Groundwater & Environmental Services, Inc.

EASTERN NEW YORK OFFICE

October 22, 2012

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: Limited Off-Site Investigation Report
Spill# 89-04339
Former Mobil #17-EMW
304 Columbia Street
Brooklyn, New York

Dear Mr. McCabe:

Please find the enclosed Limited Off-Site Investigation Findings Report prepared by Groundwater & Environmental Services, Inc. (GES) on behalf of Exxon Mobil Environmental Services Company. Should you have any questions or comments regarding the information provided herein, please contact Jessica Ferngren at (800) 360-9405, extension 4333.

Respectfully Submitted,
Groundwater & Environmental Services, Inc.

Jessica Ferngren
Senior Project Manager

Enclosure

cc: Laurie M. McCarthy – Exxon Mobil Environmental Services Company

LIMITED OFF-SITE INVESTIGATION FINDINGS REPORT

Spill# 89-04339
Former Mobil #17-EMW
304 Columbia Street
Brooklyn, New York

October 2012

Prepared for:

ExxonMobil Environmental Services Company
464 Doughty Boulevard
Inwood, New York

Prepared by:

Groundwater & Environmental Services, Inc.
89 Cabot Court, Suite A
Hauppauge, New York 11788

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

Prepared for:

ExxonMobil Environmental Services Company
464 Doughty Boulevard
Inwood, New York

October 2012

Prepared by:

Mellissa Winslow
Environmental Scientist

Reviewed by:

Jessica Ferngren
Senior Project Manager

Groundwater & Environmental Services, Inc.

89 Cabot Court, Suite A
Hauppauge, New York 11788
(800) 360-9405 Phone
(631) 582-4410 Fax

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LIST OF ACRONYMS

BTEX :	Benzene, Toluene, Ethylbenzene and Total Xylenes
CP-43 :	*Groundwater Monitoring Well Decommissioning Policy*, November 3, 2009
CP-51 SCG :	Soil quality standards as defined by the NYSDEC *Commissioner Policy 51/ Soil Cleanup Guidance*, amended October 21, 2010 (updated soil cleanup levels to TAGM 4046)
DER :	Division of Environmental Remediation
DER-10 :	*DER-10/ Technical Guidance for Site Investigation and Remediation*, issued May 3, 2010
DTW :	Depth to Water
EPA :	Environmental Protection Agency
eV :	Electron Volt
fbgs :	Feet Below Ground Surface
GPR :	Ground Penetrating Radar
LNAPL :	Light Non-Aqueous Phase Liquids
LPH :	Liquid Phase Hydrocarbons
MTBE :	Methyl Tertiary Butyl Ether
MNA :	Monitored Natural Attenuation
MW :	Monitoring Well
ND :	Not Detected
NYCDEP :	New York City Department of Environmental Protection
NYSDEC :	New York State Department of Environmental Conservation
NYSDOH :	New York State Department of Health
PID :	Photo-Ionization Detector
ppb_v :	Parts Per Billion by Volume
ppm_v :	Parts Per Million by Volume
RAP	Remedial Action Plan
RSCOs :	Recommended Soil Cleanup Objectives as defined by TAGM 4046
STARS :	*Spills Technology and Remediation Series #1*, amended August 1992
STIP :	Stipulation Agreement.
SVE :	Soil Vapor Extraction
SVOCs :	Semi Volatile Organic Compounds
TAGM :	*Technical and Administrative Guidance Memorandum (#4046): Determination of Soil Cleanup Objectives*, amended January 24, 1994
TOC :	Top of Casing
µg/kg :	Micrograms per kilogram
µg/L :	Micrograms per liter
UST :	Underground Storage Tank
VOCs :	Volatile Organic Compounds
GWQS :	Groundwater quality standards as defined by the June 1998 *Technical and Operation Guidance Series* 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* and the April 2000 *Addendum*.

1.0 INTRODUCTION

Groundwater and Environmental Services, Inc. (GES) conducted a limited off-site soil investigation at the Former Mobil #17-EMW located at 304 Columbia Street in Brooklyn, New York. A Site Map is included as **Figure 1**. The purpose of this investigation was to delineate soil impacts and the potential smear zone within the eastern sidewalk along Hamilton Avenue.

This Site Investigation Report outlines all investigations aspects of work completed including:

- Background Information
- Utility & Structure Identification
- Soil Boring Activities
- Borehole Abandonment
- Waste Disposal
- Analytical Findings
- Conclusions and Recommendations

2.0 SITE BACKGROUND

Site Description:	The Site is located in Kings County on a triangular lot bound by Columbia Street to the east, Woodhull Street to the north, and Hamilton Avenue to the southwest. The Site is directly adjacent to the Brooklyn Battery Tunnel to the southwest (along Hamilton Avenue). The Site is a former Mobil service station currently operating as an auto repair facility. The Site consists of a single-story, concrete block building with three service bays located in the northeast portion of the property. The underground storage tanks (USTs) and dispenser islands were removed during divestment activities in April 1997. An above-ground storage tank containing used oil is located to theeast of the service station building. Adjacent properties include residential properties containing basements and buildings with basements housing both commercial and residential dwellings located east of the Site on the north side of Woodhull Street. Public utilities servicing the Site include subsurface sewer, water, electric, natural gas piping, and telephone lines.	
Spills Information:	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. A detailed site history summarizing historical site investigation and remediation activities conducted at the site is provided as **Appendix A**.	
Surrounding Properties:	North:	Woolhull Street with commercial and residential properties beyond
	South:	The intersection of Hamilton and Columbia Street
	East:	Hamilton Street and the Brooklyn Battery Tunnel beyond
	West:	Columbia Street with residential and commercial properties beyond

Recent Groundwater Monitoring Activities and Conditions:	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. In May 2012, dissolved oxygen readings were collected and ORC socks were installed in MW-8A and MW-10. Within the past monitoring year, monitoring wells MW-1, MW-2, MW-7A, and MW-17 contained measureable liquid phase hydrocarbons (LPH) ranging from 0.1 feet to 0.68 feet in thickness. Within the past monitoring year, decreases in BTEX and/or MTBE have been reported in MW-3, MW-8A, and MW-15. Within the past monitoring year, increases in BTEX and/or MTBE have been reported in MW-7A, MW-8A, MW-10, MW-11, MW-13, MW-14, MW-16 MW-17 and MW-18.

3.0 SUBSURFACE INVESTIGATION ACTIVITIES

3.1 Private Utility Markout

Seven (7) borings were advanced within the critical zone(s) which are identified as the following:

- 10 foot distance from the furthest edge of any operating tank.
- 10 foot distance surrounding operating dispenser islands.
- 10 foot distance surrounding marked or known utility locations.
- 20 foot distance (horizontal and/or perpendicular direction to the utility) from overhead electric utility lines that are 50 kilovolts (kV) or less. Additional precautions are taken with higher voltage power lines.
- At active service station sites, the entire area between the tank field and the dispenser islands and the area beneath the canopy and between the dispenser islands.

A public utility locate was requested in accordance with the New York State Code Rule 753 (Dig Safely New York) on May 11, 2012. A private utility markout (PUM) was conducted by GES personnel and subcontractor on May 16, 2012 using electromagnetic locators, ground penetrating radar (GPR), visual observations and/or other possible methods to identify all utilities and structures of concern above and below ground surface in the vicinity of the proposed locations. The recent PUM findings are included in **Figure 1.**

On July 9 and 10, 2012, Associated Environmental of Hauppauge, New York, with oversight by GES cleared each soil boring location to a minimum depth of 8 feet below ground surface (bgs) utilizing an air knife and Vactron unit.

3.2 Soil Boring Activities

On July 11, 2012, Associated Environmental of Hauppauge, New York, with oversight by GES, advanced seven (7) soil borings using direct push technology. The soil boring locations are presented in **Figure 2**. These locations were selected based upon the presence of liquid phase hydrocarbons (LPH) in monitoring wells and the PUM findings.

Soil samples were collected continuously for field screening and classification utilizing direct push method (e.g., Geoprobe®) that is equipped with a macrocore. The sampling equipment was decontaminated prior to use and after each sample interval using an Alconox™ solution followed by a tap water rinse.

Drilling Method:	Boring Location:	Macro–Core® (Acetate Sleeve liners)
Soil Boring Termination Depth:	SB101	20
	SB102	15
	SB103	30
	SB104	25
	SB105	25
	SB106	25
	SB107	20

Continuous soil samples were collected and classified according to a combination of the Burmister and Unified Soil Classification System (USCS) based upon a modified version of the American Standards and Testing Material (ASTM) standard D2487 and D2488. Soil Boring Logs are included as **Appendix B**.

A representative portion of each soil sample interval was collected and placed into a re-sealable plastic bag and, after allowing headspace to gather, field screened on-site for the presence of total VOCs utilizing a PID equipped with a 10.6 eV lamp.

Maximum Soil Field Screening Data: (PID, 10.6 eV)	SB101 (10-15)	35.7 ppm
	SB102	0.0 ppm
	SB103 (8-10)	1,263 ppm
	SB104 (8-10)	893 ppm
	SB105 (8-10)	882 ppm
	SB106 (10-15)	745 ppm
	SB107 (10-15)	1,038 ppm

GES personnel determined the most appropriate analytical sample interval and target zone depending on the factors such as the site geology, hydrology and historical extent of the contamination. At a minimum, the soil sample exhibiting the highest PID/FID reading and the soil sample collected at the apparent soil-groundwater interface from each boring was submitted for laboratory analysis. Additional soil samples were collected and submitted for laboratory analysis for vertical delineation. Samples were delivered under chain-of-custody to a New York State certified laboratory for analysis of Spills Technology and Remediation Series (STARs) listed VOCs via EPA Method 8260.

3.3 Borehole Abandonment

All boreholes were abandoned utilizing a grout mixture that is consistent with the November 3, 2009 Commissioner Policy CP-43 *Groundwater Monitoring Well Decommissioning* procedures. The grout was tremi-grouted to a minimum of 5 feet bgs. The borehole will then be completed with native material or clean sand and finished at the surface with new sidewalk flags.

3.4 Waste Disposal

All soil cuttings generated from drilling activities were stored in 55-gallon steel drums, labeled according to Department of Transportation (DOT) regulations and staged on-site. On July 19, 2012, three soil drums were removed from the site. On July 27, 2012, the drums were delivered to Clean Earth of North New Jersey. The manifest of disposal is included as **Appendix C**.

4.0 ANALYTICAL RESULTS

4.1 Soil Analytical

Soil samples were collected and submitted under chain-of-custody to Test America Laboratories, Inc. of Nashville, Tennessee for analysis of STARS-listed VOCs via EPA Method 8260B. Soil analytical results were compared to the NYSDEC CP-51 SCG. Soil analytical results are summarized below.

Sample ID	Sample Intervals (depth in fbgs)	Laboratory Analysis	Maximum Total STARS Listed VOCs Concentration (µg/kg)	MTBE (µg/kg)
SB101	10-15* 15-20	VOC STARS	642.54	All ND
SB102	8-10 10-15*	VOC STARS	25.39	All ND
SB103	8-10* 15-20 25-30	VOC STARS	77,898	All ND
SB104	8-10* 24-25	VOC STARS	228.900	All ND
SB105	8-10* 24-25	VOC STARS	35,589	All ND
SB106	10-15* 20-25	VOC STARS	100,710	2.67 (20-25)
SB107	10-15* 15-20	VOC STARS	155,959	4.27 (15-20)

* indicates where the maximum total STARs Listed VOCs were detected at each boring location from the sample intervals submitted for laboratory analysis.

Soil analytical results have been summarized in **Table 1** and are depicted on **Figure 3**. Copies of the chain-of-custody and the soil analytical report have been provided in **Appendix D.**

5.0 CONCLUSIONS

Groundwater and Environmental Services, Inc. (GES) conducted a Limited Off- Site Investigation at the Former Mobil #17-EMW located at 304 Columbia Street in Brooklyn, New York. The purpose of this investigation was to delineate soil impacts and the potential smear zone within the eastern sidewalk along Hamilton Avenue.

In August 2011, an ISCO event was conducted targeting off-site areas within the eastern sidewalk along Hamilton Avenue, adjacent to monitoring wells MW-1, MW-2, MW-3, MW-11, MW-13, and MW-17, and on-site areas within the former gasoline underground storage tank (UST) area, adjacent to monitoring wells MW-7A and MW-12. 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.

Groundwater impacts within the eastern sidewalk have generally increased within the past monitoring year. Monitoring wells MW-1, MW-2, MW-7A, and MW-17, located along Hamilton Avenue, contained measureable liquid phase hydrocarbons (LPH) ranging from 0.1 feet to 0.68 feet in thickness. Increases in BTEX and/or MTBE have been reported in MW-7A, MW-8A, MW-10, MW-11, MW-13, MW-14, MW-16 MW-17 and MW-18. These increases are contributed to the ISCO event conducted in August 2011.

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.

6.0 RECOMMENDATIONS

Based upon the information provided herein, GES is requesting delineation approval. GES will submit a Site Conceptual Model & Remedial Alternatives Analysis Report for your review once this report is approved. In the interim, GES will continue to conduct groundwater sampling activities on a quarterly basis to evaluate concentration trends for the existing monitoring well network.

7.0 REFERENCES CITED

American Standards and Testing Materials D2487, 1999. *Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)*, 1999 Edition.

American Standards and Testing Materials D2488, 2000. *Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)*, 2000 Edition.

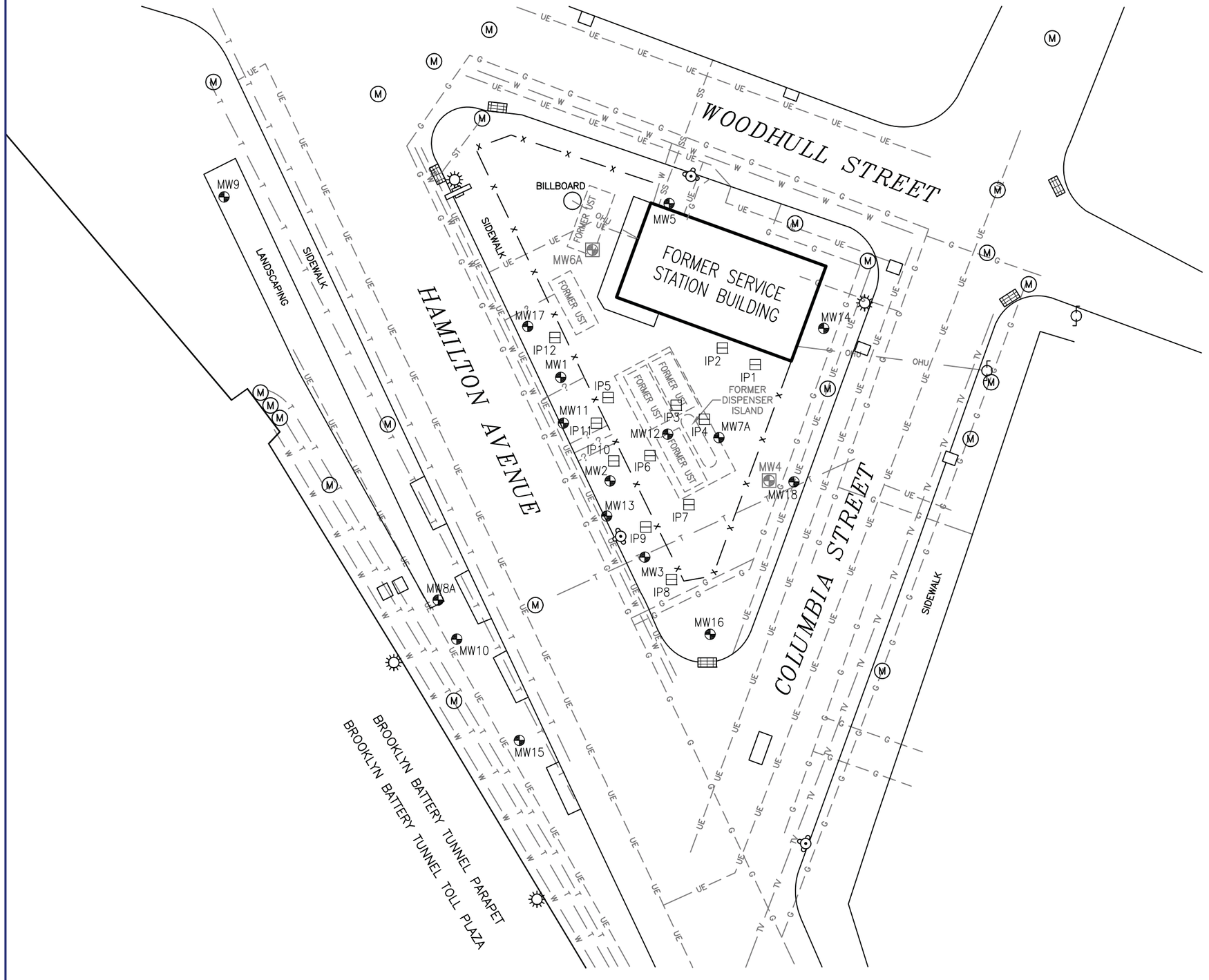
NYSDEC, 1992, *Spill Technology and Remediation Series (STARS) #1, Petroleum-Contaminated Soil Guidance Policy*, update issued October 21, 2010.

