ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

ExxonMobil Environmental Services

Revised Corrective Action Plan

ExxonMobil Site #14489
285 Old Bayview Road, North East, MD

MDE Case No. 1986-1205-CE

15 April 2013

ARCADIS

Revised Corrective Action Plan

ExxonMobil Site #14489
285 Old Bayview Road,
North East, Maryland

William R. Kahl, PG
Project Geologist

Michael S. Cleary
Project Manager

Prepared for:
ExxonMobil Environmental Services

Prepared by:
ARCADIS U.S., Inc.
1114 Benfield Boulevard
Suite A
Millersville
Maryland 21108
Tel 410 987 0032
Fax 410 987 4392

Our Ref.:
B0085851.0012

Date:
15 April 2013

ARCADIS

Table of Contents

Figures

Appendices

1. Introduction

ARCADIS U.S., Incorporated (ARCADIS) on behalf of ExxonMobil Environmental Services (EMES) and ExxonMobil Corporation (ExxonMobil) is pleased to submit a Revised Corrective Action Plan (CAP) for the former Exxon Station located at 285 Old Bayview Road, North East, Maryland. The Maryland Department of Environment (MDE) Case Number assigned to this site is 1986-1205-CE. A site location figure is included as **Figure 1** and a site plan is included as **Figure 2**.

Currently, twelve groundwater monitoring wells and two off-site potable wells are sampled on a quarterly basis as requested in an MDE letter dated May 15, 2009. Correspondences with MDE are included as **Appendix A**. The following Revised CAP requests MDE approval to conduct direct-push gypsum slurry injections in combination with the injection of an Epsom salt solution at three existing injection wells. The purpose of these injections is to reduce petroleum hydrocarbon mass on-site and reduce dissolved phase MTBE concentrations in two downgradient potable wells. The site background and methodology for the gypsum injection are discussed in further detail below.

1.1 Site Description

The property is currently an inactive Exxon retail station located at the intersection of Route 274 and Old Bayview Road. Three gasoline underground storage tanks (USTs) were removed in 2007. A two-story building remains on site. The surrounding area land use is mixed commercial and residential. The site is bordered by residential houses to the north and east, an open lot to the south and an auto repair shop to the west.

1.2 Site Background

Following the discovery of a drain line leaking gasoline at the site, seven monitoring wells (MW-1 through MW-7) were installed in April and May 1986. Liquid phase hydrocarbon (LPH) was detected and MDE Case 89-0867 was opened. Four additional wells (MW-8 through MW-11) were installed in May 1989. A Remedial Investigation (RI) Report was submitted to MDE in May 1998 (Hunter Services 1991).

In July 1990 a Remedial Action Plan (RAP) was submitted to the MDE, detailing plans for a recovery trench, well and treatment system. The site remediation system began operation in January 1991 and was operated until October 1996.

Five additional monitoring wells (MW-12 through MW-16) were installed in March 1991 for site delineation as part of an Extended Site Assessment (Environmental Science and Engineering, Inc. 1991).

A vapor extraction pilot study was completed in March 1992.

A risk assessment was completed in June 1994.

Additional site characterization was completed in December 1997 “to delineate soil and groundwater quality adjacent to and downgradient from the potential source area (the UST system)” (Land Tech Remedial, Inc. 1998). Soil and groundwater samples were collected from three boring locations.

The USTs at the site were removed in July 2007 and a Post Excavation Sampling Report was submitted to MDE in December 2007.

In accordance with the site status letter issued by MDE, dated May 5, 2009, the twelve groundwater monitoring wells and two of the off-site potable wells (259 and 261 Old Bayview Road) are currently sampled quarterly. Groundwater and potable well monitoring data collected during monitoring events since 1995 are included in groundwater monitoring reports previously submitted to MDE. ExxonMobil currently maintains a Granular Activated Carbon (GAC) filtration system for the potable well at 259 Old Bayview Road).

In 2011, a CAP was submitted for sodium persulfate injections using three injection wells that were installed near and downgradient of the former UST locations. Based on aquifer testing results, the injection wells would not take sufficient volume of sodium persulfate for effective treatment. Therefore, a revised approach using lower injection volumes was prepared and is presented in this document.

2. Conceptual Site Model

The geology and hydrogeology is based on investigative activities conducted by previous consultants and groundwater results are from the most recent sampling event conducted by ARCADIS in February 2013.

2.1 Geology and Hydrogeology

The site is located in the Coastal Plain physiographic province. Historical soil borings indicate a lithology of clay with trace mica, sand, and gravel to a depth of approximately 5 to 10 feet below land surface (bls), overlying a saprolite. Historical boring logs are included in **Appendix B**.

Depth to groundwater was measured during the most recent groundwater monitoring event in February 2013 and ranged from 12.19 feet below ground surface (ft bgs) at MW-8 to 22.87 ft bgs at MW-3A. Based on this gauging data, groundwater flow at the site appears to be to the south (**Figure 3**).

2.2 Soil Quality

Soil analytical samples collected during well installation and site characterization showed no constituent concentrations above MDE Non-Residential Cleanup Standards (ESE 1991; Land Tech 1998).

2.3 Groundwater Quality

As reported in the most recent groundwater monitoring report, groundwater samples were collected on 22 February 2013 and submitted to TestAmerica Laboratories of Nashville, Tennessee for analysis of for analysis of full list volatile organic compounds (VOCs) and fuel oxygenates using Environmental Protection Agency (EPA) Method 8260B. No LPH was detected during this reporting period. Historical groundwater monitoring data are included in **Tables 1 and 2**.

Benzene, toluene, ethylbenzene, methyl tertiary butyl ether (MTBE), and naphthalene were detected at concentrations exceeding MDE Groundwater (GW) Clean-up Standards at one or more well:

- Benzene was detected at concentrations exceeding the MDE GW standard (5 µg/L) in four samples (MW-1A, MW-2A, MW-5A, and MW-11) with a maximum concentration of 128 µg/L in the sample collected from MW-2A.

- Toluene was detected at a concentration exceeding the MDE GW standard (1,000 µg/L) in one sample (MW-1A) at a concentration of 1,620 µg/L.

- Ethylbenzene was detected at concentrations exceeding the MDE GW standard (700 µg/L) in three samples (MW-1A, MW-2A, and MW-5A) at a concentration of 73.4 µg/L.

- MTBE was detected at concentrations exceeding the MDE GW standard (20 µg/L) in one sample (MW 2A) with a maximum concentration of 148 µg/L in the sample collected from MW-11.

- Naphthalene was detected at concentrations exceeding the MDE GW standard (0.65 µg/L) in four samples (MW-1A, MW 2A, MW-5A, and MW-11) with a maximum concentration of 256 µg/L in the sample collected from MW-1A.

The highest concentrations of benzene, toluene, ethylbenzene, and MTBE have been detected in monitoring wells MW-1A and MW-2A, which are located hydraulically downgradient of the former UST locations (**Figure 3**). Benzene and MTBE were not detected above the laboratory reporting limits at downgradient off-site monitoring wells MW-13, MW-14, and MW-15 in February 2013.

The MTBE concentration detected in the influent sample collected from the GAC filtration system at 259 Old Bayview Road in February 2013 was 47.7 ug/L, which is greater than the MDE GW standard. No analytes were detected above their MDE GW standards in the effluent sample collected after GAC filtration at 259 Old Bayview Road. MTBE was detected below the MDE GW standard in the potable water sample collected at 261 Old Bayview Road (7.41 ug/L). The locations of the potable wells relative to the former Exxon station are shown in **Figure 1**.

Concentration trends plotted over time for benzene and MTBE for selected monitoring wells (**Appendix C**) indicate a general decrease in concentrations. However, concentrations have fluctuated and have been generally above the MDE GW standard. This suggests the presence of residual volatile organic compound (VOC) mass adsorbed to soil in the former UST and/or dispenser island locations.

3. Proposed Corrective Actions

The objective of the proposed corrective action is to reduce MTBE concentrations detected in downgradient potable water at 259 and 261 Old Bayview Road (**Figure 1**) by reducing concentrations of dissolved phase hydrocarbons in groundwater, including MTBE, in the vicinity of the former dispenser island near well MW-1A.

The proposed correction action includes the injection of gypsum slurry via direct-push technology together with an Epsom salt solution injection into the three existing injection wells, and pre- and post-injection groundwater monitoring.

Pre- and post-remedial groundwater sampling will be conducted to evaluate the effectiveness of the gypsum injections as part of the existing quarterly monitoring program. Sulfate analysis will be added to the analytical parameters to evaluate the distribution of the injection solution.

3.1 Pre-Remedial Sampling Event

Pre-remedial sampling will be conducted as part of the existing quarterly monitoring program. Given the current schedule, it is assumed the pre-remedial sampling will be conducted in May 2013.

Groundwater samples will be collected from monitoring wells via low-flow methodology and analyzed for BTEX, naphthalene, and fuel oxygenates by EPA Method 8260, and sulfate by EPA Method 9056 (or comparable valid method).

3.2 Gypsum Injection

Gypsum slurry will be injected into the subsurface via direct-push technology (DPT) at 20 locations in the source area, as shown on **Figure 4**. Additionally, an Epsom salt solution will be injected at the three existing injection wells at a low pressure. The goal of these injections is to distribute sulfate in the area of the former gasoline station and degrade the benzene and MTBE within the radius of influence of each injection point.

During each injection event, gypsum slurry will be injected in to two permeable intervals at each DPT injection point. The proposed injections intervals are 7 to 10 ft bgs and 12 to 15 ft bgs, based on historical site geology data. An injection volume of approximately 85 pounds (lb) of gypsum mixed with 75 gallons (gal) of water is proposed for each injection interval. The target injection rate at the DPT injection points

is 1 gallon per minute (gpm). Also during the injection event, an Epsom salt solution will be injected at the three existing injection wells (INJ-1, INJ-2, and INJ-3). An injection volume of approximate 1,325 gallons per injection well (850 lbs of Epsom salt per event) is proposed with target injection rate of 0.5 gpm using gravity feed.

During the injection event, monitoring wells will also be periodically monitored for field parameters, such as temperature, dissolved oxygen, conductivity, and pH. The total duration of the event is expected to be approximately 5 days. Material Safety Data Sheets for gypsum and Epsom salt are included in **Appendix D**.

3.3 Post-Remedial Sampling Event

Post-remedial sampling will be conducted as part of the existing quarterly monitoring program. Given the current schedule, post-remedial sampling will be conducted in September 2013.

Groundwater samples will be collected from monitoring wells via low-flow methodology and analyzed for BTEX, naphthalene, and fuel oxygenates by EPA Method 8260, and sulfate by EPA Method 9056 (or comparable valid method).

Evaluation of the injection performance will be included with the groundwater monitoring reports. The necessity of additional injections will be evaluated after two post-injection sampling events (assumed to be in 1st Quarter 2014).

