.06	-	-	91.06	2,060	81.1	303	380	2,824.1	ND<1.00	0.27
	12/18/2012		9.56	90.86	-	-	90.86	1,130	63.4	423	329	1,945.4	ND<1.00	0.52
	03/14/2013		9.39	91.03	-	-	91.03	1,140	59.3	159	261	1,619.3	ND<1.00	0.83
	06/24/2013		8.23	92.19	-	-	92.19	509	46.1	177	303	1,035.1	ND<1.00	0.74
	09/04/2013		9.32	91.10	9.28	0.04	91.13	-	-	-	-	-	-	-
MW-17	09/28/2006	100.05	10.59	89.46	-	-	89.46	4.8	64.2	378	1,420	1,867.0	202	-
	12/07/2006		10.90	89.15	-	-	89.15	19.9	97.6	335	1,090	1,542.5	29.8	-
	03/29/2007		10.18	89.87	-	-	89.87	15.4	145	432	1,300	1,892.4	19.4	-
	06/13/2007		9.55	90.50	-	-	90.50	11.1	76.9	228	695	1,011.0	21.3	-
	09/19/2007		9.71	90.34	-	-	90.34	11.4	69.3	252	665	997.7	13.6	-
	12/11/2007		10.17	89.88	-	-	89.88	4.8	32.9	148	386	571.7	4.3	-

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

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

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-17 Con't	03/13/2008		9.17	90.88	-	-	90.88	20.4	143	695	2,160	3,018.4	8.2	-
	06/06/2008		9.03	91.02	-	-	91.02	2.6	14.2	63.7	178	258.5	3.4	-
	12/30/2008		8.51	91.54	-	-	91.54	18.1	60.3	421	418	917.4	2.3	-
	03/16/2009		9.42	90.63	-	-	90.63	3.8	20.4	134	184	342.2	2.1	-
	06/08/2009		8.19	91.86	-	-	91.86	244	80.1	773	439	1,536.1	7.7	-
	07/20/2009		8.23	91.82	-	-	91.82	27.4	145	726	1,100	1,998.4	1.7	1.88
	09/24/2009		8.93	91.12	-	-	91.12	10.6	47.7	324	369	751.3	ND<1	0.86
	12/03/2009		8.91	91.14	-	-	91.14	32.7	161	854	1,170	2,217.7	1.7 J	0.58
	03/03/2010		8.02	92.03	-	-	92.03	7.5	37.7	225	289	559.2	1.4 J	0.91
	06/07/2010		8.33	91.72	-	-	91.72	7.6	35	259	274	575.6	0.83 J	0.62
	09/01/2010		9.01	91.04	-	-	91.04	16.3	91.3	716	675	1,498.6	ND<2	1.04
	12/03/2010		8.80	91.25	-	-	91.25	19.8	103	757	881	1,760.8	ND<1	0.97
	03/29/2011		7.83	92.22	-	-	92.22	6.3	14.7	166	90.9	277.9	1.2 J	-
	06/16/2011		7.96	92.09	7.90	0.06	92.14	-	-	-	-	-	-	-
	08/08/2011		8.62	91.43	8.58	0.04	91.46	-	-	-	-	-	-	-
	09/19/2011		7.12	92.93	7.11	0.01	92.94	-	-	-	-	-	-	-
	12/05/2011		7.86	92.19	-	-	92.19	9.3	43	230	209	491.3	1	-
	03/16/2012		9.40	90.65	9.33	0.07	90.70	-	-	-	-	-	-	-
	06/08/2012		8.49	91.56	-	-	91.56	23.7	78.4	402	239	743.1	ND<1.00	-
	09/07/2012		8.49	91.56	-	-	91.56	24.6	89.0	279	304	696.6	ND<1.00	0.99
	12/18/2012		8.62	91.43	-	-	91.43	18.8	72.5	275	332	698.3	ND<1.00	0.10
	03/14/2013		8.37	91.68	-	-	91.68	3.85	21.2	80.2	69.1	174.35	1.40	1.65
	06/24/2013		7.41	92.64	-	-	92.64	6.01	31.1	112	101	250.11	1.02	0.82
	09/26/2013		7.94	92.11	7.90	0.04	92.14	4.58	21.3	84.9	63.5	174.28	ND<1.00	1-2
MW-18	09/28/2006	101.41	12.54	88.87	-	-	88.87	1,470	137	499	1,160	3,266	5.8	-
	12/07/2006		12.76	88.65	-	-	88.65	2,490	210	518	1,820	5,038	ND<10	-
	03/29/2007		12.33	89.08	-	-	89.08	2,190	170	510	1,100	3,970	ND<20	-
	06/13/2007		11.10	90.31	-	-	90.31	2,400	296	1,040	3,360	7,096	ND<10	-
	09/19/2007		12.02	89.39	-	-	89.39	1,820	114	397	951	3,282	ND<2.5	-
	12/11/2007		13.40	88.01	-	-	88.01	1,670	63.6	241	439	2,413.6	ND<5	-
	03/13/2008		13.12	88.29	-	-	88.29	1,770	94.2	399	649	2,912.2	ND<10	-
	06/06/2008		13.24	88.17	-	-	88.17	2,410	156	746	1,220	4,532	ND<10	-
	12/30/2008		12.58	88.83	-	-	88.83	1,970	80.4	319	620	2,989.4	ND<5	-
	03/16/2009		12.85	88.56	-	-	88.56	1,850	79.7	254	417	2,600.7	ND<5	-
	06/08/2009		12.51	88.90	-	-	88.90	1,680	79.8	302	480	2,541.8	ND<10	-
	07/20/2009		12.65	88.76	-	-	88.76	1,570	83.7	301	537	2,491.7	ND<10	1.62
	09/24/2009		12.96	88.45	-	-	88.45	1,010	48.8	131	363	1,552.8	ND<1	0.63
	12/03/2009		12.76	88.65	-	-	88.65	1,380	57.2	355	720	2,512.2	ND<5	0.50