NYSDEC, 2009. *Commissioner Policy CP-43 Groundwater Monitoring Well Decommissioning*. New York State Department of Environmental Conservation, issued November 3, 2009.

NYSDEC, 2010. *DER 10/ Technical Guidance for Site Investigation and Remediation*, issued May 3, 2010.

NYSDEC, 2010. *Commissioner Policy CP-51 Soil Cleanup Guidance*, issued October 31, 2010.

FIGURES

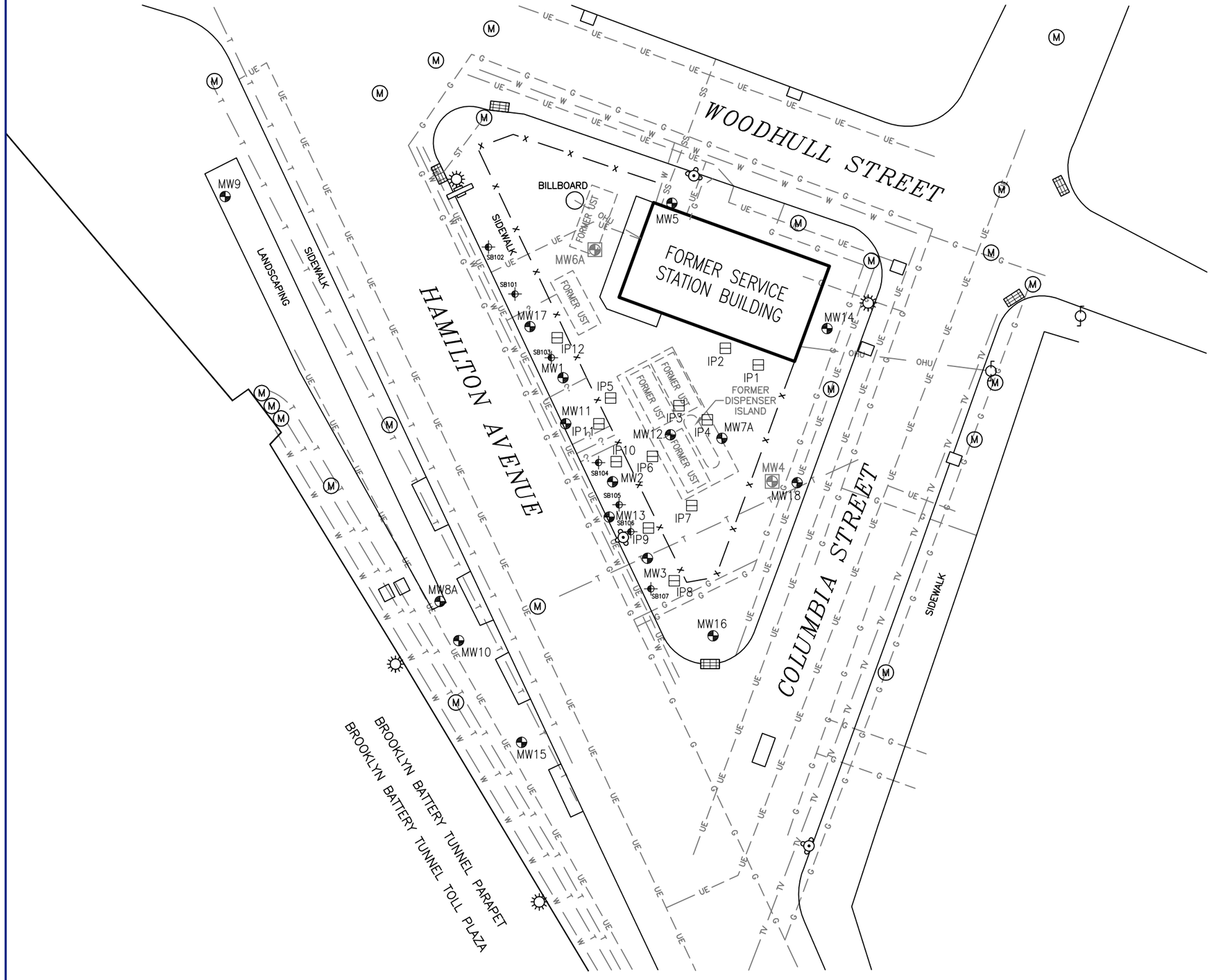


LEGEND

- FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- ABANDONED/DESTROYED MONITORING WELL
- INJECTION POINT
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND TELEVISION LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE

DRAFTED BY: W.G.S. (N.J.)	SITE MAP
CHECKED BY:	MOBIL SERVICE STATION 17-EMW 304 COLUMBIA STREET BROOKLYN, NEW YORK
REVIEWED BY:	Groundwater & Environmental Services, Inc. 70 JON BARRETT ROAD, SUITE B, PATTERSON, NY 12563
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 8-7-12 / FIGURE: 1

M:\Graphics\0500-Long Island\ExxonMobil\Mobil\17-EMW Brooklyn\17-EMW Brooklyn SM.dwg, B-30, WShea



LEGEND

- FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- ABANDONED/DESTROYED MONITORING WELL
- INJECTION POINT
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND TELEVISION LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- SOIL BORING (JULY 11, 2012)

DRAFTED BY: W.G.S. (N.J.)	SOIL SAMPLE LOCATION MAP
CHECKED BY:	MOBIL SERVICE STATION 17-EMW 304 COLUMBIA STREET BROOKLYN, NEW YORK
REVIEWED BY:	Groundwater & Environmental Services, Inc. 89 CABOT COURT, SUITE A, HAUPPAUGE, NEW YORK 11788
NORTH	SCALE IN FEET: 0 APPROXIMATE 30 / DATE: 9-28-12 / FIGURE: 2

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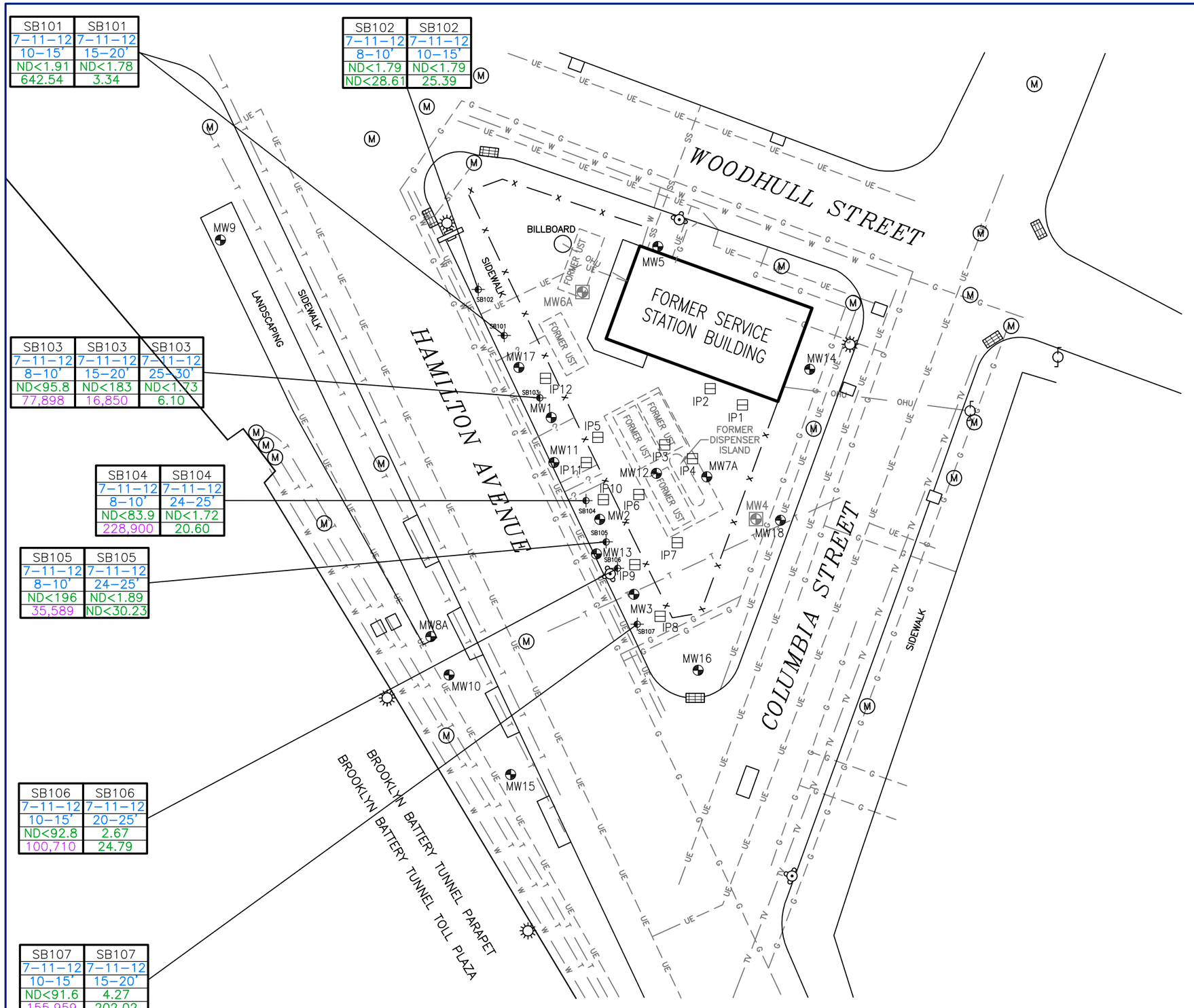


SB101	SB101
7–11–12	7–11–12
10–15'	15–20'
ND<1.91	ND<1.78
642.54	3.34

SB102	SB102
7–11–12	7–11–12
8–10'	10–15'
ND<1.79	ND<1.79
ND<28.61	25.39

SB103	SB103	SB103
7–11–12	7–11–12	7–11–12
8–10'	15–20'	25–30'
ND<95.8	ND<183	ND<1.73
77,898	16,850	6.10

SB104	SB104
7–11–12	7–11–12
8–10'	24–25'
ND<83.9	ND<1.72
228,900	20.60

SB105	SB105
7–11–12	7–11–12
8–10'	24–25'
ND<196	ND<1.89
35,589	ND<30.23

SB106	SB106
7–11–12	7–11–12
10–15'	20–25'
ND<92.8	2.67
100,710	24.79

SB107	SB107
7–11–12	7–11–12
10–15'	15–20'
ND<91.6	4.27
155,959	202.02

LEGEND

- FENCE
- CATCH BASIN
- UTILITY MANHOLE
- UTILITY POLE
- LIGHT POLE
- FIRE HYDRANT
- MONITORING WELL
- ABANDONED/DESTROYED MONITORING WELL
- INJECTION POINT
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND TELEVISION LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND WATER LINE
- UNDERGROUND GAS LINE
- SOIL BORING (JULY 11, 2012)

SB101	SAMPLE IDENTIFICATION
7–11–12	SAMPLE DATE
10–15'	SAMPLE DEPTH (feet)
ND<1.91	MTBE CONCENTRATION (ug/kg)
642.54	TOTAL STARS VOCs CONCENTRATION (ug/kg)

ug/kg	MICROGRAMS PER KILOGRAM
MTBE	METHYL *tert* –BUTYL ETHER
VOCs	VOLATILE ORGANIC COMPOUNDS
ND	NOT DETECTED
<#	WHERE AN ANALYTE IS NOT DETECTED, A METHOD DETECTION LIMIT IS GIVEN

NOTE:

VALUE SHADED PURPLE INDICATES ONE OR MORE COMPOUNDS ARE ABOVE THE CURRENT CP–51 SCG (COMMISSIONER POLICY 51/SOIL CLEANUP GUIDANCE)

DRAFTED BY: W.G.S. (N.J.)
CHECKED BY:
REVIEWED BY:

SOIL ANALYTICAL DATA MAP
JULY 11, 2012

MOBIL SERVICE STATION 17–EMW
304 COLUMBIA STREET
BROOKLYN, NEW YORK

Groundwater & Environmental Services, Inc.
89 CABOT COURT, SUITE A, HAUPPAUGE, NEW YORK 11788

NORTH

SCALE IN FEET: 0 APPROXIMATE 30
DATE: 9–28–12
FIGURE: 3

M:\Graphics\0500-Long Island\ExxonMobil\Mobil\17-EMW Brooklyn\17-EMW Brooklyn SM.dwg, B-30, WShea