3.4 Groundwater Monitoring Program Modification

Currently, twelve monitoring wells and two off-site potable wells are sampled quarterly, ARCADIS requests MDE approval to modify the current groundwater monitoring program to allow monitoring wells with lower VOC concentrations to be sampled annually, instead of quarterly. The modified monitoring program includes continued quarterly sampling for five monitoring wells (MW-1A, MW-2A, MW-5A, MW-11 and MW-14) and two off-site potable wells (259 and 261 Old Bayview Road) and annual sampling for seven monitoring wells (MW-3A, MW-8, MW-10, MW-12, MW-13, MW-15, and MW-18) as shown on **Table 3**. The modified monitoring program will be implemented after completion of the post-remedial sampling event, pending MDE approval.

Selected wells may be sampled for sulfate during groundwater monitoring events to evaluate the longevity of the injections.

3.5 Remedial Endpoints

Remedial activities will be considered complete when defined remedial endpoints are achieved. The following sections describe the remedial endpoints for each constituent of concern.

3.5.1 Liquid Phase Hydrocarbon Endpoint

MDE regulations require that all liquid phase hydrocarbons (LPH) be removed to the maximum extent practicable. No LPH is present in on-site wells, so this endpoint has already been achieved.

3.5.2 Dissolved Phase Hydrocarbon Endpoint

The MDE OCP guidance indicates that to achieve the site goal for dissolved phase remediation, risks posed by the release must be removed, contamination migration must be prevented, and asymptotic trend in dissolved-phase contamination must be established. The purpose of this injection is to reduce dissolved-phase concentrations thereby preventing migration of contaminants and establishing long-term declining trends in constituent concentrations.

The goal of this phase of remedial action is to eliminate the risk to off-site residents by reducing MTBE concentrations in potable water at 259 Old Bayview Road to below the MDE GW standard to allow removal of the GAC filtration system.

4. Project Schedule

The following schedules are proposed for the corrective action activities.

4.1 Implementation and Monitoring Schedule

The pre-remedial sampling event will be conducted during the quarterly monitoring event scheduled after MDE approval of this CAP (assumed to be May 2013).

The gypsum injection will be completed following the pre-remedial sampling.

The post-remedial sampling will be completed during the quarter monitoring event scheduled after the completion of the gypsum injection (assumed to be September 2013).

The modified groundwater monitoring program will be implemented following the post remedial sampling event, pending MDE approval.

4.2 Reporting Schedule

A summary report of the injection event will be submitted concurrently with the subsequent groundwater monitoring report, following completion of the post-remedial sampling.

4.3 Schedule Summary

The following summarizes the project schedule assuming June 2013 CAP approval:

Date	Field Event/Report
May-June 2013	Receive Revised CAP approval. Conduct pre-remedial groundwater sampling event (described in Section 3.2)
July - August 2013	Conduct injections (described in Section 3.3)
September 2013	Conduct post-remedial groundwater sampling event (described in Section 3.4)
October 2013	Submit groundwater monitoring report, and

	report of results
4th Quarter 2013	Conduct quarterly groundwater monitoring event, per modified monitoring program, including evaluation of injection results

5. References

ARCADIS, 2011. Corrective Action Plan, Former Exxon Facility #14489, 285 Old Bayview Road, North East, Maryland. September 2011.

ARCADIS, 2013. First Quarter 2013 Groundwater Monitoring Report, Former Exxon Facility #14489, 285 Old Bayview Road, North East, Maryland. April 2013.

Environmental Science & Engineering, Inc. (ESE). 1991. Extended Site Assessment Report, Mobil Northeast, 285 Old Bayview Road, Northeast, Maryland. May 1991.

Hunter Services, Inc. 1989. Remedial Investigation, Mobil Oil Corporation Retail Facility, 285 Old Bayview Road, Northeast, Maryland. August 1989.

Land Tech Remedial, Inc. Report of Additional Subsurface Site Characterization, Mobil Service Station #16-G1R, Northeast, Maryland. 2 February 1998.