Table 1

HISTORICAL GROUNDWATER MONITORING DATA

Former Mobil Station #17-EMW

304 Columbia Street

Brooklyn, New York

Monitoring Well	Date	Top of Casing (ft)	Depth to Water (ft)	GW Elevation (ft)	Depth to Product (ft)	Product Thickness (ft)	Prod Adj GW Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Dissolved Oxygen (mg/L)
NYSDEC TOGS 1.1.1 GWQS								1	5	5	5	NS	10	NS
MW-18 Con't	03/03/2010		11.90	89.51	-	-	89.51	1,790	80.6	400	548	2,818.6	ND<10	0.49
	06/07/2010		12.47	88.94	-	-	88.94	1,630	103	502	548	2,783	ND<5	0.51
	09/01/2010		12.83	88.58	-	-	88.58	2,580	102	347	637	3,666	ND<20	0.40
	12/03/2010		12.87	88.54	-	-	88.54	1,020	39.4	119	175	1,353.4	ND<10	0.39
	03/29/2011		10.46	90.95	-	-	90.95	746	34.7	137	163	1,080.7	ND<5	1.39
	06/16/2011		11.00	90.41	-	-	90.41	2,180	123	548	738	3,589	ND<10	1.47
	08/08/2011		10.71	90.70	-	-	90.70	2,440	104	261	374	3,179	ND<10	7.53
	09/19/2011		10.34	91.07	-	-	91.07	1,200	64.8	318	425	2,007.8	ND<5	1.02
	12/05/2011		9.9	91.51	-	-	91.51	1,620	65	287	345	2,317	ND<0.92	-
	03/16/2012		10.66	90.75	-	-	90.75	1,740	101	1,310	1,510	4,661	ND<1	-
	06/08/2012		9.83	91.58	-	-	91.58	153	11.9	109	137	410.9	ND<1.00	-
	09/07/2012		10.05	91.36	-	-	91.36	1,070	53.8	451	337	1,911.8	ND<1.00	1.08
	12/18/2012		10.18	91.23	-	-	91.23	944	52.9	160	315	1,471.9	ND<1.00	0.12
	03/14/2013		9.95	91.46	-	-	91.46	780	31.3	89.2	137	1,037.5	ND<1.00	0.91
	06/24/2013		8.85	92.56	-	-	92.56	382	26.5	97.3	188	693.8	ND<1.00	0.90
	09/04/2013		10.13	91.28	-	-	91.28	1,150	87.8	371	522	2,130.8	ND<1.00	1.56
MW-19	09/06/2013	-	9.41	-	-	-	-	39.3	15.8	171	58.3	284.4	ND<1.00	0.48
MW-20	09/06/2013	-	9.34	-	-	-	-	44.5	3.65	44.6	15.4	108.15	29.2	2.29

Notes:

NYSDEC TOGS 1.1.1 GWQS = TOGS (1.1.1) Ambient Water Quality Standards Guidance Values and Groundwater Effluent Limitations, amended April 2000.

- = Not analyzed or measured

BRL = Below laboratory reporting limit

BTEX = Benzene, toluene, ethylbenzene and total xylenes

CNL = Could not locate

ft = Feet

GWQS = Ground Water Quality Standard

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

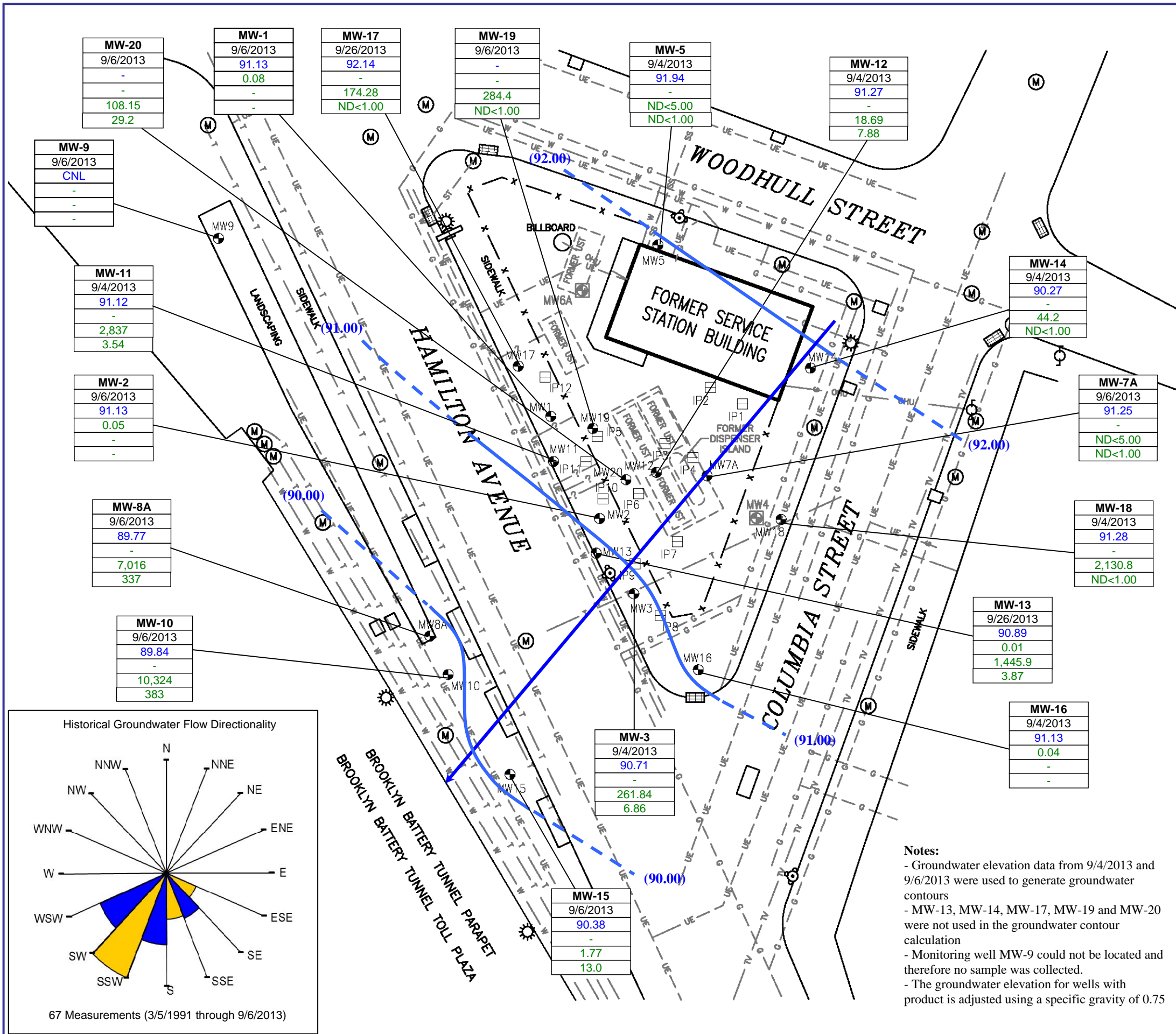
NSD = No survey data

Shaded cells = Above regulatory limits

ug/L = Micrograms/liter

VOCs = Volatile organic compounds

FIGURE



DRAFTED BY: JB (NY-E)	GROUNDWATER MONITORING MAP September 4, 6 and 26, 2013		
CHECKED BY: JF (NY-E)	Former Mobil Service Station 17-EMW (17-EMW) 304 Columbia Street Brooklyn, New York		
REVIEWED BY: JF (NY-E)	Groundwater & Environmental Services, Inc. 89 CABOT COURT, SUITE A, HAUPPAUGE, NEW YORK 11788		
NORTH	SCALE IN FEET 0 30	DATE 10/3/2013	FIGURE 1

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 <i>Commissioner Policy 51/ Soil Cleanup Guidance</i> , 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
ppm _v :	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 :	<i>Spills Technology and Remediation Series #1</i> , amended August 1992
STIP :	Stipulation Agreement.
SVE :	Soil Vapor Extraction
SVOCs :	Semi Volatile Organic Compounds
TAGM :	<i>Technical and Administrative Guidance Memorandum (#4046): Determination of Soil Cleanup Objectives</i> , 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 <i>Technical and Operation Guidance Series 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations</i> and the April 2000 <i>Addendum</i> .

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 15, 2013 – A *Monitoring Well Installation Report* was submitted to the NYSDEC describing the August/September 2013 monitoring well installation activities at the Site.