TABLE

Table 1

SOIL ANALYTICAL DATA

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

Soil Sample ID	Date	Depth (ft)	Benzene (µg/kg)	Toluene (µg/kg)	Ethyl-benzene (µg/kg)	Total Xylenes (µg/kg)	Total BTEX (µg/kg)	MTBE (µg/kg)	Isopropyl Benzene (µg/kg)	Naphthalene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,3,5-Trimethyl benzene (µg/kg)	n-Butylbenzene (µg/kg)	n-propylbenzene (µg/kg)	p-Isopropyl toluene (µg/kg)	sec-Butylbenzene (µg/kg)	tert-Butylbenzene (µg/kg)	Total STARS Listed VOCs (µg/kg)
NYS CP-51 Soil Cleanup Levels			**60**	**700**	**1,000**	**260**	**NS**	**930**	**2,300**	**12,000**	**3,600**	**8,400**	**12,000**	**3,900**	**10,000**	**11,000**	**5,900**	**NS**
SB101 (10-15)	07/11/2012	10-15	4.34	ND<1.91	39.6	133	176.94	ND<1.91	67.6	43.7	68.4	31.3	64.1	123	39.4	25	3.1	642.54
SB101 (15-20)	07/11/2012	15-20	ND<1.78	ND<1.78	3.34	ND<4.45	3.34	ND<1.78	ND<1.78	ND<4.45	ND<1.78	ND<1.78	ND<1.78	ND<1.78	ND<1.78	ND<1.78	ND<1.78	3.34
SB102 (8-10)	07/11/2012	8-10	ND<1.79	ND<1.79	ND<1.79	ND<4.46	ND<9.83	ND<1.79	ND<1.79	ND<4.46	ND<1.79	ND<1.79	ND<1.79	ND<1.79	ND<1.79	ND<1.79	ND<1.79	ND<28.61
SB102 (10-15)	07/11/2012	10-15	ND<1.79	ND<1.79	4.56	13.3	17.86	ND<1.79	ND<1.79	ND<4.47	5.58	1.95	ND<1.79	ND<1.79	ND<1.79	ND<1.79	ND<1.79	25.39
SB103 (8-10)	07/11/2012	8-10	ND<95.8	298	14,900	12,500	27,698	ND<95.8	5,590	8,660	12,600	2,890	5,010	9,000	3,080	1,570	1,800	77,898
SB103 (15-20)	07/11/2012	15-20	ND<183	ND<183	2,570	4,610	7,180	ND<183	552	1,070	4,800	1,500	626	870	252	ND<183	ND<183	16,850
SB103 (25-30)	07/11/2012	25-30	ND<1.73	ND<1.73	ND<1.73	ND<4.33	ND<9.52	ND<1.73	ND<1.73	ND<4.33	3.98	ND<1.73	2.12	ND<1.73	ND<1.73	ND<1.73	ND<1.73	6.10
SB104 (8-10)	07/11/2012	8-10	4,490	3,070	140	51,200	58,900	ND<83.9	9,110	19,300	75,800	32,700	11,000	16,200	3,770	2,120	ND<83.9	228,900
SB104 (24-25)	07/11/2012	24-25	ND<1.72	ND<1.72	3.43	12.2	15.63	ND<1.72	ND<1.72	ND<4.31	7.2	2.58	ND<1.72	2.39	ND<1.72	ND<1.72	ND<1.72	20.60
SB105 (8-10)	07/11/2012	8-10	204	ND<196	3,640	2,770	6,614	ND<196	4,250	2,580	1,090	725	4,980	12,300	1,220	1,830	ND<196	35,589
SB105 (24-25)	07/11/2012	24-25	ND<1.89	ND<1.89	ND<1.89	ND<4.72	ND<10.39	ND<1.89	ND<1.89	ND<4.72	ND<1.89	ND<1.89	ND<1.89	ND<1.89	ND<1.89	ND<1.89	ND<1.89	ND<30.23
SB106 (10-15)	07/11/2012	10-15	ND<92.8	ND<92.8	14,300	29,200	43,500	ND<92.8	2,980	6,360	24,800	11,600	4,150	5,330	1,370	620	ND<92.8	100,710
SB106 (20-25)	07/11/2012	20-25	ND<1.76	ND<1.76	3.67	5.92	9.59	2.67	ND<1.76	ND<4.39	7.1	4.21	2.01	1.88	ND<1.76	ND<1.76	ND<1.76	24.79
SB107 (10-15)	07/11/2012	10-15	113	266	39,400	30,100	69,879	ND<91.6	7,950	13,600	19,100	21,600	8,140	11,000	3,220	1,470	ND<91.6	155,959
SB107 (15-20)	07/11/2012	15-20	4.91	ND<1.88	84.8	20.2	109.91	4.27	17.9	20.2	ND<1.88	9.49	11.2	23.8	6.07	3.45	ND<1.88	202.02

Notes:

-	= No Data
*	= Total VOC Concentration excluding MTBE
µg/kg	= Micrograms/kilogram
CP-51 SCG	= Commissioner Policy 51/ Soil Cleanup Guidance, effective October 21, 2010
ND	= Not detected
NS	= No Standard
Shade	= One or more compounds are above the CP-51 SCG
VOCs	= Volatile Organic Compounds

APPENDIX A

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.

The active spill, along with historical site investigation and remediation activities conducted at the site has been summarized below.

- July 1989 –A tank removal and replacement was conducted on behalf of Mobil Oil Corporation. 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 exvacated and disposed of at a state certified landfill.

- July 25, 1989 – A site assessment was conducted at the site. Five (5) monitoring wells were installed (W-1 through W-5). Liquid phase hydrocarbons were present in W-2 and W-3.

- August 1, 1989 – Spill number 89-04339 was assigned to the site by the New York State Department of Environmental Conservation.

- December 1996 – A subsurface investigation prior to site divestment, which included the installation of three (3) Geoprobe soil borings.

- April 22 through 25, 1997 – Site divestment activities 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, double-walled fiberglass, abandoned 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 of 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 were installed (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 to varying depths from 8 to 34 feet below ground surface (B-1 through B-5).

- May 10 and 15, 2002 – A site investigation work plan was submitted for proposed delineation and included the installation of ten on-site soil borings and four off-site soil borings (along north side of Hamilton Avenue) using a Geoprobe to 16 feet below ground surface with groundwater sampling.

- June 24, 2002 – NYSDEC approved the site investigation plans and proposed schedules submitted on May 10 and 15, 2002. The NYSDEC requested four additional borings along Columbia Street and two additional borings along Woodhull Street. The NYSDEC requested a sensitive receptor survey (SRS) and UST investigation of the former tank field to evaluate existence and/or proper abandonment of 1,000-gallon USTs from 1997.

- July 22 through 26, 2002 – A subsurface investigation was conducted and included six (6) on-site soil borings (SB-1, 2, 4, 7, 8, and 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 – Site visit between the NYSDEC and ExxonMobil to discuss proposed monitoring well locations.

- February 21, 2003 – A revised proposed monitoring well/soil boring location map in regards to site discussion on February 10, 2003 to the NYSDEC via email.

- March 20, 2003 – Letter received from NYSDEC to ExxonMobil approving the on- and off-site borings and monitoring wells submitted on a revised map dated February 21, 2003.

- May 12, 2003 – A subsurface investigation was conducted which included the installation of five (5) monitoring wells.

- 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 on the pilot test and 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 investigationwas 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.

- 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-siteareas 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 catalystand 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.

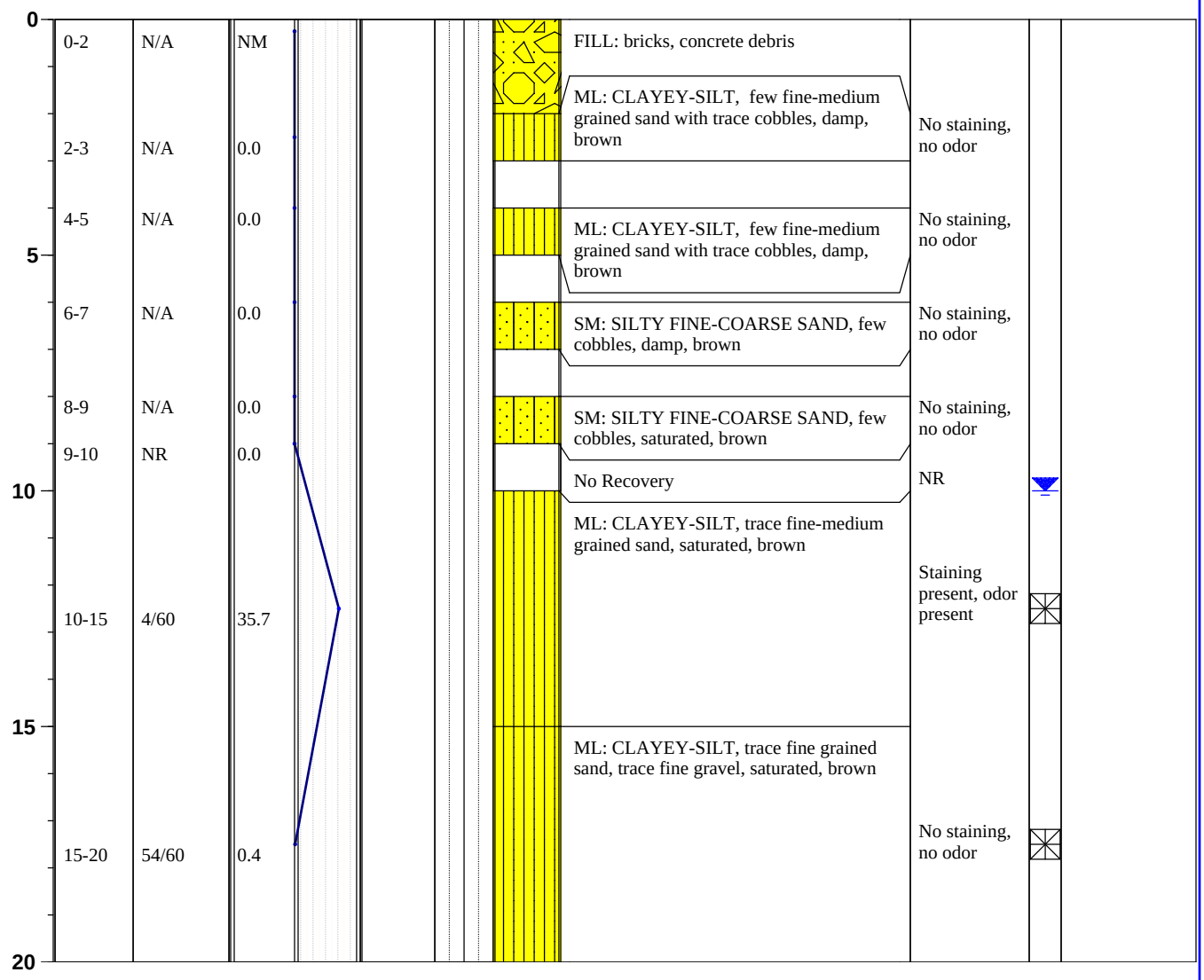
APPENDIX B

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB101**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/9/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **20 ft.**	Depth to Water: **N/A**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
Some =	20-30%
Adjective =	30-40%
And =	>40%

Notes:

N/A = not available/applicable; fbg. = feet below grade

in. = inches; ft.= feet; ppm.= parts per million

Soil Lithologies based on field observations only.

AES = Associated Environmental Services, Inc.

NR = No Recovery; NM = not measured

Blow Count Pentration Resistance:

Consistency (M&C)	Density (G&S)
<2 = Very Soft	0-4 = Very Loose
2-4 = Soft	4-10 = Loose
4-8 = Medium	10-30 = Medium
8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

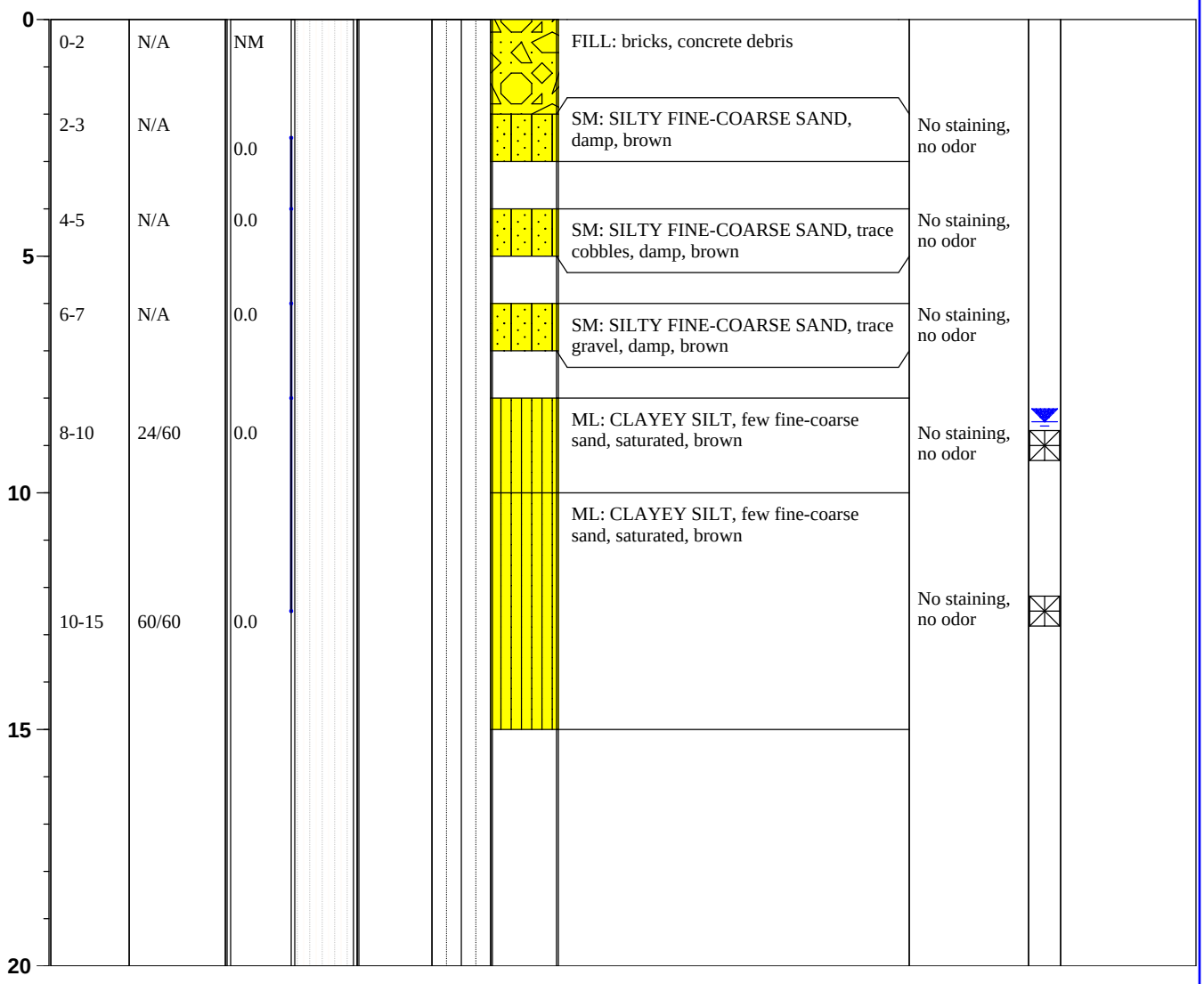
Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB102**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/9/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **15 fbg.**	Depth to Water: **8.5 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **2 in.**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
Some =	20-30%
Adjective =	30-40%
And =	>40%

Notes:

N/A = not available/applicable; fbg. = feet below grade
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
AES = Associated Environmental Services, Inc.
NR = No Recovery; NM = not measured

Blow Count Pentration Resistance:

Consistency (M&C)	Density (G&S)
<2 = Very Soft	0-4 = Very Loose
2-4 = Soft	4-10 = Loose
4-8 = Medium	10-30 = Medium
8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