ARCADIS

Tables

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-1A	6/1/2005	97.65	5.23	ND	ND	92.42	**560**	**5,770**	**2,360**	8,970	17,660	**156**	ND(500)	NA	NA	NA	NA	
	12/7/2005	97.65	6.77	ND	ND	90.88	**252**	**2,410**	**2,560**	7,500	12,722	**149**	ND(500)	NA	NA	NA	NA	
	5/24/2006	97.65	6.82	ND	ND	90.83	**97.7**	**1,260**	**1,720**	4,870	7,948	**114**	ND(500)	NA	NA	NA	NA	
	11/7/2006	97.65	5.38	ND	ND	92.27	**116**	703	**1,130**	2,880	4,829	**112**	92.2 J	NA	NA	NA	NA	
	6/21/2007	97.65	6.15	ND	ND	91.50	**145**	**1,750**	**1,020**	3,220	6,135	**53.3**	ND(250)	NA	NA	NA	NA	
	12/11/2007	97.65	7.02	ND	ND	90.63	**212**	**3,730**	**2,380**	8,180	14,502	**133**	ND(500)	NA	NA	NA	NA	
	3/24/2008	97.65	4.94	ND	ND	92.71	**216**	**3,280**	**2,270**	7,550	13,316	**510**	ND(630)	NA	NA	NA	NA	
	6/29/2008	97.65	6.10	ND	ND	91.55	**201**	**2,970**	**1,520**	5,380	10,071	**593**	ND(500)	ND(100)	ND(100)	ND(100)	**378**	
	8/14/2008	97.65	7.12	ND	ND	90.53	**151**	**2,300**	**1,410**	4,460	8,321	**561**	ND(500)	ND(100)	ND(100)	59.2 J	**345**	
	11/20/2008	97.65	7.12	ND	ND	90.53	**150**	**2,330**	**1,860**	6,030	10,370	**398**	ND(630)	ND(130)	ND(130)	58.9 J	**497**	
	2/11/2009	97.65	5.35	ND	ND	92.30	**185**	**2,720**	**1,510**	5,440	9,855	**307**	ND(500)	ND(100)	ND(100)	ND(100)	**375**	
	4/21/2009	97.65	5.08	ND	ND	92.57	**148**	**2,700**	**1,790**	6,230	10,868	**269**	ND(630)	ND(130)	ND(130)	44.0 J	**402**	
	7/31/2009	97.65	6.35	ND	ND	91.30	**101**	**1,460**	**730**	2,760	5,051	**151**	ND(250)	ND(50)	ND(50)	20.1 J	**235**	
	10/13/2009	97.65	4.80	ND	ND	92.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	97.65	5.25	ND	ND	92.40	**62.8**	873	**1,080**	2,830	4,846	**143**	ND(250)	ND(50)	ND(50)	17.2 J	**263**	
	1/12/2010	97.65	4.57	ND	ND	93.08	**162**	**2,430**	**1,350**	4,170	8,112	**139**	ND(250)	ND(50)	ND(50)	24.0 J	**355**	
	4/21/2010	97.65	4.21	ND	ND	93.44	**204**	**3,100**	**1,610**	5,510	10,424	**117**	ND(630)	ND(130)	ND(130)	ND(130)	**369**	
	7/22/2010	97.65	6.74	ND	ND	90.91	**197**	**2,900**	**1,340**	4,780	9,217	**108**	ND(630)	ND(130)	ND(130)	31.4 J	**225**	
	11/23/2010	97.65	6.55	ND	ND	91.10	**51.2**	**1,190**	**1,100**	3,530	5,871	**54.6**	ND(130)	ND(25)	ND(25)	9.0 J	**277**	
	3/2/2011	97.65	4.89	ND	ND	92.76	**60.2**	**1,220**	**1,120**	4,440	6,840	**33.8**	40.4	<1	<1	<1	**218**	
	5/19/2011	97.65	4.82	ND	ND	92.83	**101**	**1,340**	584	2,140	4,165	**28.2**	<20	<1	<1	7.47	**244**	
	7/12/2011	97.65	6.48	ND	ND	91.17	**117**	**2,450**	**1,140**	3,970	7,677	**24.4**	<20	<1	<1	<1	**234**	
	10/24/2011	97.65	5.41	ND	ND	92.24	**57.6**	**1,610**	**1,030**	3,660	6,357.6	**21**	19.1	<1	<1	4.27	**198**	
	2/8/2012	97.65	5.03	ND	ND	92.62	**67.5**	**1,490**	**956**	3,210	5,724	13.8	<10	<1	<1	<1	**187**	
	5/22/2012	97.65	6.83	ND	ND	90.82	**76.7**	**1,910**	**976**	4,140	7,103	13.6	<50	<5	<5	<5	**155**	
	8/14/2012	97.65	8.31	ND	ND	89.34	**66 [64]**	**2,180 [2,210]**	**1,080 [1,030]**	3,950 [3,700]	7,276 [7,004]	17.7 [<1]	<10 [<10]	<2 [<2]	<1 [<1]	<1 [<1]	**182 [192]**	
	10/4/2012	97.65	8.98	ND	ND	88.67	**41.9**	**1,230**	**1,010**	3,860	6,141.9	**29.1**	11.8	<2	<1	5.72	**249**	
	2/22/2013	97.65	5.50	ND	ND	92.15	**63.2**	**1,620**	**1,340**	4,290	7,313	<1	<10	<2	<1	<1	**256**	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	*--*	*20*	*--*	*--*	*--*	*--*	*0.65*	
MW-2A	6/1/2005	97.10	4.74	ND	ND	92.36	**1,740**	595	**2,590**	9,200	14,125	**829**	ND(500)	NA	NA	NA	NA	
	12/7/2005	97.10	5.65	ND	ND	91.45	**1,580**	**2,440**	**2,660**	9,530	16,210	**670**	ND(630)	NA	NA	NA	NA	
	5/24/2006	97.10	5.71	ND	ND	91.39	**1,570**	**4,950**	**2,790**	9,990	19,300	**599**	ND(630)	NA	NA	NA	NA	
	11/7/2006	97.10	4.35	ND	ND	92.75	**964**	**3,090**	**2,550**	8,730	15,334	**413**	189 J	NA	NA	NA	NA	
	6/21/2007	97.10	5.26	ND	ND	91.84	**456**	788	**2,290**	7,470	11,004	**198**	ND(250)	NA	NA	NA	NA	
	12/11/2007	97.10	5.77	ND	ND	91.33	**216**	157	569	1,830	2,772	**86.4**	30.0 J	NA	NA	NA	NA	
	3/24/2008	97.10	4.73	ND	ND	92.37	**747**	529	**1,900**	3,920	7,096	**568**	256 J	NA	NA	NA	NA	
	6/29/2008	97.10	5.66	ND	ND	91.44	**379**	**4,610**	**2,160**	8,620	15,769	**457**	ND(630)	ND(130)	ND(130)	ND(130)	**462**	
	8/14/2008	97.10	5.57	ND	ND	91.53	**489**	**4,240**	**3,310**	8,760	16,799	**531**	ND(630)	ND(130)	ND(130)	46.4 J	**652**	
	11/20/2008	97.10	5.64	5.63	0.01	91.47	**817**	308	**1,770**	5,450	8,345	**624**	ND(250)	ND(50)	ND(50)	55.6	**405**	
	2/11/2009	97.10	4.90	ND	ND	92.20	**567**	**1,220**	**1,330**	4,140	7,257	**680**	215 J	ND(50)	ND(50)	51.6	**306**	
	4/21/2009	97.10	1.82	ND	ND	95.28	**452**	**4,520**	**1,860**	7,870	14,702	**516**	ND(630)	ND(130)	ND(130)	64.0 J	**299**	
	7/31/2009	97.10	5.37	ND	ND	91.73	**191**	**1,830**	**1,270**	4,250	7,541	**341**	ND(250)	ND(50)	ND(50)	38.1 J	**316**	
	10/13/2009	97.10	3.93	ND	ND	93.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	97.10	4.51	ND	ND	92.59	**266**	656	**2,530**	7,620	11,072	**371**	ND(500)	ND(100)	ND(100)	48.5 J	**360**	
	1/12/2010	97.10	4.36	ND	ND	92.74	**699**	231	**2,340**	4,360	7,630	**532**	ND(500)	ND(100)	ND(100)	55.2 J	**402**	
	4/21/2010	97.10	4.04	ND	ND	93.06	**858**	**1,070**	**1,720**	2,690	6,338	**538**	156 J	ND(50)	ND(50)	43.4 J	**325**	
	7/22/2010	97.10	5.10	ND	ND	92.00	**544**	865	**1,590**	5,010	8,009	**430**	ND(250)	ND(50)	ND(50)	54.8	**262**	
	11/23/2010	97.10	5.51	ND	ND	91.59	**220**	367	**2,140**	3,980	5,807	**169**	ND(130)	ND(25)	ND(25)	20.2	**223**	
	3/2/2011	97.10	4.20	ND	ND	92.90	**147**	702	**1,290**	4,920	7,059	**151**	<20	<1	<1	18.4	**232**	
	5/19/2011	97.10	4.40	ND	ND	92.70	**373**	**1,530**	**1,300**	4,050	7,253	**274**	<20	1.07	<1	23.8	**222**	
	7/12/2011	97.10	5.45	ND	ND	91.65	**316**	850	**1,460**	4,690	7,316	**207**	<200	<10	<10	16.4	**243**	
	10/24/2011	97.10	4.30	ND	ND	92.80	**309**	466	**1,240**	4,070	6,085	**171**	38.8	<1	<1	16.6	**200**	
	2/8/2012	97.10	4.73	ND	ND	92.37	**154**	570	**1,280**	3,580	5,584	**115**	<10	<1	<1	10.4	**201**	
	5/22/2012	97.10	5.79	ND	ND	91.31	**216**	443	**1,550**	4,280	6,489	**131**	<50	<5	<5	11.9	**197**	
	8/14/2012	97.10	6.61	ND	ND	90.49	**221**	512	**1,220**	3,820	5,773	**138**	<10	<2	<1	13.5	**252**	
	10/4/2012	97.10	6.93	ND	ND	90.17	**311**	754	**1,000**	3,990	6,055	**179**	41.3	<2	<1	17.3	**187**	
	2/22/2013	97.10	4.58	ND	ND	92.52	**128**	858	**1,350**	3,930	6,266	**73.4**	<10	<2	<1	8.71	**181**	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-3A	6/1/2005	96.99	2.71	ND	ND	94.28	**6.7**	18	31	108	163	19.8	ND(25)	NA	NA	NA	NA	
	12/7/2005	96.99	4.55	ND	ND	92.44	**92.0**	23.3	99.9	128	343	**353**	ND(25)	NA	NA	NA	NA	
	5/24/2006	96.99	2.72	ND	ND	94.27	ND(1.0)	1.1	5.7	19	26	**47.1**	ND(25)	NA	NA	NA	NA	
	11/7/2006	96.99	2.06	ND	ND	94.93	3.4	15.2	36.6	126	181	ND(1.0)	ND(25)	NA	NA	NA	NA	
	6/21/2007	96.99	2.45	ND	ND	94.54	**278**	111	325	991	1,705	**17900**	ND(1300)	NA	NA	NA	NA	
	12/11/2007	96.99	2.25	ND	ND	94.74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**23.2**	ND(25)	NA	NA	NA	NA	
	3/24/2008	96.99	2.41	ND	ND	94.58	0.32 J	7.5	14.8	57	79.2 J	0.64 J	ND(25)	NA	NA	NA	NA	
	6/29/2008	96.99	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Not accessible
	8/14/2008	96.99	5.57	ND	ND	91.42	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	3.7	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/20/2008	96.99	2.21	ND	ND	94.78	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.60 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	96.99	2.75	ND	ND	94.24	**28.0**	13.7	2.8	6	50	**67.2**	26.0	ND(5.0)	ND(5.0)	2.7 J	ND(5.0)	
	4/21/2009	96.99	1.30	ND	ND	95.69	**9.6**	7.6	1.8	4	23	**37.2**	21.2 J	ND(5.0)	ND(5.0)	1.2 J	ND(5.0)	
	7/31/2009	96.99	2.83	ND	ND	94.16	0.25 J	ND(1.0)	ND(1.0)	ND(1.0)	0.25 J	1.4	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/13/2009	96.99	2.10	ND	ND	94.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	96.99	1.90	ND	ND	95.09	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	3.6	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	1/12/2010	96.99	2.45	ND	ND	94.54	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**18.9**	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	96.99	2.26	ND	ND	94.73	**23.8**	14.2	5.2	9	52	**20.9**	7.5 J	ND(5.0)	ND(5.0)	0.98 J	ND(5.0)	
	7/22/2010	96.99	2.85	ND	ND	94.14	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	10.2	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	96.99	4.75	ND	ND	92.24	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	96.99	2.14	ND	ND	94.85	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	5/19/2011	96.99	2.53	ND	ND	94.46	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	7/12/2011	96.99	5.76	ND	ND	91.23	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	10/24/2011	96.99	2.35	ND	ND	94.64	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	2/8/2012	96.99	2.71	ND	ND	94.28	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	5/22/2012	96.99	3.30	ND	ND	93.69	<1 [<1]	<1 [<1]	<1 [<1]	<3 [<3]	BRL [BRL]	<1 [<1]	<10 [<10]	<1 [<1]	<1 [<1]	<1 [<1]	<5 [<5]	
	8/14/2012	96.99	7.62	ND	ND	89.37	<1	<1	<1	<3	BRL	8.07	<10	<2	<1	<1	<5	
	10/4/2012	96.99	8.63	ND	ND	88.36	**8.24**	<1	<1	<3	8.24	**33.4**	14.1	<2	<1	1.12	<5	
	2/22/2013	96.99	2.48	ND	ND	94.51	1.31	<1	<1	<3	1.31	1.37	<10	<2	<1	<1	<5	
MW-4	6/1/2005	97.26	2.55	ND	ND	94.71	**6.9**	3.8	4.7	10.8	26.2	13.8	ND(25)	NA	NA	NA	NA	
	12/7/2005	97.26	2.77	ND	ND	94.49	2.9	0.81 J	7.6	5.7	17.0 J	5.3	ND(25)	NA	NA	NA	NA	
	5/24/2006	97.26	2.82	ND	ND	94.44	0.38 J	4.0	16.9	48.1	69.4 J	11.8	ND(25)	NA	NA	NA	NA	
	11/7/2006	97.26	2.48	ND	ND	94.78	2.1	2.4	9.3	31.8	45.6	**291**	ND(25)	NA	NA	NA	NA	
	6/21/2007	97.26	2.73	ND	ND	94.53	**22.9**	30.8	21.8	81.1	156.6	**934**	ND(100)	NA	NA	NA	NA	
	12/11/2007	97.26	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Monitoring well destroyed.