ATTACHMENT C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville

2960 Foster Creighton Drive

Nashville, TN 37204

Tel: (615)726-0177

TestAmerica Job ID: 490-34627-1

TestAmerica SDG: 304 Columbia Street, Brooklyn, NY

Client Project/Site: 17-EMW

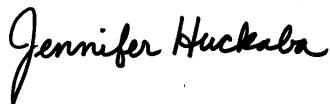
For:

Groundwater & Environmental Services Inc

89A Cabot Court

Hauppauge, New York 11788

Attn: GES Hauppauge general email



Authorized for release by:

9/17/2013 9:09:24 AM

Jennifer Huckaba, Project Manager I

jennifer.huckaba@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-34627-1	MW-3	Ground Water	09/04/13 11:50	09/05/13 08:30
490-34627-2	MW-5	Ground Water	09/04/13 10:50	09/05/13 08:30
490-34627-3	MW-11	Ground Water	09/04/13 14:00	09/05/13 08:30
490-34627-4	MW-12	Ground Water	09/04/13 13:15	09/05/13 08:30
490-34627-5	MW-14	Ground Water	09/04/13 10:30	09/05/13 08:30
490-34627-6	MW-18	Ground Water	09/04/13 11:15	09/05/13 08:30
490-34627-7	TRIP BLANK	Water	09/04/13 00:01	09/05/13 08:30

Case Narrative

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Job ID: 490-34627-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-34627-1

Comments

No additional comments.

Receipt

The samples were received on 9/5/2013 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8° C.

GC/MS VOA

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 105502 and 106067.

No other analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

The laboratory is only responsible for the certified testing and is not responsible for the sample integrity prior to laboratory receipt.

Definitions/Glossary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-3

Lab Sample ID: 490-34627-1

Date Collected: 09/04/13 11:50

Matrix: Ground Water

Date Received: 09/05/13 08:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7.74		1.00		ug/L			09/11/13 00:31	1
Toluene	14.1		1.00		ug/L			09/11/13 00:31	1
Ethylbenzene	127		1.00		ug/L			09/11/13 00:31	1
Xylenes, Total	113		2.00		ug/L			09/11/13 00:31	1
Methyl tert-butyl ether	6.86		1.00		ug/L			09/11/13 00:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		70 - 130		09/11/13 00:31	1
Toluene-d8 (Surr)	99		70 - 130		09/11/13 00:31	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 130		09/11/13 00:31	1
4-Bromofluorobenzene (Surr)	92		70 - 130		09/11/13 00:31	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-5

Date Collected: 09/04/13 10:50

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-2

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/08/13 19:28	1
Toluene	ND		1.00		ug/L			09/08/13 19:28	1
Ethylbenzene	ND		1.00		ug/L			09/08/13 19:28	1
Xylenes, Total	ND		2.00		ug/L			09/08/13 19:28	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/08/13 19:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		70 - 130		09/08/13 19:28	1
Toluene-d8 (Surr)	93		70 - 130		09/08/13 19:28	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 130		09/08/13 19:28	1
4-Bromofluorobenzene (Surr)	90		70 - 130		09/08/13 19:28	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-11

Lab Sample ID: 490-34627-3

Date Collected: 09/04/13 14:00

Matrix: Ground Water

Date Received: 09/05/13 08:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	513		10.0		ug/L			09/11/13 02:14	10
Toluene	147		1.00		ug/L			09/08/13 19:54	1
Ethylbenzene	947		10.0		ug/L			09/11/13 02:14	10
Xylenes, Total	1230		20.0		ug/L			09/11/13 02:14	10
Methyl tert-butyl ether	3.54		1.00		ug/L			09/08/13 19:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		70 - 130		09/08/13 19:54	1
Dibromofluoromethane (Surr)	111		70 - 130		09/11/13 02:14	10
Toluene-d8 (Surr)	121		70 - 130		09/08/13 19:54	1
Toluene-d8 (Surr)	100		70 - 130		09/11/13 02:14	10
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		09/08/13 19:54	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 130		09/11/13 02:14	10
4-Bromofluorobenzene (Surr)	102		70 - 130		09/08/13 19:54	1
4-Bromofluorobenzene (Surr)	94		70 - 130		09/11/13 02:14	10

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-12

Lab Sample ID: 490-34627-4

Date Collected: 09/04/13 13:15

Matrix: Ground Water

Date Received: 09/05/13 08:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	15.5		1.00		ug/L			09/11/13 00:05	1
Toluene	ND		1.00		ug/L			09/11/13 00:05	1
Ethylbenzene	3.19		1.00		ug/L			09/11/13 00:05	1
Xylenes, Total	ND		2.00		ug/L			09/11/13 00:05	1
Methyl tert-butyl ether	7.88		1.00		ug/L			09/11/13 00:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		70 - 130		09/11/13 00:05	1
Toluene-d8 (Surr)	103		70 - 130		09/11/13 00:05	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 130		09/11/13 00:05	1
4-Bromofluorobenzene (Surr)	93		70 - 130		09/11/13 00:05	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-14

Date Collected: 09/04/13 10:30

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-5

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	44.2		1.00		ug/L			09/08/13 20:45	1
Toluene	ND		1.00		ug/L			09/08/13 20:45	1
Ethylbenzene	ND		1.00		ug/L			09/08/13 20:45	1
Xylenes, Total	ND		2.00		ug/L			09/08/13 20:45	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/08/13 20:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		70 - 130					09/08/13 20:45	1
Toluene-d8 (Surr)	99		70 - 130					09/08/13 20:45	1
1,2-Dichloroethane-d4 (Surr)	122		70 - 130					09/08/13 20:45	1
4-Bromofluorobenzene (Surr)	95		70 - 130					09/08/13 20:45	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-18

Lab Sample ID: 490-34627-6

Date Collected: 09/04/13 11:15

Matrix: Ground Water

Date Received: 09/05/13 08:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1150		10.0		ug/L			09/11/13 03:05	10
Toluene	87.8		1.00		ug/L			09/08/13 21:11	1
Ethylbenzene	371		10.0		ug/L			09/11/13 03:05	10
Xylenes, Total	522		20.0		ug/L			09/11/13 03:05	10
Methyl tert-butyl ether	ND		1.00		ug/L			09/08/13 21:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		70 - 130		09/08/13 21:11	1
Dibromofluoromethane (Surr)	115		70 - 130		09/11/13 03:05	10
Toluene-d8 (Surr)	103		70 - 130		09/08/13 21:11	1
Toluene-d8 (Surr)	97		70 - 130		09/11/13 03:05	10
1,2-Dichloroethane-d4 (Surr)	104		70 - 130		09/08/13 21:11	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 130		09/11/13 03:05	10
4-Bromofluorobenzene (Surr)	99		70 - 130		09/08/13 21:11	1
4-Bromofluorobenzene (Surr)	94		70 - 130		09/11/13 03:05	10

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: TRIP BLANK

Lab Sample ID: 490-34627-7

Date Collected: 09/04/13 00:01

Matrix: Water

Date Received: 09/05/13 08:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/08/13 16:27	1
Toluene	ND		1.00		ug/L			09/08/13 16:27	1
Ethylbenzene	ND		1.00		ug/L			09/08/13 16:27	1
Xylenes, Total	ND		2.00		ug/L			09/08/13 16:27	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/08/13 16:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		70 - 130		09/08/13 16:27	1
Toluene-d8 (Surr)	92		70 - 130		09/08/13 16:27	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 130		09/08/13 16:27	1
4-Bromofluorobenzene (Surr)	91		70 - 130		09/08/13 16:27	1