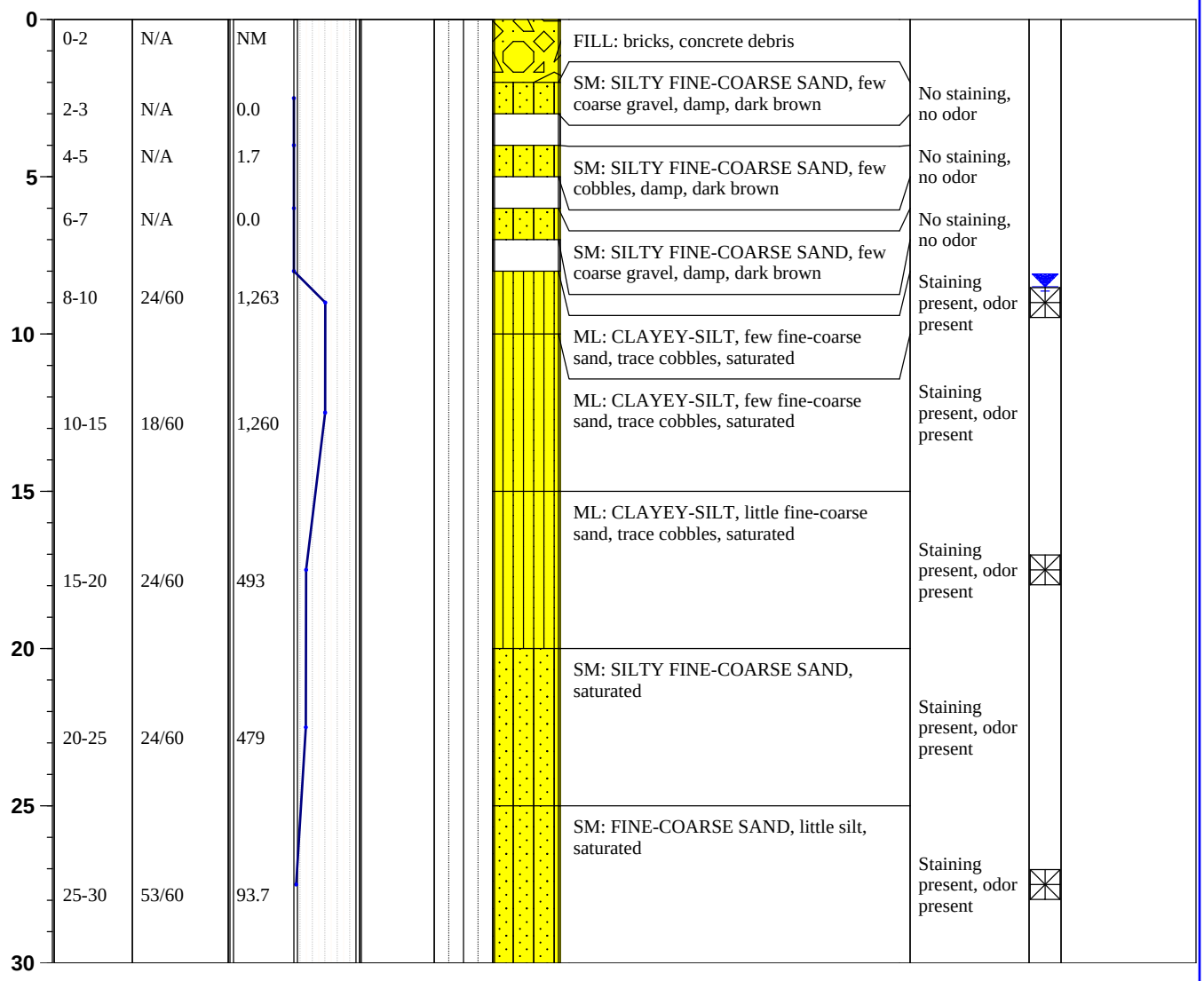
Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB103**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/9/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **30 ft.**	Depth to Water: **8.5 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
Some =	20-30%
Adjective =	30-40%
And =	>40%

Notes:

N/A = not available/applicable; fbg. = feet below grade

in. = inches; ft.= feet; ppm.= parts per million

Soil Lithologies based on field observations only.

AES = Associated Environmental Services, Inc.

NR = No Recovery; NM = not measured

Blow Count Pentration Resistance:

Consistency (M&C)	Density (G&S)
<2 = Very Soft	0-4 = Very Loose
2-4 = Soft	4-10 = Loose
4-8 = Medium	10-30 = Medium
8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

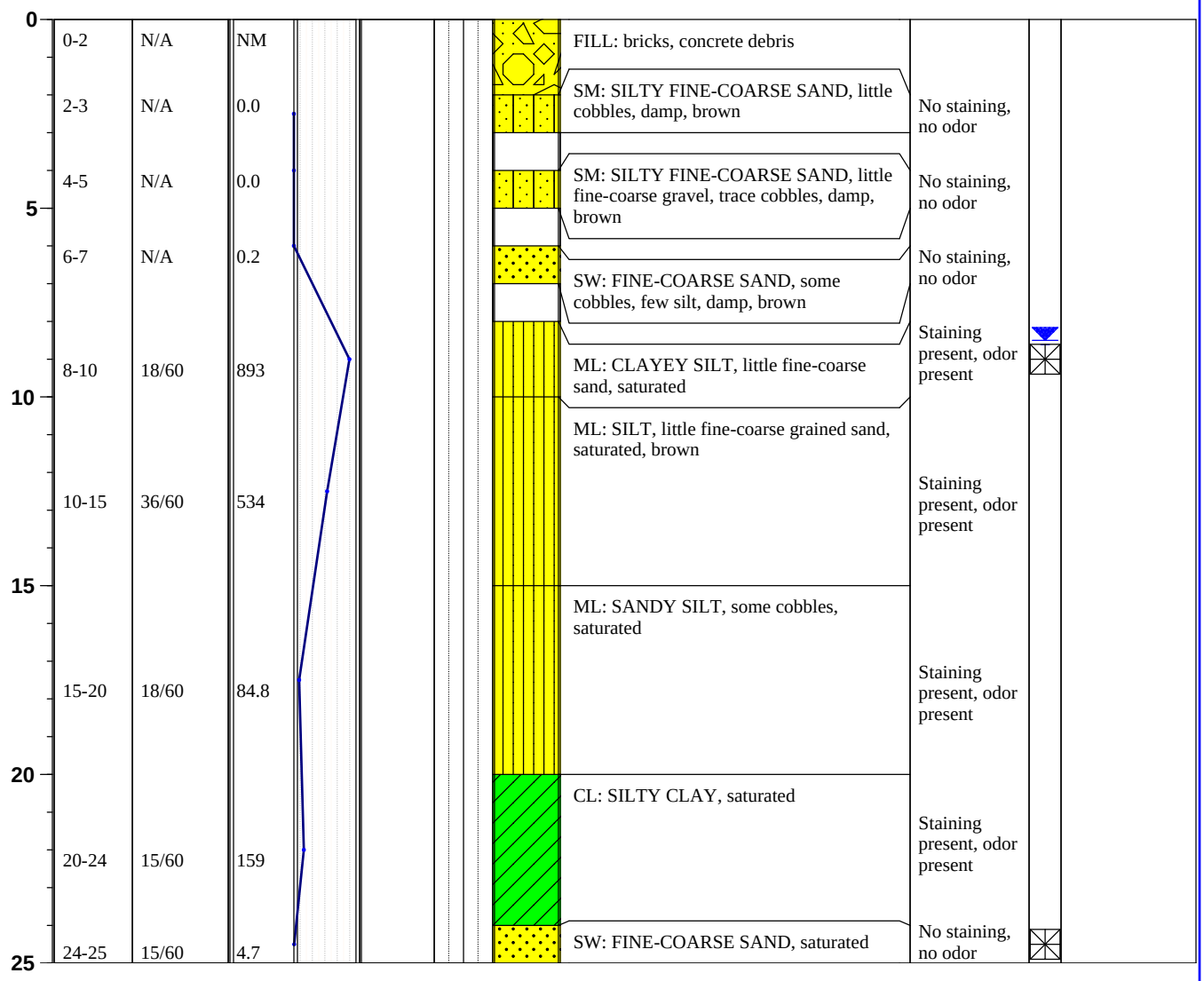
Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB104**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/10/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **25 ft.**	Depth to Water: **8.5 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
Some =	20-30%
Adjective =	30-40%
And =	>40%

Notes:

N/A = not available/applicable; fbg. = feet below grade
in. = inches; ft.= feet; ppm.= parts per million
Soil Lithologies based on field observations only.
AES = Associated Environmental Services, Inc.
NR = No Recovery; NM = not measured

Blow Count Pentration Resistance:

Consistency (M&C)	Density (G&S)
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2-4 = Soft	4-10 = Loose
4-8 = Medium	10-30 = Medium
8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB105**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/10/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **25 ft.**	Depth to Water: **8.5 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**

Depth (feet)	Sample Interval	Recovery (inches)	Field Screen (ppm) 0 1000	Blow Counts 1 50	Geologic Description	Comments	Abandonment Detail
0	0-2	N/A	NM		FILL: bricks, concrete debris		
	2-3	N/A	0.0		ML: CLAYEY SILT, little fine-coarse grained sand, trace fine-medium gravel, damp, brown	No staining, no odor	
5	4-5	N/A	0.0		SM: SILTY FINE-COARSE SAND, some cobbles, damp, brown	No staining, no odor	
	6-7	N/A	0.0		SM: SILTY FINE-COARSE SAND, some cobbles, damp, brown	No staining, no odor	
	8-10	12/60	882		ML: SILT, trace fine-coarse sand, damp	Staining present, odor present	
10					SM: SILTY FINE SAND, saturated		
	10-15	26/60	500			Staining present, odor present	
15					SM: SILTY FINE SAND, trace cobbles, saturated		
	15-20	30/60	63			Staining present, odor present	
20					CL: CLAY, woody debris, saturated		
	20-24	25/60	40			Staining present, no odor	
	24-25	11/60	9.7		SP: FINE SAND, few silt, saturated, light brown	No staining, no odor	
25							

Proportions Used:

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Few =	5-10%
Little =	10-20%
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Adjective =	30-40%
And =	>40%

Notes:

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Blow Count Pentration Resistance:

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4-8 = Medium	10-30 = Medium
8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

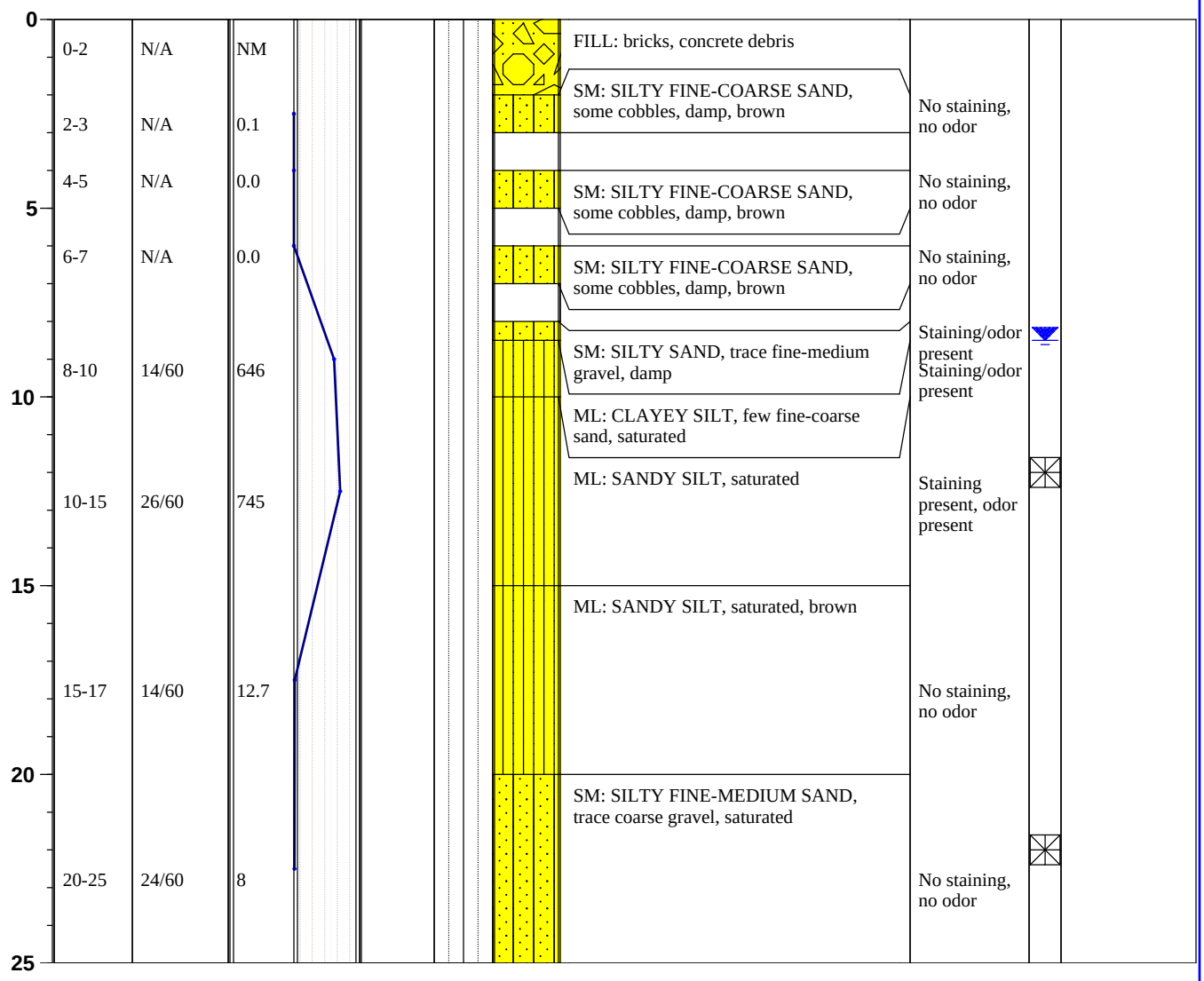
Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB106**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/10/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **25 ft.**	Depth to Water: **8.5 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
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Adjective =	30-40%
And =	>40%

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Blow Count Pentration Resistance:

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8-15 = Stiff	30-50 = Dense
15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

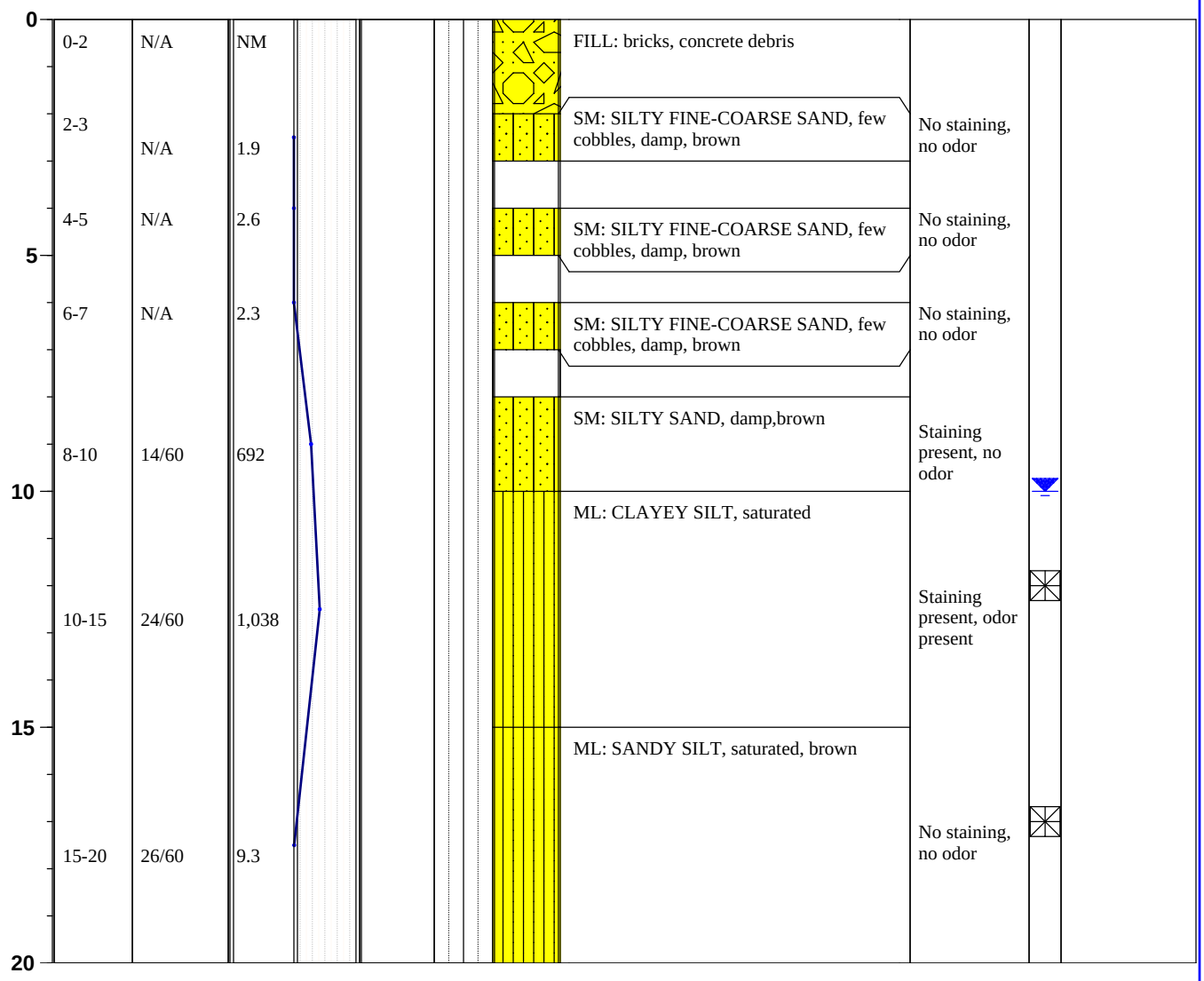
Lab Sample Location

Soil Boring Log

Groundwater & Environmental Services, Inc.