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)** *5*	**Toluene (µg/L)** *1,000*	**Ethyl-benzene (µg/L)** *700*	**Total Xylenes (µg/L)** *10,000*	**Total BTEX (µg/L)** *--*	**MTBE (µg/L)** *20*	**TBA (µg/L)** *--*	**DIPE (µg/L)** *--*	**ETBE (µg/L)** *--*	**TAME (µg/L)** *--*	**Naph-thalene (µg/L)** *0.65*	**Comments**
MW-5A	6/1/2005	95.02	2.40	ND	ND	92.62	**132**	**1,360**	**1,670**	7,270	10,432	ND(10)	ND(250)	NA	NA	NA	NA	
	12/7/2005	95.02	3.25	ND	ND	91.77	**58.2**	230	**1130**	3,420	4,838	ND(10)	ND(250)	NA	NA	NA	NA	
	5/24/2006	95.02	3.72	ND	ND	91.30	**22.4**	144	661	1,840	2,667	ND(5.0)	ND(130)	NA	NA	NA	NA	
	11/7/2006	95.02	2.09	ND	ND	92.93	**136**	868	**1,370**	4,780	7,154	ND(5.0)	ND(130)	NA	NA	NA	NA	
	6/21/2007	95.02	5.35	ND	ND	89.67	**49.7**	460	**929**	2,750	4,189	ND(5.0)	ND(130)	NA	NA	NA	NA	
	12/11/2007	95.02	3.63	ND	ND	91.39	**20.1**	62.3	**831**	2,520	3,433	ND(10)	ND(250)	NA	NA	NA	NA	
	3/24/2008	95.02	2.60	ND	ND	92.42	**56.2**	306	**855**	1,940	3,157	ND(5)	ND(130)	NA	NA	NA	NA	
	6/29/2008	95.02	4.04	ND	ND	90.98	**38.5**	251	**920**	3,200	4,410	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**246**	
	8/14/2008	95.02	4.32	ND	ND	90.70	**26.0**	139	**766**	2,910	3,841	ND(5.0)	ND(130)	ND(25)	ND(25)	ND(25)	**242**	
	11/20/2008	95.02	2.42	ND	ND	92.60	**111**	856	**1,180**	4,070	6,217	ND(20)	ND(500)	ND(100)	ND(100)	ND(100)	**362**	
	2/11/2009	95.02	2.48	ND	ND	92.54	**76.0**	900	**1,170**	4,510	6,656	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**347**	
	4/21/2009	95.02	4.76	ND	ND	90.26	**29.9**	236	574	1,920	2,760	ND(5.0)	ND(130)	ND(25)	ND(25)	ND(25)	**176**	
	7/31/2009	95.02	2.87	ND	ND	92.15	**17.3**	108	488	1,570	2,183	ND(5.0)	ND(130)	ND(25)	ND(25)	ND(25)	**169**	
	10/13/2009	95.02	2.57	ND	ND	92.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	95.02	2.06	ND	ND	92.96	**41.3**	207	**876**	2,800	3,924	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**251**	
	1/12/2010	95.02	1.10	ND	ND	93.92	**54.6**	609	**1,050**	3,800	5,514	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**269**	
	4/21/2010	95.02	1.44	ND	ND	93.58	**89.3**	942	**1,230**	4,710	6,971	ND(5.0)	ND(130)	ND(25)	ND(25)	ND(25)	**295**	
	7/22/2010	95.02	3.87	ND	ND	91.15	**45.6**	306	**1,030**	3,600	4,982	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**239**	
	11/23/2010	95.02	3.53	ND	ND	91.49	**86.0**	531	**1,210**	4,070	5,897	ND(10)	ND(250)	ND(50)	ND(50)	ND(50)	**294**	
	3/2/2011	95.02	2.41	ND	ND	92.61	**32.1**	168	**841**	2,250	3,291.1	<1	<20	<1	<1	<1	**227**	
	5/19/2011	95.02	2.59	ND	ND	92.43	**14.1**	162	555	1,730	2,461.1	<1	<20	<1	<1	<1	**148**	
	7/12/2011	95.02	3.92	ND	ND	91.10	**35.5**	323	**898**	2,530	3,786.5	<1	<20	<1	<1	<1	**267**	
	10/24/2011	95.02	2.18	ND	ND	92.84	**49.1**	324	**887**	2,700	3,960.1	<1	<10	<1	<1	<1	**248**	
	2/8/2012	95.02	2.08	ND	ND	92.94	**34.3**	425	**1,070**	3,320	4,849	<1	<10	<1	<1	<1	**244**	
	5/22/2012	95.02	3.41	ND	ND	91.61	**20.5**	239	**805**	2,530	3594.5	<5	<50	<5	<5	<5	**157**	
	8/14/2012	95.02	6.23	ND	ND	88.79	**21.5**	165	**726**	2,130	3,042.5	<1	<10	<2	<1	<1	**189**	
	10/4/2012	95.02	7.23	ND	ND	87.79	**27.4 [26.1]**	152 [147]	**819 [845]**	2,460 [2,510]	3,508.4 [3,528.1]	<1 [<1]	<10 [<10]	<2 [<2]	<1 [<1]	<1 [<1]	**250 [232]**	
	2/22/2013	95.02	2.75	ND	ND	92.27	**21.1**	124	**901**	2,570	3,616.1	<1	<10	<2	<1	<1	**181**	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-8	12/7/2005	97.04	2.56	ND	ND	94.48	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	5/24/2006	97.04	2.61	ND	ND	94.43	ND(1.0)	2.0	10.3	34	46	**24.3**	ND(25)	NA	NA	NA	NA	
	11/7/2006	97.04	2.27	ND	ND	94.77	ND(1.0)	4.1	13.9	49	67	ND(1.0)	ND(25)	NA	NA	NA	NA	
	6/21/2007	97.04	2.53	ND	ND	94.51	**104**	27.7	130	644	906	**8870**	ND(500)	NA	NA	NA	NA	
	12/11/2007	97.04	2.28	ND	ND	94.76	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	3/24/2008	97.04	2.46	ND	ND	94.58	ND(1)	0.3 J	0.7 J	2	2.9 J	18.9	ND(25)	NA	NA	NA	NA	
	6/29/2008	97.04	2.92	ND	ND	94.12	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	13.5	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	8/14/2008	97.04	3.02	ND	ND	94.02	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.6	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/20/2008	97.04	2.30	ND	ND	94.74	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	97.04	2.67	ND	ND	94.37	0.34 J	ND(1.0)	ND(1.0)	ND(1.0)	0.34 J	**86.2**	13.8 J	ND(5.0)	ND(5.0)	0.84 J	ND(5.0)	
	4/21/2009	97.04	1.90	ND	ND	95.14	0.58 J	ND(1.0)	ND(1.0)	ND(1.0)	0.58 J	**52.3**	86.4	ND(5.0)	ND(5.0)	0.95 J	ND(5.0)	
	7/31/2009	97.04	2.55	ND	ND	94.49	0.91 J	9.2	3.3	10	23.0 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/13/2009	97.04	3.00	ND	ND	94.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	97.04	4.65	ND	ND	92.39	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	1/12/2010	97.04	2.59	ND	ND	94.45	2.2	ND(1.0)	1.3	0.95 J	4.5 J	**71.8**	ND(25)	ND(5.0)	ND(5.0)	3.8 J	ND(5.0)	
	4/21/2010	97.04	2.46	ND	ND	94.58	0.28 J	ND(1.0)	ND(1.0)	ND(1.0)	0.28 J	18.5	20.5 J	ND(5.0)	ND(5.0)	0.71 J	ND(5.0)	
	7/22/2010	97.04	2.65	ND	ND	94.39	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.62 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	97.04	2.90	ND	ND	94.14	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	97.04	2.01	ND	ND	95.03	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	5/19/2011	97.04	2.53	ND	ND	94.51	<1	<1	<1	<3	BRL	2.76	<20	<1	<1	<1	<5	
	7/12/2011	97.04	4.65	ND	ND	92.39	<1	11.5	15	56.3	82.8	<1	<20	<1	<1	<1	<5	
	10/24/2011	97.04	2.59	ND	ND	94.45	<1 [<1]	<1 [<1]	<1 [<1]	<3 [<3]	BRL	1.32 [1.45]	<10 [<10]	<1 [<1]	<1 [<1]	<1 [<1]	<5 [<5]	
	2/8/2012	97.04	2.81	ND	ND	94.23	<1 [<1]	<1 [<1]	<1 [<1]	<3 [<3]	BRL [BRL]	3.46 [3.86]	<10 [<10]	<1 [<1]	<1 [<1]	<1 [<1]	<5 [<5]	
	5/22/2012	97.04	2.85	ND	ND	94.19	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	8/14/2012	97.04	3.34	ND	ND	93.70	1.32	<1	<1	<3	1.32	7.33	<10	<2	<1	<1	<5	
	10/4/2012	97.04	5.65	ND	ND	91.39	<1	<1	<1	<3	BRL	<1	<10	<2	<1	<1	<5	
	2/22/2013	97.04	2.51	ND	ND	94.53	<1	<1	<1	<3	BRL	1.01	<10	<2	<1	<1	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)** *5*	**Toluene (µg/L)** *1,000*	**Ethyl-benzene (µg/L)** *700*	**Total Xylenes (µg/L)** *10,000*	**Total BTEX (µg/L)** *--*	**MTBE (µg/L)** *20*	**TBA (µg/L)** *--*	**DIPE (µg/L)** *--*	**ETBE (µg/L)** *--*	**TAME (µg/L)** *--*	**Naph-thalene (µg/L)** *0.65*	**Comments**
MW-10	6/1/2005	93.35	3.82	ND	ND	89.53	**9**	1	4	7	21	9.3	ND(25)	NA	NA	NA	NA	
	12/7/2005	93.35	4.51	ND	ND	88.84	**24.7**	0.38 J	26.8	8	59.4 J	19.6	ND(25)	NA	NA	NA	NA	
	5/24/2006	93.35	4.67	ND	ND	88.68	**13.3**	0.52 J	5.8	4	23.6 J	**45.7**	25.3	NA	NA	NA	NA	
	11/7/2006	93.35	4.04	ND	ND	89.31	**11.2**	38.1	83.9	266	399	**164**	127	NA	NA	NA	NA	
	6/21/2007	93.35	4.54	ND	ND	88.81	**18.9**	7.4	20.1	46	93	**42.5**	ND(25)	NA	NA	NA	NA	
	12/11/2007	93.35	3.73	ND	ND	89.62	0.85 J	2.6	10.1	28	41.1 J	**22.5**	ND(25)	NA	NA	NA	NA	
	3/24/2008	93.35	4.10	ND	ND	89.25	0.39 J	3.4	7.9	21	32.3 J	6.7	ND(25)	NA	NA	NA	NA	
	6/29/2008	93.35	4.40	ND	ND	88.95	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	8/14/2008	93.35	4.75	ND	ND	88.60	ND(1.0)	ND(1.0)	ND(1.0)	0.45 J	0.45 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/20/2008	93.35	4.56	ND	ND	88.79	3.6	ND(1.0)	2.0	ND(1.0)	6	11.6	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	93.35	4.27	ND	ND	89.08	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	3.0	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2009	93.35	2.72	ND	ND	90.63	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.4	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/31/2009	93.35	4.31	ND	ND	89.04	ND(1.0)	0.65 J	0.30 J	0.69 J	1.64 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/13/2009	93.35	3.87	ND	ND	89.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	93.35	3.33	ND	ND	90.02	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.40 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	1/12/2010	93.35	3.41	ND	ND	89.94	0.30 J	ND(1.0)	ND(1.0)	ND(1.0)	0.30 J	2.7	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	93.35	2.94	ND	ND	90.41	ND(1.0)	0.40 J	1.2	4	5.8 J	0.57 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/22/2010	93.35	4.41	ND	ND	88.94	ND(1.0)	0.58 J	0.61 J	2	3.2 J	1.6	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	93.35	4.71	ND	ND	88.64	5	0.82 J	13.5	5	24.2 J	**40.3**	30.4	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	93.35	3.96	ND	ND	89.39	<1	<1	<1	<3	BRL	1.37	<20	<1	<1	<1	<5	