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-105502/7

Matrix: Water

Analysis Batch: 105502

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/08/13 16:02	1
Toluene	ND		1.00		ug/L			09/08/13 16:02	1
Ethylbenzene	ND		1.00		ug/L			09/08/13 16:02	1
Xylenes, Total	ND		2.00		ug/L			09/08/13 16:02	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/08/13 16:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		70 - 130		09/08/13 16:02	1
Toluene-d8 (Surr)	95		70 - 130		09/08/13 16:02	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		09/08/13 16:02	1
4-Bromofluorobenzene (Surr)	88		70 - 130		09/08/13 16:02	1

Lab Sample ID: LCS 490-105502/3

Matrix: Water

Analysis Batch: 105502

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.89		ug/L		94	80 - 121
Toluene	50.0	46.32		ug/L		93	80 - 126
Ethylbenzene	50.0	48.32		ug/L		97	80 - 130
Xylenes, Total	150	139.9		ug/L		93	80 - 132
Methyl tert-butyl ether	50.0	49.79		ug/L		100	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	93		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 490-105502/4

Matrix: Water

Analysis Batch: 105502

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	46.83		ug/L		94	80 - 121	0	17
Toluene	50.0	46.62		ug/L		93	80 - 126	1	15
Ethylbenzene	50.0	48.88		ug/L		98	80 - 130	1	15
Xylenes, Total	150	141.6		ug/L		94	80 - 132	1	15
Methyl tert-butyl ether	50.0	51.28		ug/L		103	72 - 133	3	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	94		70 - 130
1,2-Dichloroethane-d4 (Surr)	111		70 - 130
4-Bromofluorobenzene (Surr)	90		70 - 130

TestAmerica Nashville

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-106067/7

Matrix: Water

Analysis Batch: 106067

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/10/13 23:14	1
Toluene	ND		1.00		ug/L			09/10/13 23:14	1
Ethylbenzene	ND		1.00		ug/L			09/10/13 23:14	1
Xylenes, Total	ND		2.00		ug/L			09/10/13 23:14	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/10/13 23:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		70 - 130		09/10/13 23:14	1
Toluene-d8 (Surr)	94		70 - 130		09/10/13 23:14	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 130		09/10/13 23:14	1
4-Bromofluorobenzene (Surr)	87		70 - 130		09/10/13 23:14	1

Lab Sample ID: LCS 490-106067/3

Matrix: Water

Analysis Batch: 106067

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	42.47		ug/L		85	80 - 121
Toluene	50.0	42.76		ug/L		86	80 - 126
Ethylbenzene	50.0	44.62		ug/L		89	80 - 130
Xylenes, Total	150	130.3		ug/L		87	80 - 132
Methyl tert-butyl ether	50.0	43.79		ug/L		88	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	110		70 - 130
Toluene-d8 (Surr)	96		70 - 130
1,2-Dichloroethane-d4 (Surr)	111		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130

Lab Sample ID: LCSD 490-106067/4

Matrix: Water

Analysis Batch: 106067

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	44.41		ug/L		89	80 - 121	4	17
Toluene	50.0	44.96		ug/L		90	80 - 126	5	15
Ethylbenzene	50.0	46.39		ug/L		93	80 - 130	4	15
Xylenes, Total	150	135.3		ug/L		90	80 - 132	4	15
Methyl tert-butyl ether	50.0	46.49		ug/L		93	72 - 133	6	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	107		70 - 130
Toluene-d8 (Surr)	96		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130

TestAmerica Nashville

QC Association Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

GC/MS VOA

Analysis Batch: 105502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-34627-2	MW-5	Total/NA	Ground Water	8260B	
490-34627-3	MW-11	Total/NA	Ground Water	8260B	
490-34627-5	MW-14	Total/NA	Ground Water	8260B	
490-34627-6	MW-18	Total/NA	Ground Water	8260B	
490-34627-7	TRIP BLANK	Total/NA	Water	8260B	
LCS 490-105502/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-105502/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-105502/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 106067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-34627-1	MW-3	Total/NA	Ground Water	8260B	
490-34627-3	MW-11	Total/NA	Ground Water	8260B	
490-34627-4	MW-12	Total/NA	Ground Water	8260B	
490-34627-6	MW-18	Total/NA	Ground Water	8260B	
LCS 490-106067/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-106067/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-106067/7	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-3

Date Collected: 09/04/13 11:50

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106067	09/11/13 00:31	WC1	TAL NSH

Client Sample ID: MW-5

Date Collected: 09/04/13 10:50

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105502	09/08/13 19:28	WC1	TAL NSH

Client Sample ID: MW-11

Date Collected: 09/04/13 14:00

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105502	09/08/13 19:54	WC1	TAL NSH
Total/NA	Analysis	8260B		10	106067	09/11/13 02:14	WC1	TAL NSH

Client Sample ID: MW-12

Date Collected: 09/04/13 13:15

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106067	09/11/13 00:05	WC1	TAL NSH

Client Sample ID: MW-14

Date Collected: 09/04/13 10:30

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105502	09/08/13 20:45	WC1	TAL NSH

Client Sample ID: MW-18

Date Collected: 09/04/13 11:15

Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105502	09/08/13 21:11	WC1	TAL NSH
Total/NA	Analysis	8260B		10	106067	09/11/13 03:05	WC1	TAL NSH

Lab Chronicle

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: TRIP BLANK
Date Collected: 09/04/13 00:01
Date Received: 09/05/13 08:30

Lab Sample ID: 490-34627-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	105502	09/08/13 16:27	WC1	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34627-1
SDG: 304 Columbia Street, Brooklyn, NY

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11342	04-01-14

COOLER RECEIPT FORM



Cooler Received/Opened On 9/5/2013@ 0830

1. Tracking # 3726 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 12080142

2. Temperature of rep. sample or temp blank when opened: 3.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) ELA

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) ELA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) ELA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) ELA

I certify that I attached a label with the unique LIMS number to each container (initial) ELA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...

Login Sample Receipt Checklist

Client: Groundwater & Environmental Services Inc

Job Number: 490-34627-1

SDG Number: 304 Columbia Street, Brooklyn, NY

Login Number: 34627

List Number: 1

Creator: Abernathy, Eric

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville

2960 Foster Creighton Drive

Nashville, TN 37204

Tel: (615)726-0177

TestAmerica Job ID: 490-34839-1

TestAmerica SDG: 304 Columbia Street, Brooklyn, NY

Client Project/Site: 17-EMW

For:

Groundwater & Environmental Services Inc

89A Cabot Court

Hauppauge, New York 11788

Attn: GES Hauppauge general email



Authorized for release by:

9/17/2013 9:25:52 AM

Jennifer Huckaba, Project Manager I

jennifer.huckaba@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-34839-1	MW-8A	Ground Water	09/06/13 09:42	09/07/13 08:25
490-34839-2	MW-10	Ground Water	09/06/13 09:27	09/07/13 08:25
490-34839-3	MW-15	Ground Water	09/06/13 08:31	09/07/13 08:25
490-34839-4	MW-19	Ground Water	09/06/13 10:25	09/07/13 08:25
490-34839-5	MW-20	Ground Water	09/06/13 10:06	09/07/13 08:25
490-34839-6	Trip Blank	Water	09/06/13 00:01	09/07/13 08:25
490-34839-7	MW-7A	Ground Water	09/06/13 10:50	09/07/13 08:25

Case Narrative

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Job ID: 490-34839-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-34839-1

Comments

No additional comments.