ID NO. **SB107**

Project: **Former Mobile Station #17-EMW**	Client: **Exxon Mobile**	Regulatory Case #: **89-04339**
Address: **304 Columbia Street, Brooklyn, New York**	GES Job #: **17-EMW**	NYSDEC Case Mgr: **Michael MacCabe, P.E.**
County: **Kings County**	GES Project Mgr: **Andy Winslow**	Permit #: **N/A**
Logged By: **Andy Winslow**	Date Drilled: **7/10/12, 7/11/12**	Split Spoon/Acetate Sleeve Dia: **2 in.**
Drilling Company: **AES**	Completion Date: **7/11/12**	Split Spoon/Acetate Sleeve Length: **5 ft.**
Drill Operator: **John Schretzmayer**	Drilling Method: **Direct Push**	Soil Classification System: **USCS/Burmister**
Drill Rig Type: **Geoprobe 7822DT**	Sampling Method: **Macrocore**	Field Screening: **PID 10.6 eV Lamp (ppm)**
Borehole Diameter: **2 in.**	Surface Elevation: **N/A**	Abandonment Method: **N/A**
Total Depth: **20 ft.**	Depth to Water: **10 fbg.**	Backfill Material: **Native soil, sand**
Refusal Depth: **N/A**	Well Diameter: **N/A**	Abandonment Completion Date: **N/A**



Proportions Used:

Trace =	<5%
Few =	5-10%
Little =	10-20%
Some =	20-30%
Adjective =	30-40%
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Notes:

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NR = No Recovery; NM = not measured

Blow Count Pentration Resistance:

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4-8 = Medium	10-30 = Medium
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15-30 = Very Stiff	50> = Very Dense
>30 = Hard	

Symbols:

Apparent Water Level

Lab Sample Location

APPENDIX C

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

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	NHZ 950696

3. Generator's Name and Mailing Address: ExxonMobil Oil Corp. C/O GROUNDWATER & ENVIRONMENTAL SERVICES, 70 JON BARRETT ROAD, SUITE B, PATTERSON, NY 12563

ID# Mobil 17-CMW 304 Columbia Ave Brooklyn, NY 11231

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

5. Transporter 1 Company Name: LORCO PETROLEUM SERVICES	6. US EPA ID Number: NJR000023036	A. Transporter's Phone: 908-820-8800
7. Transporter 2 Company Name: LORCO PETROLEUM SERVICES	8. US EPA ID Number: NJR000023036	B. Transporter's Phone
9. Designated Facility Name and Site Address: CLEAN EARTH OF NORTH JERSEY, 105 JACOBUS AVE., SOUTH KEARNY, NJ 07032 973-344-4004	10. US EPA ID Number: NJD991291105	C. Facility's Phone: 973-344-4004

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. OIL CONTAMINATED SOLIDS NON DOT REGULATED MATERIAL	003	DM	1,500	P
b.				
c.				
d.				

D. Additional Descriptions for Materials Listed Above: S,T

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

24- HOUR EMERGENCY RESPONSE #908-820-8800

DECAL # 05717

MANIFEST USED FOR TRACKING PURPOSES ONLY

TRUCK # 135

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

Printed/Typed Name	Signature	Month	Day	Year
Frank LoBello	On Behalf of Exxon Mobil [signature]	07	19	12

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Kayon Johnson	[signature]	07	19	12

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Roger Correa	[signature]	07	27	12

19. Discrepancy Indication Space

RECEIVED PENDING MANIFEST REVIEW AND QUALITY CONTROL

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

Printed/Typed Name	Signature	Month	Day	Year
Anna Moriasi	[signature]	7	27	12

TRANSPORTER #1

APPENDIX D

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: 490-2155-1
TestAmerica SDG: 304 Columbia Ave, Brooklyn, NY
Client Project/Site: Exxon 17 EMW (0501985)

For:
Groundwater & Environmental Services Inc
89A Cabot Court
Hauppauge, New York 11788

Attn: Ms. Heather Cloud

Sabina Kemp

Authorized for release by:
7/24/2012 2:38:15 PM

Sabina Kemp
Project Manager I
sabina.kemp@testamericainc.com

Table of Contents

Sample Summary

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-2155-1	SB101 (10-15)	Solid	07/11/12 09:15	07/14/12 08:30
490-2155-2	SB101 (15-20)	Solid	07/11/12 09:17	07/14/12 08:30
490-2155-3	SB102 (8-10)	Solid	07/11/12 09:45	07/14/12 08:30
490-2155-4	SB102 (10-15)	Solid	07/11/12 09:49	07/14/12 08:30
490-2155-5	SB103 (8-10)	Solid	07/11/12 10:20	07/14/12 08:30
490-2155-6	SB103 (15-20)	Solid	07/11/12 10:29	07/14/12 08:30
490-2155-7	SB103 (25-30)	Solid	07/11/12 10:58	07/14/12 08:30
490-2155-8	SB104 (8-10)	Solid	07/11/12 11:39	07/14/12 08:30
490-2155-9	SB104 (24-25)	Solid	07/11/12 12:18	07/14/12 08:30
490-2155-10	SB106 (10-15)	Solid	07/11/12 12:42	07/14/12 08:30
490-2155-11	SB106 (20-25)	Solid	07/11/12 12:52	07/14/12 08:30
490-2155-12	SB107 (10-15)	Solid	07/11/12 13:14	07/14/12 08:30
490-2155-13	SB107 (15-20)	Solid	07/11/12 13:18	07/14/12 08:30
490-2155-14	SB105 (8-10)	Solid	07/11/12 13:50	07/14/12 08:30
490-2155-15	SB105 (24-25)	Solid	07/11/12 14:05	07/14/12 08:30
490-2155-16	Trip Blank	Water	07/11/12 00:01	07/14/12 08:30

Job ID: 490-2155-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-2155-1

Comments
No additional comments.

Receipt
The samples were received on 7/14/2012 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC/MS VOA
Method(s) 8260B: Surrogate recoveries for the following samples were outside control limits: SB104 (8-10) (490-2155-8), SB106 (10-15) (490-2155-10), SB107 (10-15) (490-2155-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: SB104 (8-10) (490-2155-8). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: SB106 (10-15) (490-2155-10). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: SB107 (10-15) (490-2155-12). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Surrogate recovery for the following sample was outside control limits: SB101 (10-15) (490-2155-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: SB103 (15-20) (490-2155-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: The following sample was diluted due to the nature of the sample matrix: SB105 (8-10) (490-2155-14). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