	5/19/2011	93.35	3.55	ND	ND	89.80	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	7/12/2011	93.35	4.40	ND	ND	88.95	<1	<1	<1	<3	BRL	15.4	<20	<1	<1	<1	<5	
	10/24/2011	93.35	4.07	ND	ND	89.28	<1	<1	<1	<3	BRL	19.3	<10	<1	<1	<1	<5	
	2/8/2012	93.35	4.10	ND	ND	89.25	<1	<1	<1	<3	BRL	2.49	<10	<1	<1	<1	<5	
	5/22/2012	93.35	4.76	ND	ND	88.59	<1	<1	<1	<3	BRL	17	<10	<1	<1	<1	<5	
	8/14/2012	93.35	4.15	ND	ND	89.20	<1	<1	1.07	<3	1.07	**27.3**	28.7	<2	<1	<1	<5	
	10/4/2012	93.35	4.35	ND	ND	89.00	<1	<1	<1	<3	BRL	10.5	<10	<2	<1	<1	<5	
	2/22/2013	93.35	4.35	ND	ND	89.00	<1	<1	<1	<3	BRL	<1	<10	<2	<1	<1	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-11	6/1/2005	96.64	7.84	ND	ND	88.80	**461**	**1,410**	**1,690**	5,380	8,941	**748**	185	NA	NA	NA	NA	
	12/7/2005	96.64	8.48	ND	ND	88.16	**504**	488	**839**	2,500	4,331	**614**	ND(130)	NA	NA	NA	NA	
	5/24/2006	96.64	8.52	ND	ND	88.12	**270**	317	**729**	1,920	3,236	**422**	ND(130)	NA	NA	NA	NA	
	11/7/2006	96.64	6.10	ND	ND	90.54	**148**	117	463	921	1,649	**206**	55.8	NA	NA	NA	NA	
	6/21/2007	96.64	8.16	ND	ND	88.48	**102**	64.0	341	423	930	**185**	ND(25)	NA	NA	NA	NA	
	12/11/2007	96.64	9.15	ND	ND	87.49	**275**	307	**833**	2,060	3,475	**328**	ND(250)	NA	NA	NA	NA	
	3/24/2008	96.64	6.07	ND	ND	90.57	**135**	117	443	1,160	1,855	**289**	69.3 J	NA	NA	NA	NA	
	6/29/2008	96.64	7.96	ND	ND	88.68	**14.0**	12.4	12.7	159	198	**65.4**	ND(25)	ND(5.0)	ND(5.0)	4.2 J	**19.0**	
	8/14/2008	96.64	7.78	ND	ND	88.86	3.0	0.42 J	0.96 J	6	10.5 J	**36.7**	ND(25)	ND(5.0)	ND(5.0)	0.92 J	**2.1 J**	
	11/20/2008	96.64	9.18	ND	ND	87.46	**131**	89.5	**738**	1,570	2,529	**214**	ND(130)	ND(25)	ND(25)	ND(25)	**212**	
	2/11/2009	96.64	6.87	ND	ND	89.77	**65.8**	63.1	333	781	1,243	**149**	34.8	ND(5.0)	ND(5.0)	10.7	**87.3**	
	4/21/2009	96.64	5.68	ND	ND	90.96	**60.6**	48.9	360	758	1,228	**142**	34.5 J	ND(13)	ND(13)	10.9 J	**84.9**	
	7/31/2009	96.64	8.45	ND	ND	88.19	**60.4**	47.0	521	523	1,151	**169**	ND(50)	ND(10)	ND(10)	11.9	**118**	
	10/13/2009	96.64	6.73	ND	ND	89.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	96.64	6.23	ND	ND	90.41	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	16.1	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	1/12/2010	96.64	5.22	ND	ND	91.42	**8.9**	4.5	70.9	95	180	19.2	ND(25)	ND(5.0)	ND(5.0)	1.4 J	**16.0**	
	4/21/2010	96.64	4.93	ND	ND	91.71	**29.6**	11.3	198	241	480	**76.1**	16.2 J	ND(5.0)	ND(5.0)	4.5 J	**51.8**	
	7/22/2010	96.64	9.31	ND	ND	87.33	**78.7**	64.2	**884**	1,210	2,237	**206**	ND(63)	ND(13)	ND(13)	17.4	**213**	
	11/23/2010	96.64	8.85	ND	ND	87.79	**103**	65.4	422	566	1,156	**176**	30.8	ND(5.0)	ND(5.0)	11.8	**143**	
	3/2/2011	96.64	5.96	ND	ND	90.68	**4.64**	4	47	66	121	12.8	<20	<1	<1	<1	**9.29**	
	5/19/2011	96.64	5.99	ND	ND	90.65	**16.4**	12	126	203	357	**41.7**	<20	<1	<1	<1	**35.2**	
	7/12/2011	96.64	8.58	ND	ND	88.06	**51.6**	37.8	432	487	1,008.4	**120**	<20	<1	<1	8.06	**87.5**	
	10/24/2011	96.64	6.36	ND	ND	90.28	**15.6**	12	158	218	403.6	**36.4**	<10	<1	<1	2.31	**44.8**	
	2/8/2012	96.64	5.96	ND	ND	90.68	**9.95**	10.4	143	228	391	**26**	<10	<1	<1	<1	**41.5**	
	5/22/2012	96.64	9.10	ND	ND	87.54	**31.4**	17	291	404	743.4	**87.4**	13.3	<1	<1	6.17	**65.9**	
	8/14/2012	96.64	10.51	ND	ND	86.13	**71.2**	56.8	**848**	1,270	2,246.0	**142**	<10	<2	<1	9.86	**157**	
	10/4/2012	96.64	10.82	ND	ND	85.82	**103**	72.9	667	967	1,809.9	**148**	32.7	<2	<1	12.1	**193**	
	2/22/2013	96.64	6.40	ND	ND	90.24	**8.17 [10.2]**	4.39 [6.51]	92.7 [129]	70.3 [125]	175.56 [270.71]	<1 [14.1]	<10 [<10]	<2 [<2]	<1 [<1]	<1 [1.1]	**24.6 [9.39]**	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-12	6/1/2005	100.00	10.50	ND	ND	89.50	3.6	ND(2)	ND(2)	ND(2)	3.6	**283**	ND(50)	NA	NA	NA	NA	
	12/7/2005	100.00	12.65	ND	ND	87.35	0.45 J	ND(1.0)	0.72 J	1.3	2.5 J	**135**	ND(25)	NA	NA	NA	NA	
	5/24/2006	100.00	13.16	ND	ND	86.84	4.0	25.1	31.7	101	162	**198**	ND(50)	NA	NA	NA	NA	
	11/7/2006	100.00	8.19	ND	ND	91.81	1.2	7.6	26.9	75.0	110.7	**161**	ND(25)	NA	NA	NA	NA	
	6/21/2007	100.00	12.97	ND	ND	87.03	1.8	7.3	15.4	48.6	73.1	**224**	ND(25)	NA	NA	NA	NA	
	12/11/2007	100.00	15.78	ND	ND	84.22	ND(1.0)	0.92 J	16.6	56.3	73.8 J	**25.7**	ND(25)	NA	NA	NA	NA	
	3/24/2008	100.00	7.98	ND	ND	92.02	0.84 J	0.38 J	1.3	4.1	6.6 J	**144**	11.2 J	NA	NA	NA	NA	
	6/29/2008	100.00	12.35	ND	ND	87.65	0.85 J	ND(1.0)	ND(1.0)	ND(1.0)	0.85 J	**153**	9.8 J	ND(5.0)	ND(5.0)	27.4	**1.4 J**	
	8/14/2008	100.00	13.85	ND	ND	86.15	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**126**	ND(25)	ND(5.0)	ND(5.0)	21.6	ND(5.0)	
	11/20/2008	100.00	14.53	ND	ND	85.47	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**56.0**	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	100.00	9.07	ND	ND	90.93	0.31 J	ND(1.0)	0.31 J	0.81 J	1.43 J	**114**	ND(25)	ND(5.0)	ND(5.0)	14.3	**1.4 J**	
	4/21/2009	100.00	8.62	ND	ND	91.38	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**96.7**	13.2 J	ND(5.0)	ND(5.0)	16.6	ND(5.0)	
	7/31/2009	100.00	13.86	ND	ND	86.14	ND(1.0)	1.5	0.61 J	1.6	3.7 J	**96.7**	ND(25)	ND(5.0)	ND(5.0)	18.0	ND(5.0)	
	10/13/2009	100.00	10.90	ND	ND	89.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	100.00	8.54	ND	ND	91.46	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	**38.8**	ND(25)	ND(5.0)	ND(5.0)	4.9 J	ND(5.0)	
	1/12/2010	100.00	7.36	ND	ND	92.64	0.32 J	ND(1.0)	ND(1.0)	ND(1.0)	0.32 J	**90.4**	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	100.00	7.39	ND	ND	92.61	1.4	ND(1.0)	0.86 J	0.64 J	2.9 J	**80.9**	9.5 J	ND(5.0)	ND(5.0)	13.2	**2.6 J**	
	7/22/2010	100.00	15.90	ND	ND	84.10	ND(1.0)	1.1	1.3	5.0	7.4	**53.0**	ND(25)	ND(5.0)	ND(5.0)	13.1	ND(5.0)	
	11/23/2010	100.00	14.50	ND	ND	85.50	ND(1.0)	ND(1.0)	0.42 J	1.4	1.8 J	19.1	ND(25)	ND(5.0)	ND(5.0)	3.2 J	ND(5.0)	
	3/2/2011	100.00	7.72	ND	ND	92.28	<1 [<1]	<1 [<1]	<1 [<1]	<3 [<3]	BRL	**36.8 [35.5]**	<20 [<20]	<1 [<1]	<1 [<1]	6.32 [5.99]	<5 [<5]	
	5/19/2011	100.00	8.63	ND	ND	91.37	<1 [<1]	<1 [<1]	1.15 [1.02]	<3 [<3]	BRL	**60.9 [54.1]**	<20 [<20]	<1 [<1]	<1 [<1]	<1 [10.6]	**5.01 [<5]**	
	7/12/2011	100.00	14.09	ND	ND	85.91	<1	<1	<1	<3	BRL	**37**	<20	<1	<1	6.78	<5	
	10/24/2011	100.00	8.48	ND	ND	91.52	<1	1.62	<1	<3	1.62	**28.9**	<10	<1	<1	4.82	<5	
	2/8/2012	100.00	8.33	ND	ND	91.67	<1	<1	<1	<3	BRL	**43.9**	<10	<1	<1	<1	<5	
	5/22/2012	100.00	14.55	ND	ND	85.45	<1	<1	<1	<3	BRL	**27.1**	<10	<1	<1	4.11	<5	
	8/14/2012	100.00	17.95	ND	ND	82.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	10/4/2012	100.00	dry	ND	ND	>100.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	2/22/2013	100.00	8.42	ND	ND	91.58	<1	<1	<1	<3	BRL	9.48	<10	<2	<1	1.41	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)** *5*	**Toluene (µg/L)** *1,000*	**Ethyl-benzene (µg/L)** *700*	**Total Xylenes (µg/L)** *10,000*	**Total BTEX (µg/L)** --	**MTBE (µg/L)** *20*	**TBA (µg/L)** --	**DIPE (µg/L)** --	**ETBE (µg/L)** --	**TAME (µg/L)** --	**Naph-thalene (µg/L)** *0.65*	**Comments**
MW-13	6/1/2005	94.38	9.60	ND	ND	84.78	0.99 J	11.7	62.3	225	300 J	2.2	ND(25)	NA	NA	NA	NA	
	12/7/2005	94.38	10.93	ND	ND	83.45	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	5/24/2006	94.38	12.06	ND	ND	82.32	1.4	16.3	25.5	83.9	127.1	ND(1.0)	ND(25)	NA	NA	NA	NA	
	11/7/2006	94.38	7.87	ND	ND	86.51	ND(1.0)	1.5	7.3	21.2	30.0	ND(1.0)	ND(25)	NA	NA	NA	NA	
	6/21/2007	94.38	11.29	ND	ND	83.09	ND(1.0)	7.0	15.4	48.0	70.4	ND(1.0)	ND(25)	NA	NA	NA	NA	