Receipt

The samples were received on 9/7/2013 8:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following sample was outside control limits: MW-10 (490-34839-2). Evidence of matrix interference is present; therefore, re-analysis was not performed at a 1X level.

Method(s) 8260B: The following sample(s) were collected in properly preserved vials, however, the pH was outside the required criteria when verified by the laboratory: MW-10 (490-34839-2), MW-20 (490-34839-5), and MW-7A (490-34839-7).

Method(s) 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 106738 and 107041.

No other analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

The laboratory is only responsible for the certified testing and is not responsible for the sample integrity prior to laboratory receipt.

Definitions/Glossary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-8A

Date Collected: 09/06/13 09:42

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-1

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1670		10.0		ug/L			09/14/13 06:58	10
Toluene	306		10.0		ug/L			09/14/13 06:58	10
Ethylbenzene	1250		10.0		ug/L			09/14/13 06:58	10
Xylenes, Total	3790		20.0		ug/L			09/14/13 06:58	10
Methyl tert-butyl ether	337		10.0		ug/L			09/14/13 06:58	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	99		70 - 130		09/14/13 06:58	10
Toluene-d8 (Surr)	95		70 - 130		09/14/13 06:58	10
1,2-Dichloroethane-d4 (Surr)	81		70 - 130		09/14/13 06:58	10
4-Bromofluorobenzene (Surr)	96		70 - 130		09/14/13 06:58	10

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-10

Date Collected: 09/06/13 09:27

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-2

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5290		100		ug/L			09/14/13 08:14	100
Toluene	524		10.0		ug/L			09/14/13 07:49	10
Ethylbenzene	1360		10.0		ug/L			09/14/13 07:49	10
Xylenes, Total	3150		20.0		ug/L			09/14/13 07:49	10
Methyl tert-butyl ether	383		10.0		ug/L			09/14/13 07:49	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		70 - 130		09/14/13 07:49	10
Dibromofluoromethane (Surr)	103		70 - 130		09/14/13 08:14	100
Toluene-d8 (Surr)	95		70 - 130		09/14/13 07:49	10
Toluene-d8 (Surr)	95		70 - 130		09/14/13 08:14	100
1,2-Dichloroethane-d4 (Surr)	79		70 - 130		09/14/13 07:49	10
1,2-Dichloroethane-d4 (Surr)	83		70 - 130		09/14/13 08:14	100
4-Bromofluorobenzene (Surr)	101		70 - 130		09/14/13 07:49	10
4-Bromofluorobenzene (Surr)	101		70 - 130		09/14/13 08:14	100

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-15

Lab Sample ID: 490-34839-3

Date Collected: 09/06/13 08:31

Matrix: Ground Water

Date Received: 09/07/13 08:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.77		1.00		ug/L			09/14/13 04:00	1
Toluene	ND		1.00		ug/L			09/14/13 04:00	1
Ethylbenzene	ND		1.00		ug/L			09/14/13 04:00	1
Xylenes, Total	ND		2.00		ug/L			09/14/13 04:00	1
Methyl tert-butyl ether	13.0		1.00		ug/L			09/14/13 04:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Dibromofluoromethane (Surr)</i>	104		70 - 130					09/14/13 04:00	1
<i>Toluene-d8 (Surr)</i>	95		70 - 130					09/14/13 04:00	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	84		70 - 130					09/14/13 04:00	1
<i>4-Bromofluorobenzene (Surr)</i>	101		70 - 130					09/14/13 04:00	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-19

Lab Sample ID: 490-34839-4

Date Collected: 09/06/13 10:25

Matrix: Ground Water

Date Received: 09/07/13 08:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	39.3		1.00		ug/L			09/13/13 20:04	1
Toluene	15.8		1.00		ug/L			09/13/13 20:04	1
Ethylbenzene	171		1.00		ug/L			09/13/13 20:04	1
Xylenes, Total	58.3		2.00		ug/L			09/13/13 20:04	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/13/13 20:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		70 - 130		09/13/13 20:04	1
Toluene-d8 (Surr)	96		70 - 130		09/13/13 20:04	1
1,2-Dichloroethane-d4 (Surr)	82		70 - 130		09/13/13 20:04	1
4-Bromofluorobenzene (Surr)	99		70 - 130		09/13/13 20:04	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-20

Lab Sample ID: 490-34839-5

Date Collected: 09/06/13 10:06

Matrix: Ground Water

Date Received: 09/07/13 08:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	44.5		1.00		ug/L			09/13/13 20:29	1
Toluene	3.65		1.00		ug/L			09/13/13 20:29	1
Ethylbenzene	44.6		1.00		ug/L			09/13/13 20:29	1
Xylenes, Total	15.4		2.00		ug/L			09/13/13 20:29	1
Methyl tert-butyl ether	29.2		1.00		ug/L			09/13/13 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		70 - 130		09/13/13 20:29	1
Toluene-d8 (Surr)	94		70 - 130		09/13/13 20:29	1
1,2-Dichloroethane-d4 (Surr)	76		70 - 130		09/13/13 20:29	1
4-Bromofluorobenzene (Surr)	100		70 - 130		09/13/13 20:29	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: Trip Blank

Lab Sample ID: 490-34839-6

Date Collected: 09/06/13 00:01

Matrix: Water

Date Received: 09/07/13 08:25

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/13/13 13:43	1
Toluene	ND		1.00		ug/L			09/13/13 13:43	1
Ethylbenzene	ND		1.00		ug/L			09/13/13 13:43	1
Xylenes, Total	ND		2.00		ug/L			09/13/13 13:43	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/13/13 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		70 - 130		09/13/13 13:43	1
Toluene-d8 (Surr)	96		70 - 130		09/13/13 13:43	1
1,2-Dichloroethane-d4 (Surr)	81		70 - 130		09/13/13 13:43	1
4-Bromofluorobenzene (Surr)	100		70 - 130		09/13/13 13:43	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-7A

Date Collected: 09/06/13 10:50

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-7

Matrix: Ground Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/13/13 20:55	1
Toluene	ND		1.00		ug/L			09/13/13 20:55	1
Ethylbenzene	ND		1.00		ug/L			09/13/13 20:55	1
Xylenes, Total	ND		2.00		ug/L			09/13/13 20:55	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/13/13 20:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		70 - 130		09/13/13 20:55	1
Toluene-d8 (Surr)	95		70 - 130		09/13/13 20:55	1
1,2-Dichloroethane-d4 (Surr)	82		70 - 130		09/13/13 20:55	1
4-Bromofluorobenzene (Surr)	100		70 - 130		09/13/13 20:55	1

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-106738/7

Matrix: Water

Analysis Batch: 106738

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/13/13 13:17	1
Toluene	ND		1.00		ug/L			09/13/13 13:17	1
Ethylbenzene	ND		1.00		ug/L			09/13/13 13:17	1
Xylenes, Total	ND		2.00		ug/L			09/13/13 13:17	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/13/13 13:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		70 - 130		09/13/13 13:17	1
Toluene-d8 (Surr)	96		70 - 130		09/13/13 13:17	1
1,2-Dichloroethane-d4 (Surr)	82		70 - 130		09/13/13 13:17	1
4-Bromofluorobenzene (Surr)	102		70 - 130		09/13/13 13:17	1