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
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB101 (10-15)
Date Collected: 07/11/12 09:15
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-1
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.00727		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
1,3,5-Trimethylbenzene	0.0313		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
p-Isopropyltoluene	0.0394		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Benzene	0.00434		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Ethylbenzene	0.0396		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Isopropylbenzene	0.0676		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Methyl tert-butyl ether	ND		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
m,p-Xylene	0.126		0.00287		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
n-Butylbenzene	0.0641		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
N-Propylbenzene	0.123		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Naphthalene	0.0437		0.00478		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
sec-Butylbenzene	0.0250		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
tert-Butylbenzene	0.00310		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Toluene	ND		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
Xylenes, Total	0.133		0.00478		mg/Kg		07/18/12 07:35	07/20/12 10:07	1
1,2,4-Trimethylbenzene	0.0684		0.00191		mg/Kg		07/18/12 07:35	07/20/12 10:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*233*	*X*	*70 - 130*	*07/18/12 07:35*	*07/20/12 10:07*	*1*
4-Bromofluorobenzene (Surr)	*159*	*X*	*70 - 130*	*07/18/12 07:35*	*07/20/12 10:07*	*1*
Dibromofluoromethane (Surr)	*198*	*X*	*70 - 130*	*07/18/12 07:35*	*07/20/12 10:07*	*1*
Toluene-d8 (Surr)	*177*	*X*	*70 - 130*	*07/18/12 07:35*	*07/20/12 10:07*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB101 (15-20)
Date Collected: 07/11/12 09:17
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-2
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
1,3,5-Trimethylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
p-Isopropyltoluene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Benzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Ethylbenzene	**0.00334**		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Isopropylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Methyl tert-butyl ether	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
m,p-Xylene	**0.00342**		0.00267		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
n-Butylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
N-Propylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Naphthalene	ND		0.00445		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
sec-Butylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
tert-Butylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Toluene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
Xylenes, Total	ND		0.00445		mg/Kg		07/18/12 07:35	07/19/12 18:55	1
1,2,4-Trimethylbenzene	ND		0.00178		mg/Kg		07/18/12 07:35	07/19/12 18:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/19/12 18:55*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/19/12 18:55*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*07/18/12 07:35*	*07/19/12 18:55*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*	*07/18/12 07:35*	*07/19/12 18:55*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB102 (8-10)
Date Collected: 07/11/12 09:45
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-3
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
1,3,5-Trimethylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
p-Isopropyltoluene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Benzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Ethylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Isopropylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Methyl tert-butyl ether	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
m,p-Xylene	ND		0.00268		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
n-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
N-Propylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Naphthalene	ND		0.00446		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
sec-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
tert-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Toluene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
Xylenes, Total	ND		0.00446		mg/Kg		07/18/12 07:35	07/19/12 19:27	1
1,2,4-Trimethylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:27*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:27*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:27*	*1*
Toluene-d8 (Surr)	*117*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:27*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB102 (10-15)
Date Collected: 07/11/12 09:49
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-4
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
1,3,5-Trimethylbenzene	**0.00195**		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
p-Isopropyltoluene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Benzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Ethylbenzene	**0.00456**		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Isopropylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Methyl tert-butyl ether	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
m,p-Xylene	**0.0133**		0.00268		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
n-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
N-Propylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Naphthalene	ND		0.00447		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
sec-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
tert-Butylbenzene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Toluene	ND		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
Xylenes, Total	**0.0133**		0.00447		mg/Kg		07/18/12 07:35	07/19/12 19:58	1
1,2,4-Trimethylbenzene	**0.00558**		0.00179		mg/Kg		07/18/12 07:35	07/19/12 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:58*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:58*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:58*	*1*
Toluene-d8 (Surr)	*119*		*70 - 130*	*07/18/12 07:35*	*07/19/12 19:58*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB103 (8-10)
Date Collected: 07/11/12 10:20
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-5
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.584		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
1,3,5-Trimethylbenzene	2.89		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
p-Isopropyltoluene	3.08		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Benzene	ND		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Ethylbenzene	14.9		0.958		mg/Kg		07/18/12 08:33	07/20/12 12:44	1
Isopropylbenzene	5.59		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Methyl tert-butyl ether	ND		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
m,p-Xylene	11.9		0.144		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
n-Butylbenzene	5.01		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
N-Propylbenzene	9.00		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Naphthalene	8.66		0.239		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
sec-Butylbenzene	1.57		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
tert-Butylbenzene	1.80		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Toluene	0.298		0.0958		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
Xylenes, Total	12.5		0.239		mg/Kg		07/18/12 08:33	07/19/12 20:30	1
1,2,4-Trimethylbenzene	12.6		0.958		mg/Kg		07/18/12 08:33	07/20/12 12:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*139*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 20:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*	*07/18/12 08:33*	*07/20/12 12:44*	*1*
4-Bromofluorobenzene (Surr)	*182*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 20:30*	*1*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/18/12 08:33*	*07/20/12 12:44*	*1*
Dibromofluoromethane (Surr)	*117*		*70 - 130*	*07/18/12 08:33*	*07/19/12 20:30*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*	*07/18/12 08:33*	*07/20/12 12:44*	*1*
Toluene-d8 (Surr)	*202*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 20:30*	*1*
Toluene-d8 (Surr)	*111*		*70 - 130*	*07/18/12 08:33*	*07/20/12 12:44*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB103 (15-20)
Date Collected: 07/11/12 10:29
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-6
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**0.226**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
1,3,5-Trimethylbenzene	**1.50**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
p-Isopropyltoluene	**0.252**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Benzene	ND		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Ethylbenzene	**2.57**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Isopropylbenzene	**0.552**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Methyl tert-butyl ether	ND		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
m,p-Xylene	**4.38**		0.275		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
n-Butylbenzene	**0.626**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
N-Propylbenzene	**0.870**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Naphthalene	**1.07**		0.459		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
sec-Butylbenzene	ND		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
tert-Butylbenzene	ND		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Toluene	ND		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
Xylenes, Total	**4.61**		0.459		mg/Kg		07/18/12 08:33	07/20/12 13:16	1
1,2,4-Trimethylbenzene	**4.80**		0.183		mg/Kg		07/18/12 08:33	07/20/12 13:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*	*07/18/12 08:33*	*07/20/12 13:16*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*	*07/18/12 08:33*	*07/20/12 13:16*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*	*07/18/12 08:33*	*07/20/12 13:16*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*	*07/18/12 08:33*	*07/20/12 13:16*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB103 (25-30)
Date Collected: 07/11/12 10:58
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-7
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
1,3,5-Trimethylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
p-Isopropyltoluene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Benzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Ethylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Isopropylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Methyl tert-butyl ether	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
m,p-Xylene	ND		0.00260		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
n-Butylbenzene	**0.00212**		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
N-Propylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Naphthalene	ND		0.00433		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
sec-Butylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
tert-Butylbenzene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Toluene	ND		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
Xylenes, Total	ND		0.00433		mg/Kg		07/18/12 07:35	07/20/12 10:38	1
1,2,4-Trimethylbenzene	**0.00398**		0.00173		mg/Kg		07/18/12 07:35	07/20/12 10:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*	*07/18/12 07:35*	*07/20/12 10:38*	*1*
4-Bromofluorobenzene (Surr)	*115*		*70 - 130*	*07/18/12 07:35*	*07/20/12 10:38*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/20/12 10:38*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*	*07/18/12 07:35*	*07/20/12 10:38*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB104 (8-10)
Date Collected: 07/11/12 11:39
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-8
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	18.3		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
1,3,5-Trimethylbenzene	32.7		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
p-Isopropyltoluene	3.77		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
Benzene	4.49		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
Ethylbenzene	0.140		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
Isopropylbenzene	9.11		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
Methyl tert-butyl ether	ND		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
m,p-Xylene	146		1.26		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
n-Butylbenzene	11.0		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
N-Propylbenzene	16.2		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
Naphthalene	19.3		2.10		mg/Kg		07/18/12 08:33	07/20/12 14:19	1
sec-Butylbenzene	2.12		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
tert-Butylbenzene	ND		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
Toluene	3.07		0.0839		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
Xylenes, Total	51.2		0.210		mg/Kg		07/18/12 08:33	07/19/12 22:05	1
1,2,4-Trimethylbenzene	75.8		0.839		mg/Kg		07/18/12 08:33	07/20/12 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*214*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 22:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:19*	*1*
4-Bromofluorobenzene (Surr)	*180*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 22:05*	*1*
4-Bromofluorobenzene (Surr)	*120*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:19*	*1*
Dibromofluoromethane (Surr)	*175*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 22:05*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:19*	*1*
Toluene-d8 (Surr)	*204*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 22:05*	*1*
Toluene-d8 (Surr)	*120*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:19*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB104 (24-25)
Date Collected: 07/11/12 12:18
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-9
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
1,3,5-Trimethylbenzene	**0.00258**		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
p-Isopropyltoluene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Benzene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Ethylbenzene	**0.00343**		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Isopropylbenzene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Methyl tert-butyl ether	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
m,p-Xylene	**0.0122**		0.00259		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
n-Butylbenzene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
N-Propylbenzene	**0.00239**		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Naphthalene	ND		0.00431		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
sec-Butylbenzene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
tert-Butylbenzene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Toluene	ND		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
Xylenes, Total	**0.0122**		0.00431		mg/Kg		07/21/12 07:12	07/21/12 09:22	1
1,2,4-Trimethylbenzene	**0.00720**		0.00172		mg/Kg		07/21/12 07:12	07/21/12 09:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*07/21/12 07:12*	*07/21/12 09:22*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*	*07/21/12 07:12*	*07/21/12 09:22*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*	*07/21/12 07:12*	*07/21/12 09:22*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*	*07/21/12 07:12*	*07/21/12 09:22*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB106 (10-15)
Date Collected: 07/11/12 12:42
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-10
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**0.943**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
1,3,5-Trimethylbenzene	**11.6**		0.928		mg/Kg		07/18/12 08:33	07/20/12 14:51	1
p-Isopropyltoluene	**1.37**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Benzene	ND		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Ethylbenzene	**14.3**		0.928		mg/Kg		07/18/12 08:33	07/20/12 14:51	1
Isopropylbenzene	**2.98**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Methyl tert-butyl ether	ND		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
m,p-Xylene	**38.1**		1.39		mg/Kg		07/18/12 08:33	07/20/12 14:51	1
n-Butylbenzene	**4.15**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
N-Propylbenzene	**5.33**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Naphthalene	**6.36**		0.232		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
sec-Butylbenzene	**0.620**		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
tert-Butylbenzene	ND		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Toluene	ND		0.0928		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
Xylenes, Total	**29.2**		0.232		mg/Kg		07/18/12 08:33	07/19/12 23:08	1
1,2,4-Trimethylbenzene	**24.8**		0.928		mg/Kg		07/18/12 08:33	07/20/12 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*146*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 23:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:51*	*1*
4-Bromofluorobenzene (Surr)	*161*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 23:08*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:51*	*1*
Dibromofluoromethane (Surr)	*134*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 23:08*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:51*	*1*
Toluene-d8 (Surr)	*178*	*X*	*70 - 130*	*07/18/12 08:33*	*07/19/12 23:08*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*	*07/18/12 08:33*	*07/20/12 14:51*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB106 (20-25)
Date Collected: 07/11/12 12:52
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-11
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
1,3,5-Trimethylbenzene	**0.00421**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
p-Isopropyltoluene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Benzene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Ethylbenzene	**0.00367**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Isopropylbenzene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Methyl tert-butyl ether	**0.00267**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
m,p-Xylene	**0.00592**		0.00264		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
n-Butylbenzene	**0.00201**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
N-Propylbenzene	**0.00188**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Naphthalene	ND		0.00439		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
sec-Butylbenzene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
tert-Butylbenzene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Toluene	ND		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
Xylenes, Total	**0.00592**		0.00439		mg/Kg		07/18/12 07:35	07/20/12 11:41	1
1,2,4-Trimethylbenzene	**0.00710**		0.00176		mg/Kg		07/18/12 07:35	07/20/12 11:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*	*07/18/12 07:35*	*07/20/12 11:41*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/20/12 11:41*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/20/12 11:41*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*	*07/18/12 07:35*	*07/20/12 11:41*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB107 (10-15)
Date Collected: 07/11/12 13:14
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-12
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	1.65		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
1,3,5-Trimethylbenzene	21.6		0.916		mg/Kg		07/18/12 08:33	07/20/12 15:22	1
p-Isopropyltoluene	3.22		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
Benzene	0.113		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
Ethylbenzene	39.4		0.916		mg/Kg		07/18/12 08:33	07/20/12 15:22	1
Isopropylbenzene	7.95		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
Methyl tert-butyl ether	ND		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
m,p-Xylene	36.9		1.37		mg/Kg		07/18/12 08:33	07/20/12 15:22	1
n-Butylbenzene	8.14		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
N-Propylbenzene	11.0		0.916		mg/Kg		07/18/12 08:33	07/20/12 15:22	1
Naphthalene	13.6		2.29		mg/Kg		07/18/12 08:33	07/20/12 15:22	1
sec-Butylbenzene	1.47		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
tert-Butylbenzene	ND		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
Toluene	0.266		0.0916		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
Xylenes, Total	30.1		0.229		mg/Kg		07/18/12 08:33	07/20/12 00:11	1
1,2,4-Trimethylbenzene	19.1		0.916		mg/Kg		07/18/12 08:33	07/20/12 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*167*	*X*	*70 - 130*	*07/18/12 08:33*	*07/20/12 00:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:22*	*1*
4-Bromofluorobenzene (Surr)	*176*	*X*	*70 - 130*	*07/18/12 08:33*	*07/20/12 00:11*	*1*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:22*	*1*
Dibromofluoromethane (Surr)	*138*	*X*	*70 - 130*	*07/18/12 08:33*	*07/20/12 00:11*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:22*	*1*
Toluene-d8 (Surr)	*202*	*X*	*70 - 130*	*07/18/12 08:33*	*07/20/12 00:11*	*1*
Toluene-d8 (Surr)	*115*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:22*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB107 (15-20)
Date Collected: 07/11/12 13:18
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-13
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
1,3,5-Trimethylbenzene	**0.00949**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
p-Isopropyltoluene	**0.00607**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Benzene	**0.00491**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Ethylbenzene	**0.0848**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Isopropylbenzene	**0.0179**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Methyl tert-butyl ether	**0.00427**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
m,p-Xylene	**0.0202**		0.00281		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
n-Butylbenzene	**0.0112**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
N-Propylbenzene	**0.0238**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Naphthalene	**0.0202**		0.00469		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
sec-Butylbenzene	**0.00345**		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
tert-Butylbenzene	ND		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Toluene	ND		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
Xylenes, Total	**0.0202**		0.00469		mg/Kg		07/18/12 07:35	07/20/12 12:13	1
1,2,4-Trimethylbenzene	ND		0.00188		mg/Kg		07/18/12 07:35	07/20/12 12:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*	*07/18/12 07:35*	*07/20/12 12:13*	*1*
4-Bromofluorobenzene (Surr)	*118*		*70 - 130*	*07/18/12 07:35*	*07/20/12 12:13*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*	*07/18/12 07:35*	*07/20/12 12:13*	*1*
Toluene-d8 (Surr)	*121*		*70 - 130*	*07/18/12 07:35*	*07/20/12 12:13*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB105 (8-10)
Date Collected: 07/11/12 13:50
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-14
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.440		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
1,3,5-Trimethylbenzene	0.725		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
p-Isopropyltoluene	1.22		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Benzene	0.204		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Ethylbenzene	3.64		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Isopropylbenzene	4.25		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Methyl tert-butyl ether	ND		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
m,p-Xylene	2.33		0.294		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
n-Butylbenzene	4.98		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
N-Propylbenzene	12.3		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Naphthalene	2.58		0.490		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
sec-Butylbenzene	1.83		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
tert-Butylbenzene	ND		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Toluene	ND		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
Xylenes, Total	2.77		0.490		mg/Kg		07/18/12 08:33	07/20/12 15:54	1
1,2,4-Trimethylbenzene	1.09		0.196		mg/Kg		07/18/12 08:33	07/20/12 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:54*	*1*
4-Bromofluorobenzene (Surr)	*121*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:54*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:54*	*1*
Toluene-d8 (Surr)	*121*		*70 - 130*	*07/18/12 08:33*	*07/20/12 15:54*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: SB105 (24-25)
Date Collected: 07/11/12 14:05
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-15
Matrix: Solid

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
1,3,5-Trimethylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
p-Isopropyltoluene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Benzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Ethylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Isopropylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Methyl tert-butyl ether	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
m,p-Xylene	ND		0.00283		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
n-Butylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
N-Propylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Naphthalene	ND		0.00472		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
sec-Butylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
tert-Butylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Toluene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
Xylenes, Total	ND		0.00472		mg/Kg		07/18/12 07:35	07/20/12 09:35	1
1,2,4-Trimethylbenzene	ND		0.00189		mg/Kg		07/18/12 07:35	07/20/12 09:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*	*07/18/12 07:35*	*07/20/12 09:35*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*	*07/18/12 07:35*	*07/20/12 09:35*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*	*07/18/12 07:35*	*07/20/12 09:35*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*07/18/12 07:35*	*07/20/12 09:35*	*1*

Client: Groundwater & Environmental Services Inc
Project/Site: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Client Sample ID: Trip Blank
Date Collected: 07/11/12 00:01
Date Received: 07/14/12 08:30

Lab Sample ID: 490-2155-16
Matrix: 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			07/17/12 17:45	1
Ethylbenzene	ND		1.00		ug/L			07/17/12 17:45	1
Methyl tert-butyl ether	ND		1.00		ug/L			07/17/12 17:45	1
Toluene	ND		1.00		ug/L			07/17/12 17:45	1
Xylenes, Total	ND		3.00		ug/L			07/17/12 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*07/17/12 17:45*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*07/17/12 17:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*70 - 130*		*07/17/12 17:45*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*07/17/12 17:45*	*1*

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

Lab Sample ID: MB 490-6363/4
Matrix: Water
Analysis Batch: 6363

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			07/17/12 13:58	1
Ethylbenzene	ND		1.00		ug/L			07/17/12 13:58	1
Methyl tert-butyl ether	ND		1.00		ug/L			07/17/12 13:58	1
Toluene	ND		1.00		ug/L			07/17/12 13:58	1
Xylenes, Total	ND		3.00		ug/L			07/17/12 13:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*07/17/12 13:58*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*07/17/12 13:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*		*07/17/12 13:58*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*07/17/12 13:58*	*1*

Lab Sample ID: LCS 490-6363/3
Matrix: Water
Analysis Batch: 6363

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	45.73		ug/L		91	80 - 121
Ethylbenzene	50.0	47.71		ug/L		95	80 - 130
Methyl tert-butyl ether	50.0	42.73		ug/L		85	72 - 133
Toluene	50.0	47.32		ug/L		95	80 - 126
Xylenes, Total	150	143.3		ug/L		96	80 - 132

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 490-2192-B-1 MS
Matrix: Water
Analysis Batch: 6363

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	52.70		ug/L		105	75 - 133
Ethylbenzene	ND		50.0	56.32		ug/L		113	79 - 139
Toluene	ND		50.0	53.80		ug/L		108	75 - 136
Xylenes, Total	ND		150	171.3		ug/L		114	74 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*110*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*117*		*70 - 130*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*

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

Lab Sample ID: 490-2192-C-1 MSD
Matrix: Water
Analysis Batch: 6363

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	52.79		ug/L		106	75 - 133	0	17
Ethylbenzene	ND		50.0	56.07		ug/L		112	79 - 139	0	15
Toluene	ND		50.0	53.74		ug/L		107	75 - 136	0	15
Xylenes, Total	ND		150	171.0		ug/L		114	74 - 141	0	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*108*		*70 - 130*
Toluene-d8 (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*

Lab Sample ID: 490-2155-5 MS
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: SB103 (8-10)
Prep Type: Total/NA
Prep Batch: 6498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	ND		23.9	22.27		mg/Kg		91	18 - 166
1,3,5-Trimethylbenzene	2.66		23.9	23.93		mg/Kg		89	18 - 164
p-Isopropyltoluene	2.91		23.9	24.33		mg/Kg		89	12 - 168
Benzene	ND		23.9	21.03		mg/Kg		88	31 - 143
Ethylbenzene	14.9		23.9	36.35		mg/Kg		90	23 - 161
Isopropylbenzene	5.23		23.9	29.84		mg/Kg		103	23 - 181
Methyl tert-butyl ether	ND		23.9	23.06		mg/Kg		96	28 - 141
m,p-Xylene	11.0		47.9	53.86		mg/Kg		90	27 - 162
n-Butylbenzene	ND		23.9	27.50		mg/Kg		115	10 - 175
N-Propylbenzene	8.56		23.9	28.56		mg/Kg		84	19 - 162
Naphthalene	8.60		23.9	26.39		mg/Kg		74	10 - 176
sec-Butylbenzene	1.52		23.9	23.19		mg/Kg		91	12 - 170
tert-Butylbenzene	ND		23.9	21.88		mg/Kg		91	20 - 164
Toluene	ND		23.9	20.27		mg/Kg		85	30 - 155
Xylenes, Total	11.0		71.8	76.13		mg/Kg		91	25 - 162
1,2,4-Trimethylbenzene	12.6		23.9	33.56		mg/Kg		87	14 - 165

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*109*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*119*		*70 - 130*

Lab Sample ID: 490-2155-5 MSD
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: SB103 (8-10)
Prep Type: Total/NA
Prep Batch: 6498

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	ND		23.9	21.14		mg/Kg		86	18 - 166	5	50
1,3,5-Trimethylbenzene	2.66		23.9	22.90		mg/Kg		85	18 - 164	4	50
p-Isopropyltoluene	2.91		23.9	23.22		mg/Kg		85	12 - 168	5	50
Benzene	ND		23.9	20.21		mg/Kg		84	31 - 143	4	50
Ethylbenzene	14.9		23.9	35.19		mg/Kg		85	23 - 161	3	50