	12/11/2007	94.38	11.61	ND	ND	82.77	ND(1.0)	0.76 J	10.5	31.0	42.3 J	ND(1.0)	ND(25)	NA	NA	NA	NA	
	3/24/2008	94.38	7.58	ND	ND	86.80	ND(1)	1.8	21.8	63.7	87.3	2.1	ND(25)	NA	NA	NA	NA	
	6/29/2008	94.38	11.11	ND	ND	83.27	ND(1.0)	ND(1.0)	ND(1.0)	0.91 J	0.91 J	0.46 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	8/14/2008	94.38	12.62	ND	ND	81.76	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/20/2008	94.38	11.97	ND	ND	82.41	ND(1.0)	ND(1.0)	0.56 J	1.3	1.9 J	0.64 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	94.38	9.52	ND	ND	84.86	ND(1.0)	2.0	25.3	73.5	100.8	3.5	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	**11.8**	
	4/21/2009	94.38	3.75	ND	ND	90.63	ND(1.0)	0.45 J	8.0	18.3	26.8 J	1.7	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	**3.2 J**	
	7/31/2009	94.38	12.49	ND	ND	81.89	1.2	1.3	2.1	9.3	13.9	5.5	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	**5.3**	
	10/13/2009	94.38	10.00	ND	ND	84.38	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/27/2009	94.38	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	1/12/2010	94.38	6.36	ND	ND	88.02	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	94.38	6.55	ND	ND	87.83	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	1.5	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/22/2010	94.38	14.77	ND	ND	79.61	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	94.38	14.40	ND	ND	79.98	ND(1.0)	ND(1.0)	0.44 J	1.1	1.5 J	0.46 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	94.38	4.58	ND	ND	89.80	<1	<1	5.25	11.8	17	<1	<20	<1	<1	<1	<5	
	5/19/2011	94.38	8.85	ND	ND	85.53	<1	<1	13.9	46.5	60	3.27	<20	<1	<1	<1	**7.24**	
	7/12/2011	94.38	12.63	ND	ND	81.75	<1	<1	14	43	57	5.76	<20	<1	<1	<1	**17.1**	
	10/24/2011	94.38	6.83	ND	ND	87.55	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	2/8/2012	94.38	5.90	ND	ND	88.48	<1	<1	1.78	3.88	6	<1	<10	<1	<1	<1	<5	
	5/22/2012	94.38	13.05	ND	ND	81.33	<1	<1	2.72	<3	2.72	2.09	<10	<1	<1	<1	<5	
	8/14/2012	94.38	17.93	ND	ND	76.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	10/4/2012	94.38	17.96	ND	ND	76.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	2/22/2013	94.38	6.63	ND	ND	87.75	<1	<1	2.8	5.07	7.87	<1	<10	<2	<1	<1	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	*--*	*20*	*--*	*--*	*--*	*--*	*0.65*	
MW-14	6/1/2005	93.10	11.90	ND	ND	81.20	**456**	51.1	50.8	144	702	**102**	ND(50)	NA	NA	NA	NA	
	12/7/2005	93.10	11.58	ND	ND	81.52	ND(1.0)	5.3	ND(1.0)	ND(1.0)	5.3	ND(1.0)	ND(25)	NA	NA	NA	NA	
	5/24/2006	93.10	12.88	ND	ND	80.22	**66.7**	14.8	23.5	86.1	191.1	**25.9**	23.2 J	NA	NA	NA	NA	
	11/7/2006	93.10	8.87	ND	ND	84.23	**62.9**	3.1	8.8	35.9	110.7	**28.5**	24.4 J	NA	NA	NA	NA	
	6/21/2007	93.10	12.69	ND	ND	80.41	**580**	75.8	87.3	225	968	**142**	141	NA	NA	NA	NA	
	12/11/2007	93.10	10.25	ND	ND	82.85	ND(1.0)	0.31 J	2.9	9.5	12.7 J	ND(1.0)	ND(25)	NA	NA	NA	NA	
	3/24/2008	93.10	8.40	ND	ND	84.70	4.7	0.41 J	0.47 J	1	7 J	5.3	ND(25)	NA	NA	NA	NA	
	6/29/2008	93.10	12.50	ND	ND	80.60	**27.0**	2.8	1.7	19.8	51.3	**32.5**	11.3 J	ND(5.0)	ND(5.0)	ND(5.0)	**2.9 J**	
	8/14/2008	93.10	14.52	ND	ND	78.58	**104**	0.33 J	1.3	11.5	117 J	**61.7**	42.2	0.80 J	ND(5.0)	ND(5.0)	**15.9**	
	11/20/2008	93.10	12.32	ND	ND	80.78	0.72 J	ND(1.0)	ND(1.0)	ND(1.0)	0.72 J	2.4	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	93.10	10.33	ND	ND	82.77	**19.8**	1.1	1.2	2.7	24.8	18.2	11.3 J	ND(5.0)	ND(5.0)	ND(5.0)	**1.5 J**	
	4/21/2009	93.10	7.85	ND	ND	85.25	2.0	ND(1.0)	ND(1.0)	ND(1.0)	2.0	3.6	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/31/2009	93.10	13.09	ND	ND	80.01	**109**	4.9	1.7	33.1	149	**69.6**	44.2	1.1 J	ND(5.0)	ND(5.0)	**11.2**	
	10/13/2009	93.10	11.37	ND	ND	81.73	**41.7**	4.4	ND(1.0)	7.3	53.4	**23.7**	17.1 J	0.38 J	ND(5.0)	ND(5.0)	**6.0**	
	10/27/2009	93.10	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	1/12/2010	93.10	8.54	ND	ND	84.56	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	7.1	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	93.10	5.98	ND	ND	87.12	**45**	10.1	9.0	38.0	102.1	**39.6**	21.4 J	0.57 J	ND(5.0)	ND(5.0)	**10.4**	
	7/22/2010	93.10	15.94	ND	ND	77.16	**118**	0.61 J	0.90 J	20.4	140 J	**109**	100	1.9 J	ND(5.0)	ND(5.0)	**28.8**	
	11/23/2010	93.10	17.50	ND	ND	75.60	ND(1.0)	0.50 J	0.54 J	0.27 J	1.31 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	**1.6 J**	
	3/2/2011	93.10	7.59	ND	ND	85.51	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	5/19/2011	93.10	9.91	ND	ND	83.19	**28.1**	17.9	22.4	62.7	131	**49.4**	<20	<1	<1	<1	**8.02**	
	7/12/2011	93.10	13.98	ND	ND	79.12	**161 [151]**	<1 [<1]	11.5 [9.9]	61.9 [52.7]	234.4 [213.6]	**79.1 [78.4]**	31.7 [31.1]	<1 [<1]	<1 [<1]	1.29 [1.27]	**42.2 [35.7]**	
	10/24/2011	93.10	9.91	ND	ND	83.19	**14.6 [13.3]**	<1 [<1]	<1 [<1]	4.11 [3.67]	18.71 [16.97]	14.1 [13]	<10 [<10]	<1 [<1]	<1 [<1]	<1 [<1]	<5 [<5]	
	2/8/2012	93.10	9.09	ND	ND	84.01	**9.79**	<1	<1	6.09	16	17.4	<10	<1	<1	<1	<5	
	5/22/2012	93.10	15.07	ND	ND	78.03	**22.4**	<1	<1	<3	22.4	**65.1**	13	<1	<1	<1	**7.29**	
	8/14/2012	93.10	18.05	ND	ND	75.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	10/4/2012	93.10	dry	ND	ND	>93.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	insufficient volume for sample
	2/22/2013	93.10	9.57	ND	ND	83.53	<1	1.32	3.46	12.2	16.98	<1	<10	<2	<1	<1	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-15	6/1/2005	92.40	8.31	ND	ND	84.09	1.6	ND(1.0)	0.87 J	2.3	4.8 J	ND(1.0)	ND(25)	NA	NA	NA	NA	
	12/7/2005	92.40	6.02	ND	ND	86.38	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	5/24/2006	92.40	8.51	ND	ND	83.89	0.68 J	8.5	15.8	51.7	76.7 J	ND(1.0)	ND(25)	NA	NA	NA	NA	
	11/7/2006	92.40	5.32	ND	ND	87.08	ND(1.0)	2.7	10.7	31.9	45.3	ND(1.0)	ND(25)	NA	NA	NA	NA	
	6/21/2007	92.40	11.29	ND	ND	81.11	1.8	5.0	11.6	35.5	53.9	ND(1.0)	ND(25)	NA	NA	NA	NA	
	12/11/2007	92.40	7.31	ND	ND	85.09	ND(1.0)	ND(1.0)	1.6	5.3	6.9	ND(1.0)	ND(25)	NA	NA	NA	NA	
	3/24/2008	92.40	5.22	ND	ND	87.18	0.78 J	ND(1)	ND(1)	ND(1)	0.78 J	ND(1)	ND(25)	NA	NA	NA	NA	
	6/29/2008	92.40	7.79	ND	ND	84.61	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	8/14/2008	92.40	9.00	ND	ND	83.40	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/20/2008	92.40	4.84	ND	ND	87.56	1.2	ND(1.0)	ND(1.0)	ND(1.0)	1.2	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	92.40	6.66	ND	ND	85.74	2.3	ND(1.0)	0.63 J	0.65 J	3.6 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	**2.0 J**	
	4/21/2009	92.40	1.90	ND	ND	90.50	0.60 J	ND(1.0)	ND(1.0)	ND(1.0)	0.60 J	1.1	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/31/2009	92.40	8.55	ND	ND	83.85	0.55 J	4.7	1.5	4.6	11.4 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/13/2009	92.40	7.90	ND	ND	84.50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/27/2009	92.40	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	1/12/2010	92.40	5.21	ND	ND	87.19	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	92.40	5.88	ND	ND	86.52	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/22/2010	92.40	10.31	ND	ND	82.09	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	92.40	11.14	ND	ND	81.26	1.7	ND(1.0)	0.34 J	0.27 J	2.3 J	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	92.40	3.94	ND	ND	88.46	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	5/19/2011	92.40	6.56	ND	ND	85.84	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	7/12/2011	92.40	8.88	ND	ND	83.52	1.4	<1	<1	<3	1.4	<1	<20	<1	<1	<1	<5	
	10/24/2011	92.40	6.76	ND	ND	85.64	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	2/8/2012	92.40	7.45	ND	ND	84.95	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	5/22/2012	92.40	9.45	ND	ND	82.95	1.89	<1	<1	<3	1.89	<1	<10	<1	<1	<1	<5	
	8/14/2012	92.40	11.82	ND	ND	80.58	4.05	<1	1.88	<3	5.93	<1	<10	<2	<1	<1	<5	
	10/4/2012	92.40	13.96	ND	ND	78.44	**10.5**	<1	8.57	<3	19.07	<1	<10	<2	<1	<1	<5	
	2/22/2013	92.40	6.10	ND	ND	86.30	<1	<1	<1	<3	BRL	<1	<10	<2	<1	<1	<5	