Lab Sample ID: LCS 490-106738/3

Matrix: Water

Analysis Batch: 106738

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.33		ug/L		93	80 - 121
Toluene	50.0	43.91		ug/L		88	80 - 126
Ethylbenzene	50.0	44.62		ug/L		89	80 - 130
Xylenes, Total	150	129.5		ug/L		86	80 - 132
Methyl tert-butyl ether	50.0	43.74		ug/L		87	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	103		70 - 130
Toluene-d8 (Surr)	96		70 - 130
1,2-Dichloroethane-d4 (Surr)	83		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCSD 490-106738/4

Matrix: Water

Analysis Batch: 106738

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	45.41		ug/L		91	80 - 121	2	17
Toluene	50.0	46.18		ug/L		92	80 - 126	5	15
Ethylbenzene	50.0	45.47		ug/L		91	80 - 130	2	15
Xylenes, Total	150	130.6		ug/L		87	80 - 132	1	15
Methyl tert-butyl ether	50.0	42.89		ug/L		86	72 - 133	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	102		70 - 130
Toluene-d8 (Surr)	98		70 - 130
1,2-Dichloroethane-d4 (Surr)	81		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130

TestAmerica Nashville

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 490-107041/7

Matrix: Water

Analysis Batch: 107041

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/14/13 02:19	1
Toluene	ND		1.00		ug/L			09/14/13 02:19	1
Ethylbenzene	ND		1.00		ug/L			09/14/13 02:19	1
Xylenes, Total	ND		2.00		ug/L			09/14/13 02:19	1
Methyl tert-butyl ether	ND		1.00		ug/L			09/14/13 02:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	105		70 - 130		09/14/13 02:19	1
Toluene-d8 (Surr)	95		70 - 130		09/14/13 02:19	1
1,2-Dichloroethane-d4 (Surr)	84		70 - 130		09/14/13 02:19	1
4-Bromofluorobenzene (Surr)	98		70 - 130		09/14/13 02:19	1

Lab Sample ID: LCS 490-107041/3

Matrix: Water

Analysis Batch: 107041

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.16		ug/L		94	80 - 121
Toluene	50.0	46.38		ug/L		93	80 - 126
Ethylbenzene	50.0	44.52		ug/L		89	80 - 130
Xylenes, Total	150	132.1		ug/L		88	80 - 132
Methyl tert-butyl ether	50.0	44.44		ug/L		89	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	95		70 - 130
1,2-Dichloroethane-d4 (Surr)	85		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130

Lab Sample ID: LCSD 490-107041/4

Matrix: Water

Analysis Batch: 107041

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	45.51		ug/L		91	80 - 121	4	17
Toluene	50.0	43.34		ug/L		87	80 - 126	7	15
Ethylbenzene	50.0	43.21		ug/L		86	80 - 130	3	15
Xylenes, Total	150	126.7		ug/L		84	80 - 132	4	15
Methyl tert-butyl ether	50.0	43.55		ug/L		87	72 - 133	2	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	95		70 - 130
1,2-Dichloroethane-d4 (Surr)	85		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130

TestAmerica Nashville

QC Association Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

GC/MS VOA

Analysis Batch: 106738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-34839-4	MW-19	Total/NA	Ground Water	8260B	
490-34839-5	MW-20	Total/NA	Ground Water	8260B	
490-34839-6	Trip Blank	Total/NA	Water	8260B	
490-34839-7	MW-7A	Total/NA	Ground Water	8260B	
LCS 490-106738/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-106738/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-106738/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 107041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-34839-1	MW-8A	Total/NA	Ground Water	8260B	
490-34839-2	MW-10	Total/NA	Ground Water	8260B	
490-34839-2	MW-10	Total/NA	Ground Water	8260B	
490-34839-3	MW-15	Total/NA	Ground Water	8260B	
LCS 490-107041/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-107041/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-107041/7	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-8A

Date Collected: 09/06/13 09:42

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	107041	09/14/13 06:58	WC1	TAL NSH

Client Sample ID: MW-10

Date Collected: 09/06/13 09:27

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	107041	09/14/13 07:49	WC1	TAL NSH
Total/NA	Analysis	8260B		100	107041	09/14/13 08:14	WC1	TAL NSH

Client Sample ID: MW-15

Date Collected: 09/06/13 08:31

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	107041	09/14/13 04:00	WC1	TAL NSH

Client Sample ID: MW-19

Date Collected: 09/06/13 10:25

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106738	09/13/13 20:04	WC1	TAL NSH

Client Sample ID: MW-20

Date Collected: 09/06/13 10:06

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106738	09/13/13 20:29	WC1	TAL NSH

Client Sample ID: Trip Blank

Date Collected: 09/06/13 00:01

Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106738	09/13/13 13:43	WC1	TAL NSH

Lab Chronicle

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Client Sample ID: MW-7A
Date Collected: 09/06/13 10:50
Date Received: 09/07/13 08:25

Lab Sample ID: 490-34839-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	106738	09/13/13 20:55	WC1	TAL NSH

Laboratory References:
TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

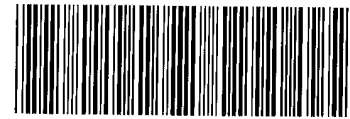
TestAmerica Job ID: 490-34839-1
SDG: 304 Columbia Street, Brooklyn, NY

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	11342	04-01-14

COOLER RECEIPT FORM



490-34839 Chain of Custody

Cooler Received/Opened On 9/7/2013 @ 0825

1. Tracking # 4642 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 17960357

2. Temperature of rep. sample or temp blank when opened: 1.1 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 Front/Back

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) MDM

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES NO...NA

14. Was there a Trip Blank in this cooler? YES NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) DA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) DA

I certify that I attached a label with the unique LIMS number to each container (initial) DA

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO # _____

Login Sample Receipt Checklist

Client: Groundwater & Environmental Services Inc

Job Number: 490-34839-1

SDG Number: 304 Columbia Street, Brooklyn, NY

Login Number: 34839

List Source: TestAmerica Nashville

List Number: 1

Creator: Armstrong, Daniel

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Nashville

2960 Foster Creighton Drive

Nashville, TN 37204

Tel: (615)726-0177

TestAmerica Job ID: 490-36365-1

TestAmerica SDG: 304 Columbia St, Brooklyn, NY

Client Project/Site: 17-EMW

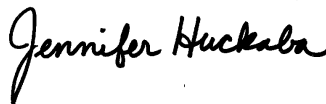
For:

Groundwater & Environmental Services Inc

89A Cabot Court

Hauppauge, New York 11788

Attn: GES Hauppauge general email



Authorized for release by:

10/2/2013 4:07:30 PM

Jennifer Huckaba, Project Manager I

(615)301-5042

jennifer.huckaba@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Sample Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-36365-1	MW-17	Ground Water	09/26/13 09:25	09/27/13 08:30
490-36365-2	MW-13	Ground Water	09/26/13 10:05	09/27/13 08:30
490-36365-3	Trip Blank	Water	09/26/13 00:01	09/27/13 08:30

Case Narrative

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Job ID: 490-36365-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative 490-36365-1

Comments

No additional comments.

Receipt

The samples were received on 9/27/2013 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4° C.