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

Lab Sample ID: 490-2155-5 MSD
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: SB103 (8-10)
Prep Type: Total/NA
Prep Batch: 6498

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene	5.23		23.9	28.49		mg/Kg		97	23 - 181	5	50
Methyl tert-butyl ether	ND		23.9	22.64		mg/Kg		95	28 - 141	2	50
m,p-Xylene	11.0		47.9	51.93		mg/Kg		85	27 - 162	4	50
n-Butylbenzene	ND		23.9	26.58		mg/Kg		111	10 - 175	3	50
N-Propylbenzene	8.56		23.9	27.51		mg/Kg		79	19 - 162	4	50
Naphthalene	8.60		23.9	26.68		mg/Kg		75	10 - 176	1	50
sec-Butylbenzene	1.52		23.9	22.07		mg/Kg		86	12 - 170	5	50
tert-Butylbenzene	ND		23.9	20.70		mg/Kg		86	20 - 164	6	50
Toluene	ND		23.9	19.39		mg/Kg		81	30 - 155	4	50
Xylenes, Total	11.0		71.8	73.07		mg/Kg		86	25 - 162	4	50
1,2,4-Trimethylbenzene	12.6		23.9	32.47		mg/Kg		83	14 - 165	3	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
Toluene-d8 (Surr)	*113*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*116*		*70 - 130*

Lab Sample ID: 490-2155-A-1-C MS
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: 490-2155-A-1-C MS
Prep Type: Total/NA
Prep Batch: 6498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	ND		2.31	2.006		mg/Kg		87	18 - 166
1,3,5-Trimethylbenzene	0.0953		2.31	2.148		mg/Kg		89	18 - 164
p-Isopropyltoluene	ND		2.31	2.373		mg/Kg		99	12 - 168
Benzene	ND		2.31	1.792		mg/Kg		78	31 - 143
Ethylbenzene	0.138		2.31	2.077		mg/Kg		84	23 - 161
Isopropylbenzene	0.129		2.31	2.329		mg/Kg		95	23 - 181
Methyl tert-butyl ether	ND		2.31	1.449		mg/Kg		63	28 - 141
m,p-Xylene	0.456		4.62	4.412		mg/Kg		86	27 - 162
n-Butylbenzene	ND		2.31	2.471		mg/Kg		107	10 - 175
N-Propylbenzene	0.236		2.31	2.226		mg/Kg		86	19 - 162
Naphthalene	ND		2.31	2.075		mg/Kg		82	10 - 176
sec-Butylbenzene	ND		2.31	2.091		mg/Kg		91	12 - 170
tert-Butylbenzene	ND		2.31	1.976		mg/Kg		86	20 - 164
Toluene	ND		2.31	1.807		mg/Kg		78	30 - 155
Xylenes, Total	0.456		6.93	6.418		mg/Kg		86	25 - 162
1,2,4-Trimethylbenzene	0.229		2.31	2.247		mg/Kg		87	14 - 165

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*104*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*

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

Lab Sample ID: 490-2155-A-1-C MSD
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: 490-2155-A-1-C MSD
Prep Type: Total/NA
Prep Batch: 6498

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
o-Xylene	ND		2.31	2.203		mg/Kg		95	18 - 166	9	50
1,3,5-Trimethylbenzene	0.0953		2.31	2.324		mg/Kg		96	18 - 164	8	50
p-Isopropyltoluene	ND		2.31	2.308		mg/Kg		96	12 - 168	3	50
Benzene	ND		2.31	1.948		mg/Kg		84	31 - 143	8	50
Ethylbenzene	0.138		2.31	2.269		mg/Kg		92	23 - 161	9	50
Isopropylbenzene	0.129		2.31	2.564		mg/Kg		105	23 - 181	10	50
Methyl tert-butyl ether	ND		2.31	1.563		mg/Kg		68	28 - 141	8	50
m,p-Xylene	0.456		4.62	4.806		mg/Kg		94	27 - 162	9	50
n-Butylbenzene	ND		2.31	2.655		mg/Kg		115	10 - 175	7	50
N-Propylbenzene	0.236		2.31	2.374		mg/Kg		93	19 - 162	6	50
Naphthalene	ND		2.31	2.003		mg/Kg		79	10 - 176	4	50
sec-Butylbenzene	ND		2.31	2.266		mg/Kg		98	12 - 170	8	50
tert-Butylbenzene	ND		2.31	2.166		mg/Kg		94	20 - 164	9	50
Toluene	ND		2.31	2.011		mg/Kg		87	30 - 155	11	50
Xylenes, Total	0.456		6.93	7.009		mg/Kg		95	25 - 162	9	50
1,2,4-Trimethylbenzene	0.229		2.31	2.448		mg/Kg		96	14 - 165	9	50

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*114*		*70 - 130*

Lab Sample ID: MB 490-6878/6
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00200		mg/Kg			07/19/12 15:46	1
1,3,5-Trimethylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
p-Isopropyltoluene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Benzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Ethylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Isopropylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Methyl tert-butyl ether	ND		0.00200		mg/Kg			07/19/12 15:46	1
m,p-Xylene	ND		0.00300		mg/Kg			07/19/12 15:46	1
n-Butylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
N-Propylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Naphthalene	ND		0.00500		mg/Kg			07/19/12 15:46	1
sec-Butylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
tert-Butylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Toluene	ND		0.00200		mg/Kg			07/19/12 15:46	1
Xylenes, Total	ND		0.00500		mg/Kg			07/19/12 15:46	1
1,2,4-Trimethylbenzene	ND		0.00200		mg/Kg			07/19/12 15:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*07/19/12 15:46*	*1*
Toluene-d8 (Surr)	*116*		*70 - 130*		*07/19/12 15:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*07/19/12 15:46*	*1*

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

Lab Sample ID: MB 490-6878/6
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*07/19/12 15:46*	*1*

Lab Sample ID: MB 490-6878/7
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.100		mg/Kg			07/19/12 16:17	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
p-Isopropyltoluene	ND		0.100		mg/Kg			07/19/12 16:17	1
Benzene	ND		0.100		mg/Kg			07/19/12 16:17	1
Ethylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
Isopropylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			07/19/12 16:17	1
m,p-Xylene	ND		0.150		mg/Kg			07/19/12 16:17	1
n-Butylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
N-Propylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
Naphthalene	ND		0.250		mg/Kg			07/19/12 16:17	1
sec-Butylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
tert-Butylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1
Toluene	ND		0.100		mg/Kg			07/19/12 16:17	1
Xylenes, Total	ND		0.250		mg/Kg			07/19/12 16:17	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			07/19/12 16:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*07/19/12 16:17*	*1*
Toluene-d8 (Surr)	*114*		*70 - 130*		*07/19/12 16:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*07/19/12 16:17*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*07/19/12 16:17*	*1*

Lab Sample ID: LCS 490-6878/3
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.0500	0.04615		mg/Kg		92	80 - 141
1,3,5-Trimethylbenzene	0.0500	0.04415		mg/Kg		88	78 - 138
p-Isopropyltoluene	0.0500	0.04384		mg/Kg		88	77 - 141
Benzene	0.0500	0.04349		mg/Kg		87	75 - 127
Ethylbenzene	0.0500	0.04477		mg/Kg		90	80 - 134
Isopropylbenzene	0.0500	0.05051		mg/Kg		101	80 - 150
Methyl tert-butyl ether	0.0500	0.04737		mg/Kg		95	70 - 136
m,p-Xylene	0.100	0.09151		mg/Kg		92	80 - 137
n-Butylbenzene	0.0500	0.04773		mg/Kg		95	72 - 152
N-Propylbenzene	0.0500	0.04230		mg/Kg		85	75 - 137
Naphthalene	0.0500	0.04445		mg/Kg		89	69 - 150
sec-Butylbenzene	0.0500	0.04486		mg/Kg		90	79 - 141
tert-Butylbenzene	0.0500	0.04473		mg/Kg		89	80 - 132
Toluene	0.0500	0.05051		mg/Kg		101	80 - 132

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

Lab Sample ID: LCS 490-6878/3
Matrix: Solid
Analysis Batch: 6878

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			0.150	0.1377		mg/Kg		92	80 - 137		
1,2,4-Trimethylbenzene			0.0500	0.04285		mg/Kg		86	77 - 139		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*110*		*70 - 130*
Toluene-d8 (Surr)	*110*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*

Lab Sample ID: MB 490-7009/6
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00200		mg/Kg			07/20/12 08:32	1
1,3,5-Trimethylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
p-Isopropyltoluene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Benzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Ethylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Isopropylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Methyl tert-butyl ether	ND		0.00200		mg/Kg			07/20/12 08:32	1
m,p-Xylene	ND		0.00300		mg/Kg			07/20/12 08:32	1
n-Butylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
N-Propylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Naphthalene	ND		0.00500		mg/Kg			07/20/12 08:32	1
sec-Butylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
tert-Butylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Toluene	ND		0.00200		mg/Kg			07/20/12 08:32	1
Xylenes, Total	ND		0.00500		mg/Kg			07/20/12 08:32	1
1,2,4-Trimethylbenzene	ND		0.00200		mg/Kg			07/20/12 08:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*07/20/12 08:32*	*1*
Toluene-d8 (Surr)	*125*		*70 - 130*		*07/20/12 08:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*07/20/12 08:32*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*07/20/12 08:32*	*1*

Lab Sample ID: MB 490-7009/7
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.100		mg/Kg			07/20/12 09:04	1
1,3,5-Trimethylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
p-Isopropyltoluene	ND		0.100		mg/Kg			07/20/12 09:04	1
Benzene	ND		0.100		mg/Kg			07/20/12 09:04	1
Ethylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
Isopropylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
Methyl tert-butyl ether	ND		0.100		mg/Kg			07/20/12 09:04	1

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

Lab Sample ID: MB 490-7009/7
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylene	ND		0.150		mg/Kg			07/20/12 09:04	1
n-Butylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
N-Propylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
Naphthalene	ND		0.250		mg/Kg			07/20/12 09:04	1
sec-Butylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
tert-Butylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1
Toluene	ND		0.100		mg/Kg			07/20/12 09:04	1
Xylenes, Total	ND		0.250		mg/Kg			07/20/12 09:04	1
1,2,4-Trimethylbenzene	ND		0.100		mg/Kg			07/20/12 09:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*07/20/12 09:04*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*07/20/12 09:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*07/20/12 09:04*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*07/20/12 09:04*	*1*

Lab Sample ID: LCS 490-7009/3
Matrix: Solid
Analysis Batch: 7009

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.0500	0.04876		mg/Kg		98	80 - 141
1,3,5-Trimethylbenzene	0.0500	0.04751		mg/Kg		95	78 - 138
p-Isopropyltoluene	0.0500	0.04770		mg/Kg		95	77 - 141
Benzene	0.0500	0.04377		mg/Kg		88	75 - 127
Ethylbenzene	0.0500	0.04713		mg/Kg		94	80 - 134
Isopropylbenzene	0.0500	0.05336		mg/Kg		107	80 - 150
Methyl tert-butyl ether	0.0500	0.05077		mg/Kg		102	70 - 136
m,p-Xylene	0.100	0.09607		mg/Kg		96	80 - 137
n-Butylbenzene	0.0500	0.05359		mg/Kg		107	72 - 152
N-Propylbenzene	0.0500	0.04589		mg/Kg		92	75 - 137
Naphthalene	0.0500	0.04863		mg/Kg		97	69 - 150
sec-Butylbenzene	0.0500	0.04858		mg/Kg		97	79 - 141
tert-Butylbenzene	0.0500	0.04743		mg/Kg		95	80 - 132
Toluene	0.0500	0.04878		mg/Kg		98	80 - 132
Xylenes, Total	0.150	0.1448		mg/Kg		97	80 - 137
1,2,4-Trimethylbenzene	0.0500	0.04696		mg/Kg		94	77 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*111*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*

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

Lab Sample ID: MB 490-7314/5
Matrix: Solid
Analysis Batch: 7314

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.00200		mg/Kg			07/21/12 08:22	1
1,3,5-Trimethylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
p-Isopropyltoluene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Benzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Ethylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Isopropylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Methyl tert-butyl ether	ND		0.00200		mg/Kg			07/21/12 08:22	1
m,p-Xylene	ND		0.00300		mg/Kg			07/21/12 08:22	1
n-Butylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
N-Propylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Naphthalene	ND		0.00500		mg/Kg			07/21/12 08:22	1
sec-Butylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
tert-Butylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Toluene	ND		0.00200		mg/Kg			07/21/12 08:22	1
Xylenes, Total	ND		0.00500		mg/Kg			07/21/12 08:22	1
1,2,4-Trimethylbenzene	ND		0.00200		mg/Kg			07/21/12 08:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*07/21/12 08:22*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*07/21/12 08:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*07/21/12 08:22*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*07/21/12 08:22*	*1*

Lab Sample ID: LCS 490-7314/3
Matrix: Solid
Analysis Batch: 7314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	0.0500	0.05992		mg/Kg		120	80 - 141
1,3,5-Trimethylbenzene	0.0500	0.05679		mg/Kg		114	78 - 138
p-Isopropyltoluene	0.0500	0.05821		mg/Kg		116	77 - 141
Benzene	0.0500	0.05500		mg/Kg		110	75 - 127
Ethylbenzene	0.0500	0.05735		mg/Kg		115	80 - 134
Isopropylbenzene	0.0500	0.06744		mg/Kg		135	80 - 150
Methyl tert-butyl ether	0.0500	0.05631		mg/Kg		113	70 - 136
m,p-Xylene	0.100	0.1178		mg/Kg		118	80 - 137
n-Butylbenzene	0.0500	0.06028		mg/Kg		121	72 - 152
N-Propylbenzene	0.0500	0.05492		mg/Kg		110	75 - 137
Naphthalene	0.0500	0.06013		mg/Kg		120	69 - 150
sec-Butylbenzene	0.0500	0.05586		mg/Kg		112	79 - 141
tert-Butylbenzene	0.0500	0.05386		mg/Kg		108	80 - 132
Toluene	0.0500	0.05363		mg/Kg		107	80 - 132
Xylenes, Total	0.150	0.1777		mg/Kg		118	80 - 137
1,2,4-Trimethylbenzene	0.0500	0.05553		mg/Kg		111	77 - 139

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*

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

Lab Sample ID: LCS 490-7314/3
Matrix: Solid
Analysis Batch: 7314

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	94		70 - 130

GC/MS VOA

Analysis Batch: 6363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-16	Trip Blank	Total/NA	Water	8260B	
490-2192-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
490-2192-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 490-6363/3	Lab Control Sample	Total/NA	Water	8260B	
MB 490-6363/4	Method Blank	Total/NA	Water	8260B	

Prep Batch: 6480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-1	SB101 (10-15)	Total/NA	Solid	5035	
490-2155-2	SB101 (15-20)	Total/NA	Solid	5035	
490-2155-3	SB102 (8-10)	Total/NA	Solid	5035	
490-2155-4	SB102 (10-15)	Total/NA	Solid	5035	
490-2155-7	SB103 (25-30)	Total/NA	Solid	5035	
490-2155-11	SB106 (20-25)	Total/NA	Solid	5035	
490-2155-13	SB107 (15-20)	Total/NA	Solid	5035	
490-2155-15	SB105 (24-25)	Total/NA	Solid	5035	