Table 1
Groundwater Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

		Gauging Data					Analytical Data											
Well ID	**Date**	**Top of Casing Elevation (feet)**	**Depth to Water (feet)**	**Depth to Hydro-carbon (feet)**	**Hydro-carbon Thickness (feet)**	**Corrected GW Elevation (feet)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethyl-benzene (µg/L)**	**Total Xylenes (µg/L)**	**Total BTEX (µg/L)**	**MTBE (µg/L)**	**TBA (µg/L)**	**DIPE (µg/L)**	**ETBE (µg/L)**	**TAME (µg/L)**	**Naph-thalene (µg/L)**	**Comments**
							5	*1,000*	*700*	*10,000*	--	*20*	--	--	--	--	*0.65*	
MW-16	6/1/2005	90.30	7.42	ND	ND	82.88	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	12/7/2005	90.30	6.12	ND	ND	84.18	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	NA	NA	NA	NA	
	5/24/2006	90.30	7.50	ND	ND	82.80	ND(1.0)	2.0	6.0	31.6	39.6	ND(1.0)	ND(25)	NA	NA	NA	NA	
	11/7/2006	90.30	5.16	ND	ND	85.14	0.51 J	4.7	17.8	51.1	74.1 J	ND(1.0)	ND(25)	NA	NA	NA	NA	
	6/21/2007	90.30	8.50	ND	ND	81.80	ND(1.0)	9.8	19.8	61.8	91.4	ND(1.0)	ND(25)	NA	NA	NA	NA	
	12/11/2007	90.30	5.84	ND	ND	84.46	ND(1.0)	ND(1.0)	1.0	3.3	4.3	ND(1.0)	ND(25)	NA	NA	NA	NA	
	3/24/2008	90.30	5.13	ND	ND	85.17	ND(1)	ND(1)	ND(1)	ND(1)	BRL	ND(1)	ND(25)	NA	NA	NA	NA	
	6/29/2008	90.30	7.19	ND	ND	83.11	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	8/14/2008	90.30	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well not located, not sampled
	11/20/2008	90.30	9.43	ND	ND	80.87	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	2/11/2009	90.30	6.05	ND	ND	84.25	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2009	90.30	4.15	ND	ND	86.15	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	0.54 J	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/31/2009	90.30	6.50	ND	ND	83.80	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	10/13/2009	90.30	5.15	ND	ND	85.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	10/27/2009	90.30	3.95	ND	ND	86.35	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	1/12/2010	90.30	5.16	ND	ND	85.14	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	4/21/2010	90.30	4.96	ND	ND	85.34	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	7/22/2010	90.30	8.49	ND	ND	81.81	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	11/23/2010	90.30	7.49	ND	ND	82.81	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	BRL	ND(1.0)	ND(25)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	
	3/2/2011	90.30	4.89	ND	ND	85.41	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	5/19/2011	90.30	5.36	ND	ND	84.94	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	7/12/2011	90.30	8.84	ND	ND	81.46	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	10/24/2011	90.30	5.48	ND	ND	84.82	<1	<1	1.3	4.55	BRL	<1	<10	<1	<1	<1	<5	
	2/8/2012	90.30	5.41	ND	ND	84.89	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	5/22/2012	90.30	8.83	ND	ND	81.47	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	8/14/2012	90.30	11.87	ND	ND	78.43	<1	<1	<1	<3	BRL	<1	<10	<2	<1	<1	<5	
	10/4/2012	90.30	10.99	ND	ND	79.31	<1	<1	1.09	<3	1.09	<1	<10	<2	<1	<1	<5	
	2/22/2013	90.30	5.70	ND	ND	84.60	<1	<1	<1	<3	BRL	<1	<10	<2	<1	<1	<5	

Notes:

µg/L - micrograms/liter
italic values - MDE Groundwater Clean-Up Standards
0.65 [1.63] - results from duplicate sample listed in brackets
BRL - Below laboratory reporting limits
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
DIPE - Di-Isopropyl Ether
ETBE - Ethyl Tertiary Butyl Ether
GW - Groundwater
J - Indicates an estimated value
MTBE - Methyl Tert Butyl Ether
NA - Not analyzed
ND - Not detected
ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
NM - Not monitored
NS - Not sampled
NSVD - Not surveyed to vertical datum
TAME - Tertiary Amyl Methyl Ether
TBA - Tertiary Butyl Alcohol

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
215 Bayview	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.19 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
223 Bayview	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.19	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.29 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.32 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.18 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
223 Bayview	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
237 Bayview	6/23/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	0.11 J	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	BRL	0.11 J	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
243 Bayview	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.18 J	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.18 J	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.070 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
246 Bayview	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.1	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.16 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.13 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
256 Bayview	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	1.00	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.8	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.67	ND(5.0)	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.76	ND(5.0)	NA	NA	NA	ND(0.50)	
259 Bayview	3/30/2005	0.1	0.081	ND(0.50)	ND(0.50)	0.2	15.5	41	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	21.1	68.1	NA	NA	NA	NA	
	8/29/2005	0.18 J	0.30 J	ND(0.50)	0.15 J	0.63 J	16.8	52.8	NA	NA	NA	ND(0.50)	
	9/26/2005	0.083	ND(0.50)	ND(0.50)	0.213	0.296	16.4	44.3	NA	NA	NA	NA	
	10/25/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	19.3	38.6	NA	NA	NA	NA	
	11/14/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	5.9	16.7	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	19.8	50.0	NA	NA	NA	NA	
	1/20/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	13.3	44.3	NA	NA	NA	ND(0.50)	
	3/3/2006	0.096 J	ND(0.50)	ND(0.50)	ND(0.50)	0.096 J	16.9	53.6	NA	NA	NA	ND(0.50)	
	4/3/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	17.6	65.3	NA	NA	NA	ND(0.50)	
	5/15/2006	0.087 J	ND(0.50)	ND(0.50)	ND(0.50)	0.087 J	20.0	58.9	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	18.4	64.5	NA	NA	NA	ND(0.50)	
	7/27/2006	0.083 J	ND(0.50)	ND(0.50)	ND(0.50)	0.083 J	22.1	73.7	NA	NA	NA	ND(0.50)	
	8/29/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	23.7	98.6	NA	NA	NA	ND(0.50)	
	9/26/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	25.7	73.8	ND(0.50)	ND(0.50)	1.7	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	30.2	93.0	ND(0.50)	ND(0.50)	1.5	ND(0.50)	
	11/30/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	30.9	103	NA	NA	NA	ND(0.50)	
	12/19/2006	0.084 J	ND(0.50)	ND(0.50)	ND(0.50)	0.084 J	32.5	121	ND(0.50)	ND(0.50)	2.0	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	33.2	128	NA	NA	NA	ND(0.50)	
	2/28/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	38.6	133	NA	NA	NA	ND(0.50)	
	3/15/2007	0.096 J	ND(0.50)	ND(0.50)	ND(0.50)	0.096 J	33.1	140	0.14 J	ND(0.50)	1.6	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
259 Bayview EFF	3/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/17/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/22/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	9/19/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	4.7 J	NA	NA	NA	ND(0.50)	
	11/29/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	22.4	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.22 J	4.8 J	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.18 J	100	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.15 J	111	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	7/31/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	10.4	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	10/13/2009	ND(0.50)	0.25 J	ND(0.50)	ND(0.50)	0.25 J	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	1/13/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	7/22/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/23/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	16.1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/1/2011	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	5/19/2011	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	7/12/2011	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	10/24/2011	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	2/8/2012	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	5/23/2012	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	8/14/2012	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<2	<5	
	10/4/2012	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	2/22/2013	<0.5	<0.5	<0.5	<1	BRL	<0.5	26.1	<0.5	<0.5	<0.5	<5	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
259 Bayview INF	3/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	32.2	136	NA	NA	NA	ND(0.50)	
	4/17/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	29.9	104	NA	NA	NA	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	38.0	145	NA	NA	NA	ND(0.50)	
	6/22/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	36.8	133	NA	NA	NA	ND(0.50)	
	9/19/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	39.9	158	NA	NA	NA	ND(0.50)	
	10/23/2007	0.081 J	ND(0.50)	ND(0.50)	ND(0.50)	0.081 J	39.3	142	NA	NA	NA	ND(0.50)	
	11/29/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	37.6	189	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	35.0	148	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	37.9	105	0.093 J	ND(0.50)	1.4	ND(0.50)	
	9/23/2008	0.087 J	ND(0.50)	ND(0.50)	ND(0.50)	0.087 J	47.3	149	0.082 J	ND(0.50)	1.2	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	38.2	131	0.11 J	ND(0.50)	1.6	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	35.8	102	ND(0.50)	ND(0.50)	1.3	ND(0.50)	
	4/21/2009	0.079 J	ND(0.50)	ND(0.50)	ND(0.50)	0.079 J	44.6	121	0.095 J	ND(0.50)	1.5	ND(0.50)	
	7/31/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	34.5	134	0.075 J	ND(0.50)	1.2	ND(0.50)	
	10/13/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	35.6	118	0.11 J	ND(0.50)	1.3	ND(0.50)	
	1/13/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	50.9	173	ND(0.50)	ND(0.50)	1.6	ND(0.50)	
	4/21/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	40.6	105	0.19 J	ND(0.50)	1.5	ND(0.50)	
	7/22/2010	0.083 J	ND(0.50)	ND(0.50)	ND(0.50)	0.083 J	40.3	123	0.19 J	ND(0.50)	1.4	ND(0.50)	
	11/23/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	39.6	91	0.12 J	ND(0.50)	1.2	ND(0.50)	
	3/1/2011	<0.5	<0.5	<0.5	<1	BRL	43.6	59.9	1.58	<0.5	<0.5	<5	
	5/19/2011	<0.5	<0.5	<0.5	<1	BRL	44.8	86.2	<0.5	<0.5	1.63	<5	
	7/12/2011	<1	<1	<1	<3	BRL	43.2	114	<1	<1	1.85	<5	
	10/24/2011	<1	<1	<1	<3	BRL	42.6	99.3	1.49	<1	<1	<5	
	2/8/2012	<1	<1	<1	<3	BRL	39.2	90.1	1.12	<1	<1	<5	
	5/23/2012	<0.5	<0.5	<0.5	<1	BRL	45.4	65.2	<0.5	<0.5	1.68	<5	
	8/14/2012	<1	<1	<1	<3	BRL	36	51.6	<1	<1	<2	<5	
	10/4/2012	<0.5	<0.5	<0.5	<1	BRL	47.9	70.5	1.38	<0.5	<0.5	<5	
	2/22/2013	<0.5	<0.5	<0.5	<1	BRL	47.7	64.8	1.3	<0.5	<0.5	<5	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
259 Bayview MID	3/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/17/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/22/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	9/19/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	56.3	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	85.5	NA	NA	NA	ND(0.50)	
	11/29/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	156	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.089 J	3.7 J	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	10.0	81.4	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.49 J	119	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	4.3 J	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	7/31/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	93.3	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	10/13/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	1/13/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	58.3	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	20.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	7/22/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/23/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	101	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/1/2011	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	5/19/2011	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	7/12/2011	<1	<1	<1	<3	BRL	<1	<20	<1	<1	<1	<5	
	10/24/2011	<1	<1	<1	<3	BRL	<1	63.4	<1	<1	<1	<5	
	2/8/2012	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<1	<5	
	5/23/2012	<0.5	<0.5	<0.5	<1	BRL	<0.5	<10	<0.5	<0.5	<0.5	<5	
	8/14/2012	<1	<1	<1	<3	BRL	<1	<10	<1	<1	<2	<5	
	10/4/2012	<0.5	<0.5	<0.5	<1	BRL	<0.5	27.2	<0.5	<0.5	<0.5	<5	
	2/22/2013	<0.5	<0.5	<0.5	<1	BRL	<0.5	76.9	<0.5	<0.5	<0.5	<5	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
261 Bayview	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	1.1	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	1.2	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	1.7	2.6	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	1.6	2.8 J	NA	NA	NA	ND(0.50)	
	1/30/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	2.6	6.4	NA	NA	NA	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	4.6	16.3	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/9/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	5.0	18.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	4.0	12.4	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	5.1	16.0	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	7/31/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	5.9	17.1	ND(0.50)	ND(0.50)	0.34 J	ND(0.50)	
	10/13/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	5.2	18.3	ND(0.50)	ND(0.50)	0.22 J	ND(0.50)	
	1/13/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	6.7	21.8	ND(0.50)	ND(0.50)	0.31 J	ND(0.50)	
	4/21/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	6.4	16.0	ND(0.50)	ND(0.50)	0.34 J	ND(0.50)	
	7/22/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	7.0	21.3	ND(0.50)	ND(0.50)	0.30 J	ND(0.50)	
	11/23/2010	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	6.4	19.4	ND(0.50)	ND(0.50)	0.25 J	ND(0.50)	
	3/1/2011	<0.5	<0.5	<0.5	<1	BRL	7.2	11.6	<0.5	<0.5	<0.5	<5	
	5/19/2011	<0.5	<0.5	<0.5	<1	BRL	6.8	15.0	<0.5	<0.5	<0.5	<5	
	7/12/2011	<1	<1	<1	<3	BRL	7.41	<20	<1	<1	<1	<5	
	10/24/2011	<1	<1	<1	<3	BRL	8.85	<10	<1	<1	<1	<5	
	2/8/2012	<1	<1	<1	<3	BRL	6.03	<10	<1	<1	<1	<5	
	5/23/2012	<0.5	<0.5	<0.5	<1	BRL	10.2	21.6	<0.5	<0.5	<0.5	<5	
	8/14/2012	<1	<1	<1	<3	BRL	8.03	23.1	<1	<1	<1	<5	
	10/4/2012	<0.5	<0.5	<0.5	<1	BRL	8.71	14.5	<0.5	<0.5	<0.5	<5	
	2/22/2013	<0.5	<0.5	<0.5	<1	BRL	10.1	28.6	<0.5	<0.5	<0.5	<5	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
265 Bayview	6/23/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	0.57	ND(5.0)	NA	NA	NA	NA	
	12/19/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.50)	BRL	0.47	ND(5.0)	NA	NA	NA	NA	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.57	ND(5.0)	NA	NA	NA	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.35 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
280 Bayview EFF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	0.34 J	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/27/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	7/27/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
280 Bayview INF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.27 J	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	0.32 J	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.19 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/27/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.22 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.36 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.24 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.24 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.23 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.17 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	7/27/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.15 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.15 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.15 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.18 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.13 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.14 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	0.052 J	ND(0.50)	ND(0.50)	0.052 J	0.14 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
280 Bayview MID	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	7/27/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.090 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/20/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.10 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
281 Bayview EFF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	ND(0.5)	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/3/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
281 Bayview INF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.5	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	0.64	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.76	ND(5.0)	NA	NA	NA	ND(0.50)	
	4/3/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.57	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.36 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.24 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.74	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.69	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.67	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.70	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.66	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.70	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.66	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.75	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.73	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
281 Bayview MID	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.22 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
285 Bayview EFF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	BRL	ND(0.5)	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/27/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.31 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	TBA (µg/L)	TAME (µg/L)	ETBE (µg/L)	DIPE (µg/L)	Naph-thalene (µg/L)	Comments
285 Bayview INF	3/30/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.66	ND(5.0)	NA	NA	NA	NA	
	6/23/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.53	ND(5.0)	NA	NA	NA	NA	
	9/26/2005	1.4	ND(0.5)	ND(0.5)	ND(0.5)	1.4	1.0	ND(5)	NA	NA	NA	NA	
	12/19/2005	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.80	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/27/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.36 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/12/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.72	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/31/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.71	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	12/19/2006	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.27 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	3/15/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.71	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/21/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
285 Bayview MID	5/31/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	NA	NA	NA	ND(0.50)	
	10/23/2007	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.11 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	3/24/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.17 J	ND(5.0)	NA	NA	NA	ND(0.50)	
	6/30/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.26 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	9/23/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	ND(0.50)	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	11/18/2008	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.20 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	2/11/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.16 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	
	4/24/2009	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	BRL	0.19 J	ND(5.0)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	