GC/MS VOA

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 110897 were outside control limits for ethylbenzene. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

The laboratory is only responsible for the certified testing and is not responsible for the sample integrity prior to laboratory receipt.

Definitions/Glossary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F	MS/MSD Recovery and/or RPD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Client Sample ID: MW-17

Date Collected: 09/26/13 09:25

Date Received: 09/27/13 08:30

Lab Sample ID: 490-36365-1

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.58		1.00		ug/L			10/01/13 02:36	1
Toluene	21.3		1.00		ug/L			10/01/13 02:36	1
Ethylbenzene	84.9		1.00		ug/L			10/01/13 02:36	1
Xylenes, Total	63.5		3.00		ug/L			10/01/13 02:36	1
Methyl tert-butyl ether	ND		1.00		ug/L			10/01/13 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 130		10/01/13 02:36	1
4-Bromofluorobenzene (Surr)	102		70 - 130		10/01/13 02:36	1
Dibromofluoromethane (Surr)	103		70 - 130		10/01/13 02:36	1
Toluene-d8 (Surr)	96		70 - 130		10/01/13 02:36	1

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Client Sample ID: MW-13

Date Collected: 09/26/13 10:05

Date Received: 09/27/13 08:30

Lab Sample ID: 490-36365-2

Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	395		5.00		ug/L			10/01/13 18:57	5
Toluene	77.9		1.00		ug/L			10/01/13 03:04	1
Ethylbenzene	515		5.00		ug/L			10/01/13 18:57	5
Xylenes, Total	458		15.0		ug/L			10/01/13 18:57	5
Methyl tert-butyl ether	3.87		1.00		ug/L			10/01/13 03:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		70 - 130		10/01/13 03:04	1
1,2-Dichloroethane-d4 (Surr)	94		70 - 130		10/01/13 18:57	5
4-Bromofluorobenzene (Surr)	101		70 - 130		10/01/13 03:04	1
4-Bromofluorobenzene (Surr)	97		70 - 130		10/01/13 18:57	5
Dibromofluoromethane (Surr)	89		70 - 130		10/01/13 03:04	1
Dibromofluoromethane (Surr)	99		70 - 130		10/01/13 18:57	5
Toluene-d8 (Surr)	97		70 - 130		10/01/13 03:04	1
Toluene-d8 (Surr)	94		70 - 130		10/01/13 18:57	5

Client Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Client Sample ID: Trip Blank

Lab Sample ID: 490-36365-3

Date Collected: 09/26/13 00:01

Matrix: Water

Date Received: 09/27/13 08:30

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			10/01/13 02:08	1
Toluene	ND		1.00		ug/L			10/01/13 02:08	1
Ethylbenzene	ND		1.00		ug/L			10/01/13 02:08	1
Xylenes, Total	ND		3.00		ug/L			10/01/13 02:08	1
Methyl tert-butyl ether	ND		1.00		ug/L			10/01/13 02:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 130		10/01/13 02:08	1
4-Bromofluorobenzene (Surr)	98		70 - 130		10/01/13 02:08	1
Dibromofluoromethane (Surr)	105		70 - 130		10/01/13 02:08	1
Toluene-d8 (Surr)	96		70 - 130		10/01/13 02:08	1

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 490-110897/7

Matrix: Water

Analysis Batch: 110897

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			10/01/13 01:13	1
Toluene	ND		1.00		ug/L			10/01/13 01:13	1
Ethylbenzene	ND		1.00		ug/L			10/01/13 01:13	1
Xylenes, Total	ND		3.00		ug/L			10/01/13 01:13	1
Methyl tert-butyl ether	ND		1.00		ug/L			10/01/13 01:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		70 - 130		10/01/13 01:13	1
4-Bromofluorobenzene (Surr)	97		70 - 130		10/01/13 01:13	1
Dibromofluoromethane (Surr)	103		70 - 130		10/01/13 01:13	1
Toluene-d8 (Surr)	97		70 - 130		10/01/13 01:13	1

Lab Sample ID: LCS 490-110897/3

Matrix: Water

Analysis Batch: 110897

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	49.47		ug/L		99	80 - 121
Toluene	50.0	50.68		ug/L		101	80 - 126
Ethylbenzene	50.0	51.85		ug/L		104	80 - 130
Xylenes, Total	100	103.2		ug/L		103	80 - 132
Methyl tert-butyl ether	50.0	47.92		ug/L		96	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: LCSD 490-110897/4

Matrix: Water

Analysis Batch: 110897

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	48.68		ug/L		97	80 - 121	2	17
Toluene	50.0	49.89		ug/L		100	80 - 126	2	15
Ethylbenzene	50.0	51.21		ug/L		102	80 - 130	1	15
Xylenes, Total	100	101.6		ug/L		102	80 - 132	2	15
Methyl tert-butyl ether	50.0	47.69		ug/L		95	72 - 133	0	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	96		70 - 130

TestAmerica Nashville

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 490-36365-1 MS

Matrix: Ground Water

Analysis Batch: 110897

Client Sample ID: MW-17

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	4.58		50.0	51.58		ug/L		94	75 - 133
Toluene	21.3		50.0	67.58		ug/L		93	75 - 136
Ethylbenzene	84.9		50.0	123.4	F	ug/L		77	79 - 139
Xylenes, Total	63.5		100	154.4		ug/L		91	74 - 141
Methyl tert-butyl ether	ND		50.0	48.31		ug/L		95	66 - 141

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 130
4-Bromofluorobenzene (Surr)	104		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: 490-36365-1 MSD

Matrix: Ground Water

Analysis Batch: 110897

Client Sample ID: MW-17

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	4.58		50.0	51.95		ug/L		95	75 - 133	1	17
Toluene	21.3		50.0	66.67		ug/L		91	75 - 136	1	15
Ethylbenzene	84.9		50.0	122.4	F	ug/L		75	79 - 139	1	15
Xylenes, Total	63.5		100	149.7		ug/L		86	74 - 141	3	15
Methyl tert-butyl ether	ND		50.0	49.75		ug/L		98	66 - 141	3	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	105		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: MB 490-111000/7

Matrix: Water

Analysis Batch: 111000

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			10/01/13 13:47	1
Toluene	ND		1.00		ug/L			10/01/13 13:47	1
Ethylbenzene	ND		1.00		ug/L			10/01/13 13:47	1
Xylenes, Total	ND		3.00		ug/L			10/01/13 13:47	1
Methyl tert-butyl ether	ND		1.00		ug/L			10/01/13 13:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 130		10/01/13 13:47	1
4-Bromofluorobenzene (Surr)	97		70 - 130		10/01/13 13:47	1
Dibromofluoromethane (Surr)	103		70 - 130		10/01/13 13:47	1
Toluene-d8 (Surr)	96		70 - 130		10/01/13 13:47	1

TestAmerica Nashville

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 490-111000/3

Matrix: Water

Analysis Batch: 111000

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	46.93		ug/L		94	80 - 121
Toluene	50.0	47.74		ug/L		95	80 - 126
Ethylbenzene	50.0	49.10		ug/L		98	80 - 130
Xylenes, Total	100	98.09		ug/L		98	80 - 132
Methyl tert-butyl ether	50.0	50.26		ug/L		101	72 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: LCSD 490-111000/4