Prep Batch: 6498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-5	SB103 (8-10)	Total/NA	Solid	5035	
490-2155-5 MS	SB103 (8-10)	Total/NA	Solid	5035	
490-2155-5 MSD	SB103 (8-10)	Total/NA	Solid	5035	
490-2155-6	SB103 (15-20)	Total/NA	Solid	5035	
490-2155-8	SB104 (8-10)	Total/NA	Solid	5035	
490-2155-10	SB106 (10-15)	Total/NA	Solid	5035	
490-2155-12	SB107 (10-15)	Total/NA	Solid	5035	
490-2155-14	SB105 (8-10)	Total/NA	Solid	5035	
490-2155-A-1-C MS	490-2155-A-1-C MS	Total/NA	Solid	5035	
490-2155-A-1-C MSD	490-2155-A-1-C MSD	Total/NA	Solid	5035	

Analysis Batch: 6878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-2	SB101 (15-20)	Total/NA	Solid	8260B	6480
490-2155-3	SB102 (8-10)	Total/NA	Solid	8260B	6480
490-2155-4	SB102 (10-15)	Total/NA	Solid	8260B	6480
490-2155-5	SB103 (8-10)	Total/NA	Solid	8260B	6498
490-2155-8	SB104 (8-10)	Total/NA	Solid	8260B	6498
490-2155-10	SB106 (10-15)	Total/NA	Solid	8260B	6498
490-2155-12	SB107 (10-15)	Total/NA	Solid	8260B	6498
490-2155-A-1-C MS	490-2155-A-1-C MS	Total/NA	Solid	8260B	6498
490-2155-A-1-C MSD	490-2155-A-1-C MSD	Total/NA	Solid	8260B	6498
LCS 490-6878/3	Lab Control Sample	Total/NA	Solid	8260B	
MB 490-6878/6	Method Blank	Total/NA	Solid	8260B	
MB 490-6878/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 7009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-1	SB101 (10-15)	Total/NA	Solid	8260B	6480
490-2155-5	SB103 (8-10)	Total/NA	Solid	8260B	6498
490-2155-5 MS	SB103 (8-10)	Total/NA	Solid	8260B	6498
490-2155-5 MSD	SB103 (8-10)	Total/NA	Solid	8260B	6498
490-2155-6	SB103 (15-20)	Total/NA	Solid	8260B	6498

GC/MS VOA (Continued)

Analysis Batch: 7009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-7	SB103 (25-30)	Total/NA	Solid	8260B	6480
490-2155-8	SB104 (8-10)	Total/NA	Solid	8260B	6498
490-2155-10	SB106 (10-15)	Total/NA	Solid	8260B	6498
490-2155-11	SB106 (20-25)	Total/NA	Solid	8260B	6480
490-2155-12	SB107 (10-15)	Total/NA	Solid	8260B	6498
490-2155-13	SB107 (15-20)	Total/NA	Solid	8260B	6480
490-2155-14	SB105 (8-10)	Total/NA	Solid	8260B	6498
490-2155-15	SB105 (24-25)	Total/NA	Solid	8260B	6480
LCS 490-7009/3	Lab Control Sample	Total/NA	Solid	8260B	
MB 490-7009/6	Method Blank	Total/NA	Solid	8260B	
MB 490-7009/7	Method Blank	Total/NA	Solid	8260B	

Analysis Batch: 7314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-9	SB104 (24-25)	Total/NA	Solid	8260B	7327
LCS 490-7314/3	Lab Control Sample	Total/NA	Solid	8260B	
MB 490-7314/5	Method Blank	Total/NA	Solid	8260B	

Prep Batch: 7327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-2155-9	SB104 (24-25)	Total/NA	Solid	5035	

Client Sample ID: SB101 (10-15)

Lab Sample ID: 490-2155-1

Date Collected: 07/11/12 09:15

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 10:07	AF	TAL NSH

Client Sample ID: SB101 (15-20)

Lab Sample ID: 490-2155-2

Date Collected: 07/11/12 09:17

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 18:55	AF	TAL NSH

Client Sample ID: SB102 (8-10)

Lab Sample ID: 490-2155-3

Date Collected: 07/11/12 09:45

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 19:27	AF	TAL NSH

Client Sample ID: SB102 (10-15)

Lab Sample ID: 490-2155-4

Date Collected: 07/11/12 09:49

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 19:58	AF	TAL NSH

Client Sample ID: SB103 (8-10)

Lab Sample ID: 490-2155-5

Date Collected: 07/11/12 10:20

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 20:30	AF	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 12:44	AF	TAL NSH

Client Sample ID: SB103 (15-20)

Lab Sample ID: 490-2155-6

Date Collected: 07/11/12 10:29

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 13:16	AF	TAL NSH

Client Sample ID: SB103 (25-30)

Lab Sample ID: 490-2155-7

Date Collected: 07/11/12 10:58

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 10:38	AF	TAL NSH

Client Sample ID: SB104 (8-10)

Lab Sample ID: 490-2155-8

Date Collected: 07/11/12 11:39

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 22:05	AF	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 14:19	AF	TAL NSH

Client Sample ID: SB104 (24-25)

Lab Sample ID: 490-2155-9

Date Collected: 07/11/12 12:18

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7327	07/21/12 07:12	AA	TAL NSH
Total/NA	Analysis	8260B		1	7314	07/21/12 09:22	AF	TAL NSH

Client Sample ID: SB106 (10-15)

Lab Sample ID: 490-2155-10

Date Collected: 07/11/12 12:42

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/19/12 23:08	AF	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 14:51	AF	TAL NSH

Client Sample ID: SB106 (20-25)

Lab Sample ID: 490-2155-11

Date Collected: 07/11/12 12:52

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 11:41	AF	TAL NSH

Client Sample ID: SB107 (10-15)

Lab Sample ID: 490-2155-12

Date Collected: 07/11/12 13:14

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	6878	07/20/12 00:11	AF	TAL NSH

Client Sample ID: SB107 (10-15)

Lab Sample ID: 490-2155-12

Date Collected: 07/11/12 13:14

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	7009	07/20/12 15:22	AF	TAL NSH

Client Sample ID: SB107 (15-20)

Lab Sample ID: 490-2155-13

Date Collected: 07/11/12 13:18

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 12:13	AF	TAL NSH

Client Sample ID: SB105 (8-10)

Lab Sample ID: 490-2155-14

Date Collected: 07/11/12 13:50

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6498	07/18/12 08:33	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 15:54	AF	TAL NSH

Client Sample ID: SB105 (24-25)

Lab Sample ID: 490-2155-15

Date Collected: 07/11/12 14:05

Matrix: Solid

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6480	07/18/12 07:35	AA	TAL NSH
Total/NA	Analysis	8260B		1	7009	07/20/12 09:35	AF	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 490-2155-16

Date Collected: 07/11/12 00:01

Matrix: Water

Date Received: 07/14/12 08:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	6363	07/17/12 17:45	MG	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: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, 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: Exxon 17 EMW (0501985)

TestAmerica Job ID: 490-2155-1
SDG: 304 Columbia Ave, Brooklyn, NY

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Nashville		ACIL		393
TestAmerica Nashville	A2LA	ISO/IEC 17025		0453.07
TestAmerica Nashville	Alabama	State Program	4	41150
TestAmerica Nashville	Alaska (UST)	State Program	10	UST-087
TestAmerica Nashville	Arizona	State Program	9	AZ0473
TestAmerica Nashville	Arkansas DEQ	State Program	6	88-0737
TestAmerica Nashville	California	NELAC	9	1168CA
TestAmerica Nashville	Canadian Assoc Lab Accred (CALA)	Canada		3744
TestAmerica Nashville	Colorado	State Program	8	N/A
TestAmerica Nashville	Connecticut	State Program	1	PH-0220
TestAmerica Nashville	Florida	NELAC	4	E87358
TestAmerica Nashville	Illinois	NELAC	5	200010
TestAmerica Nashville	Iowa	State Program	7	131
TestAmerica Nashville	Kansas	NELAC	7	E-10229
TestAmerica Nashville	Kentucky	State Program	4	90038
TestAmerica Nashville	Kentucky (UST)	State Program	4	19
TestAmerica Nashville	Louisiana	NELAC	6	30613
TestAmerica Nashville	Louisiana	NELAC	6	LA110014
TestAmerica Nashville	Maryland	State Program	3	316
TestAmerica Nashville	Massachusetts	State Program	1	M-TN032
TestAmerica Nashville	Minnesota	NELAC	5	047-999-345
TestAmerica Nashville	Mississippi	State Program	4	N/A
TestAmerica Nashville	Montana (UST)	State Program	8	NA
TestAmerica Nashville	Nevada	State Program	9	TN00032
TestAmerica Nashville	New Hampshire	NELAC	1	2963
TestAmerica Nashville	New Jersey	NELAC	2	TN965
TestAmerica Nashville	New York	NELAC	2	11342
TestAmerica Nashville	North Carolina DENR	State Program	4	387
TestAmerica Nashville	North Dakota	State Program	8	R-146
TestAmerica Nashville	Ohio VAP	State Program	5	CL0033
TestAmerica Nashville	Oklahoma	State Program	6	9412
TestAmerica Nashville	Oregon	NELAC	10	TN200001
TestAmerica Nashville	Pennsylvania	NELAC	3	68-00585
TestAmerica Nashville	Rhode Island	State Program	1	LAO00268
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	South Carolina	State Program	4	84009
TestAmerica Nashville	Tennessee	State Program	4	2008
TestAmerica Nashville	Texas	NELAC	6	T104704077-09-TX
TestAmerica Nashville	USDA	Federal		S-48469
TestAmerica Nashville	Utah	NELAC	8	TAN
TestAmerica Nashville	Virginia	NELAC	3	460152
TestAmerica Nashville	Washington	State Program	10	C789
TestAmerica Nashville	West Virginia DEP	State Program	3	219
TestAmerica Nashville	Wisconsin	State Program	5	998020430
TestAmerica Nashville	Wyoming (UST)	A2LA	8	453.07

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville Division
2960 Foster Creighton
Nashville, TN 37204
Phone: 615-726-0177
Toll Free: 800-765-0980
Fax: 615-726-3404

ExxonMobil

Consultant Name: Groundwater & Environmental Services, Inc.
Address: 89 Cabot Court, Suite A
City/State/Zip: Hauppauge, New York
ExxonMobil Project Mgr: Jacqueline Fawcett
Consultant Project Mgr: Jessica Femgren
Consultant Telephone Number: 800-360-9405 x4333 Fax No.: 631-582-4410
Sampler Name: (Print) Andy Winslow
Sampler Signature:

TA Account #: PO#:
Invoice To: Groundwater & Environmental Services, Inc.
Report To: LILabs@gesonline.com
Project Name: Former ExxonMobil 17-EMW (0501985)
Retail # (MRN #): 17-EMW
Major Project (AFE#): 501985
Site Address 304 Columbia Avenue
City, State, Zip Brooklyn, NY
Regulatory District (CA)

Sample ID or Field ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	HNO_3 (Red Label)	None (Black Label)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: STARS LIST 8260B (BTEX + MTBE) (MTBE)	RUSH TAT (Pre-Schedule)*	STD TAT request	Fax Results (yes or no)	Due Date of Report
1 SB101(10-15) ~~0915~~	7/11/12	0915	1	X															X		X		X		
2 SB101 (15-20)		0917	1	X															X		X		X		
3 SB102 (8-10)		0945	2	X															X		X		X		
4 SB102 (15-15)		0949	2	X															X		X		X		
5 SB103 (8-10)		1020	2	X															X		X		X		
6 SB103 (15-20)		1029	2	X															X		X		X		
7 SB103 (25-30)		1058	1	X															X		X		X		
8 SB104 (8-10)		1139	2	X															X		X		X		
9 SB104 (24-25)		1218	1	X															X		X		X		
10 SB106 (10-15)	↓	1242	2	X															X		X		X		

Loc: 490
2155
s Inc

Comments/Special Instructions:

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
QC Deliverables (please circle one)
Level 2 Level 3 Level 4 Other
* It will be the responsibility of ExxonMobil or its consultant to notify the TestAmerica Project Manager by phone or fax that a rush sample will be submitted.
TA Project Manager: Date:

Relinquished by:	Date	Time	Received by:	Date	Time
Andy Winslow	7/13/12	1130	4.3 JRN	7-14-12	0830
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

7/24/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville Division
2960 Foster Creighton
Nashville, TN 37204
Phone: 615-726-0177
Toll Free: 800-765-0980
Fax: 615-726-3404

ExxonMobil

Consultant Name: Groundwater & Environmental Services, Inc.
Address: 89 Cabot Court, Suite A
City/State/Zip: Hauppauge, New York
ExxonMobil Project Mgr: Jacqueline Fawcett
Consultant Project Mgr: Jessica Femgren
Consultant Telephone Number: 800-360-9405 x4333 Fax No.: 631-582-4410
Sampler Name: (Print) Andy Winslow
Sampler Signature:

TA Account #: PO#:
Invoice To: Groundwater & Environmental Services, Inc.
Report To: LILabs@gesonline.com
Project Name: Former ExxonMobil 17-EMW (0501985)
Retail # (MRN #): 17-EMW
Major Project (AFE#): 501985
Site Address 304 Columbia Avenue
City, State, Zip Brooklyn, NY
Regulatory District (CA)

Sample ID or Field ID	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Field Filtered	Preservative: Methanol	Sodium Bisulfate	HCl (Blue Label)	NaOH (Orange Label)	H_2SO_4 Plastic (Yellow Label)	H_2SO_4 Glass(Yellow Label)	HNO_3 (Red Label)	None (Black Label)	Matrix: Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyze For: 8260B Stars List	8260 BTEX MTBE	RUSH TAT (Pre-Scheduled)*	STD TAT request	Fax Results (yes or no)	Due Date of Report
SB106 (20-25)	7/11/12	1252	1	X															X		X			X		
SB107 (10-15)		1314	2	X															X		X			X		
SB107 (15-20)		1318	2	X															X		X			X		
SB105 (8-10)		1350	1	X															X		X			X		
SB105 (24-25)		1405	1	X															X		X			X		
TRIP BLANK	7/13/12	1100	2												X						X	X		X		
																					X			X		
																					X			X		
																					X			X		
																					X			X		

Loc: 490
2155

Comments/Special Instructions:

Laboratory Comments:
Temperature Upon Receipt:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
QC Deliverables (please circle one)
Level 2 Level 3 Level 4 Other
* It will be the responsibility of ExxonMobil or its consultant to notify the TestAmerica Project Manager by phone or fax that a rush sample will be submitted.
TA Project Manager: Date:

Relinquished by:	Date	Time	Received by:	Date	Time
	7/13/12	1130		7-14-12	0830
Relinquished by:	Date	Time	Received by TestAmerica:	Date	Time

7/24/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECE

Cooler Received/Opened On 7/14/2012@ 8:30

1. Tracking # 4799 (last 4 digits, FedEx)

Courier: Fedex IR Gun ID 17960358

2. Temperature of rep. sample or temp blank when opened: 4.3 *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 (intial) EA

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 (intial) _____

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 (intial) _____

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 (intial) _____

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

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

BIS = Broken in shipment

Login Sample Receipt Checklist

Client: Groundwater & Environmental Services Inc

Job Number: 490-2155-1
SDG Number: 304 Columbia Ave, Brooklyn, NY

Login Number: 2155
List Number: 1
Creator: Ford, Easton

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is 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	4.3C
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	