Matrix: Water

Analysis Batch: 111000

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	50.0	46.89		ug/L		94	80 - 121	0	17
Toluene	50.0	48.28		ug/L		97	80 - 126	1	15
Ethylbenzene	50.0	49.42		ug/L		99	80 - 130	1	15
Xylenes, Total	100	97.86		ug/L		98	80 - 132	0	15
Methyl tert-butyl ether	50.0	50.50		ug/L		101	72 - 133	0	16

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: 490-36456-A-4 MS

Matrix: Water

Analysis Batch: 111000

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		50.0	49.31		ug/L		99	75 - 133
Toluene	ND		50.0	50.36		ug/L		101	75 - 136
Ethylbenzene	ND		50.0	52.47		ug/L		105	79 - 139
Xylenes, Total	ND		100	103.3		ug/L		103	74 - 141
Methyl tert-butyl ether	ND		50.0	49.08		ug/L		98	66 - 141

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Dibromofluoromethane (Surr)	106		70 - 130
Toluene-d8 (Surr)	96		70 - 130

TestAmerica Nashville

QC Sample Results

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 490-36456-A-4 MSD

Matrix: Water

Analysis Batch: 111000

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		50.0	49.40		ug/L		99	75 - 133	0	17
Toluene	ND		50.0	50.20		ug/L		100	75 - 136	0	15
Ethylbenzene	ND		50.0	51.94		ug/L		104	79 - 139	1	15
Xylenes, Total	ND		100	102.3		ug/L		102	74 - 141	1	15
Methyl tert-butyl ether	ND		50.0	49.97		ug/L		100	66 - 141	2	16

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
Toluene-d8 (Surr)	95		70 - 130

QC Association Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

GC/MS VOA

Analysis Batch: 110897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-36365-1	MW-17	Total/NA	Ground Water	8260C	
490-36365-1 MS	MW-17	Total/NA	Ground Water	8260C	
490-36365-1 MSD	MW-17	Total/NA	Ground Water	8260C	
490-36365-2	MW-13	Total/NA	Ground Water	8260C	
490-36365-3	Trip Blank	Total/NA	Water	8260C	
LCS 490-110897/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-110897/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-110897/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 111000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-36365-2	MW-13	Total/NA	Ground Water	8260C	
490-36456-A-4 MS	Matrix Spike	Total/NA	Water	8260C	
490-36456-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
LCS 490-111000/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 490-111000/4	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 490-111000/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Client Sample ID: MW-17

Date Collected: 09/26/13 09:25

Date Received: 09/27/13 08:30

Lab Sample ID: 490-36365-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	110897	10/01/13 02:36	EML	TAL NSH

Client Sample ID: MW-13

Date Collected: 09/26/13 10:05

Date Received: 09/27/13 08:30

Lab Sample ID: 490-36365-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	110897	10/01/13 03:04	EML	TAL NSH
Total/NA	Analysis	8260C		5	111000	10/01/13 18:57	EML	TAL NSH

Client Sample ID: Trip Blank

Date Collected: 09/26/13 00:01

Date Received: 09/27/13 08:30

Lab Sample ID: 490-36365-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	110897	10/01/13 02:08	EML	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL NSH

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Groundwater & Environmental Services Inc
Project/Site: 17-EMW

TestAmerica Job ID: 490-36365-1
SDG: 304 Columbia St, Brooklyn, NY

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-13
Alaska (UST)	State Program	10	UST-087	07-24-14
Arizona	State Program	9	AZ0473	05-05-14
Arizona	State Program	9	AZ0473	05-05-14 *
Arkansas DEQ	State Program	6	88-0737	04-25-14
California	NELAP	9	1168CA	10-31-13
Canadian Assoc Lab Accred (CALA)	Canada		3744	03-08-14
Connecticut	State Program	1	PH-0220	12-31-13
Florida	NELAP	4	E87358	06-30-14
Illinois	NELAP	5	200010	12-09-13
Iowa	State Program	7	131	05-01-14
Kansas	NELAP	7	E-10229	10-31-13
Kentucky (UST)	State Program	4	19	06-30-14
Louisiana	NELAP	6	30613	06-30-14
Maryland	State Program	3	316	03-31-14
Massachusetts	State Program	1	M-TN032	06-30-14
Minnesota	NELAP	5	047-999-345	12-31-13
Mississippi	State Program	4	N/A	06-30-14
Montana (UST)	State Program	8	NA	01-01-20
Nevada	State Program	9	TN00032	07-31-14
New Hampshire	NELAP	1	2963	10-10-13
New Jersey	NELAP	2	TN965	06-30-14
New York	NELAP	2	11342	04-01-14
North Carolina DENR	State Program	4	387	12-31-13
North Dakota	State Program	8	R-146	06-30-14
Ohio VAP	State Program	5	CL0033	01-19-14
Oklahoma	State Program	6	9412	08-31-14
Oregon	NELAP	10	TN200001	04-29-14
Pennsylvania	NELAP	3	68-00585	06-30-14
Rhode Island	State Program	1	LAO00268	12-30-13
South Carolina	State Program	4	84009 (001)	02-28-14
Tennessee	State Program	4	2008	02-23-14
Texas	NELAP	6	T104704077-09-TX	08-31-14
USDA	Federal		S-48469	11-02-13
Utah	NELAP	8	TN00032	07-31-14
Virginia	NELAP	3	460152	06-14-14
Washington	State Program	10	C789	07-19-14
West Virginia DEP	State Program	3	219	02-28-14
Wisconsin	State Program	5	998020430	08-31-14
Wyoming (UST)	A2LA	8	453.07	12-31-13

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Nashville

COOLER RECEIPT FORM



Cooler Received/Opened On: 9/27/2013 @0830

1. Tracking # 7249 (last 4 digits, FedEx)

Courier: Fed-Ex IR Gun ID: 14740456

2. Temperature of rep. sample or temp blank when opened: 5.4 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) HH

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # AJH

I certify that I unloaded the cooler and answered questions 7-14 (initial) AJH

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) AJH

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) AJH

I certify that I attached a label with the unique LIMS number to each container (initial) AJH

21. Were there Non-Conformance issues at login? YES...NO... Was a NCM generated? YES...NO...#

Loc: 490
36365

ExxonMobil.

Phone: 615-726-0177
Toll Free: 800-765-0980
Fax: 615-726-3404

**Nashville Division
2960 Foster Creighton
Nashville, TN 37204**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TA Project #: 49001306 PO#:

Invoice To: CES

Report To:

Project Name: 17-EMW

Retail # (MRN #):

Major Project (AFE#):

Site Address: 304 COLUMBIA ST

City, State, Zip: BROOKLYN NY

Regulatory District (CA):

Consultant Name: Groundwater & Environmental Services Inc
 Address: 89 Cabot Court
 City/State/Zip: Hauppauge, NY 11788
 ExconMobil Project Mgr: LAURIE MCCARTHY
 Consultant Project Mgr: JESSICA FERNBERG
 Consultant Telephone Number: 1800 360 9405 Fax No.: 4333
 Sampler Name: (Print) KEA LAKAS
 Sampler Signature: KEA LAKAS

[illegible]

Login Sample Receipt Checklist

Client: Groundwater & Environmental Services Inc

Job Number: 490-36365-1

SDG Number: 304 Columbia St, Brooklyn, NY

Login Number: 36365

List Number: 1

Creator: Huskey, Adam

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	