Table 2
Potable Water Monitoring and Analytical Data
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Notes:
µg/L - micrograms/liter
BRL - Below laboratory reporting limits
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
DIPE - Di-Isopropyl Ether
ETBE - Ethyl Tertiary Butyl Ether
J - Indicates an estimated value
MTBE - Methyl Tert Butyl Ether
NA - Not analyzed
ND(5.0) - Not detected at or above the laboratory reporting limit, laboratory reporting limit included.
NS - Not sampled
TAME - Tertiary Amyl Methyl Ether
TBA - Tertiary Butyl Alcohol

Table 3
Proposed Groundwater Monitoring Progam
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland

Sampling Locations	Sampling Frequency	Planned Sampling Schedule	Analytical Parameters
MW-1A, MW-2A, MW-5A, MW-11, MW-14 259 OLD BAYVIEW ROAD 261 OLD BAYVIEW ROAD	QUARTERLY	February May August November	Full-Suite VOCs including fuel oxygenates (EPA Method 8260)
MW-3A, MW-8, MW-10, MW-12, MW-13, MW-15, MW-16	ANNUALLY	February[1]	Full-Suite VOCs including fuel oxygenates (EPA Method 8260)

Notes:

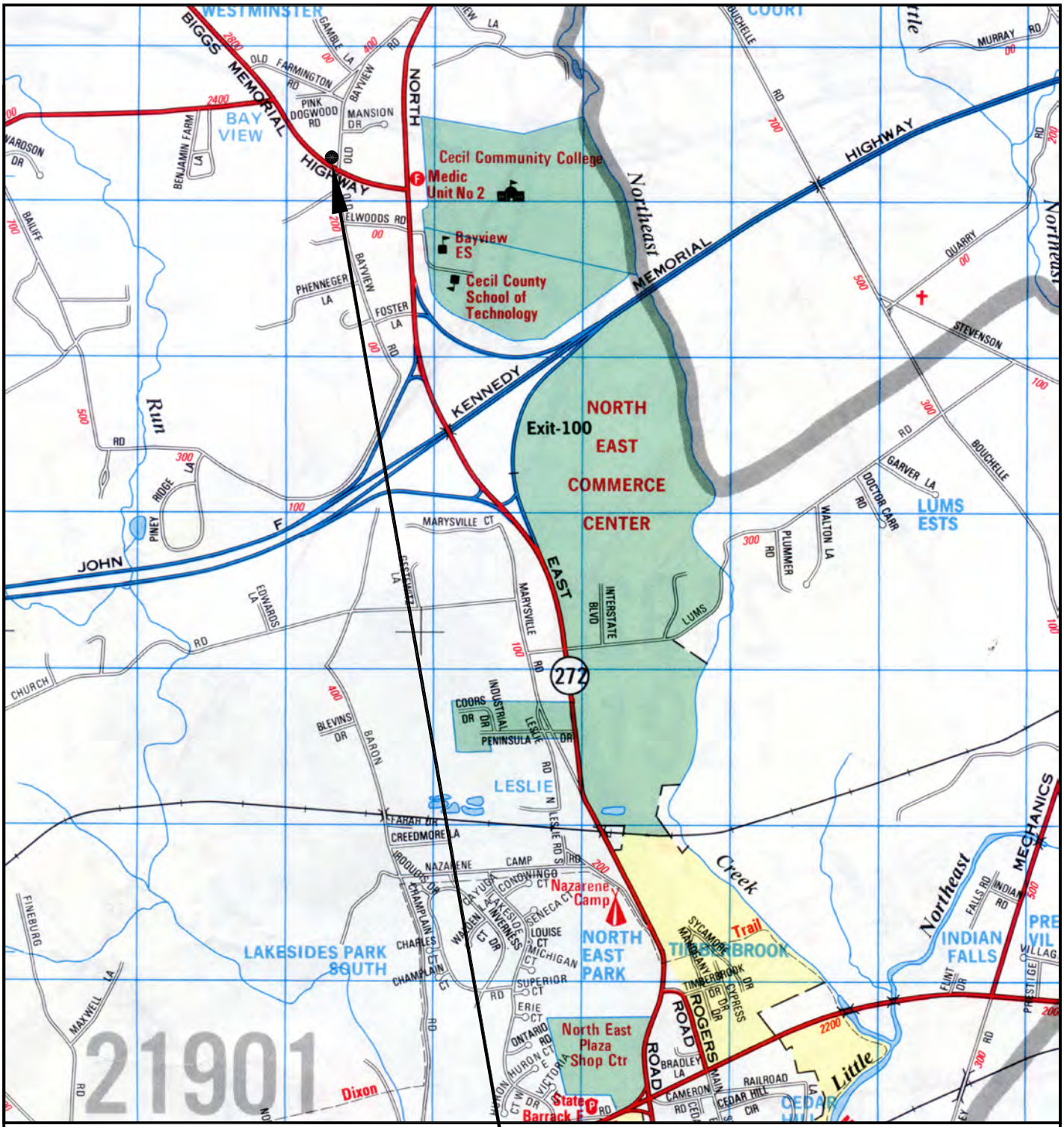
VOC - volatile organic compound

EPA - U.S. Environmental Protection Agency

1 - Annual sampling schedule will be determined based on implemtation of the Corrective Action Plan.

ARCADIS

Figures

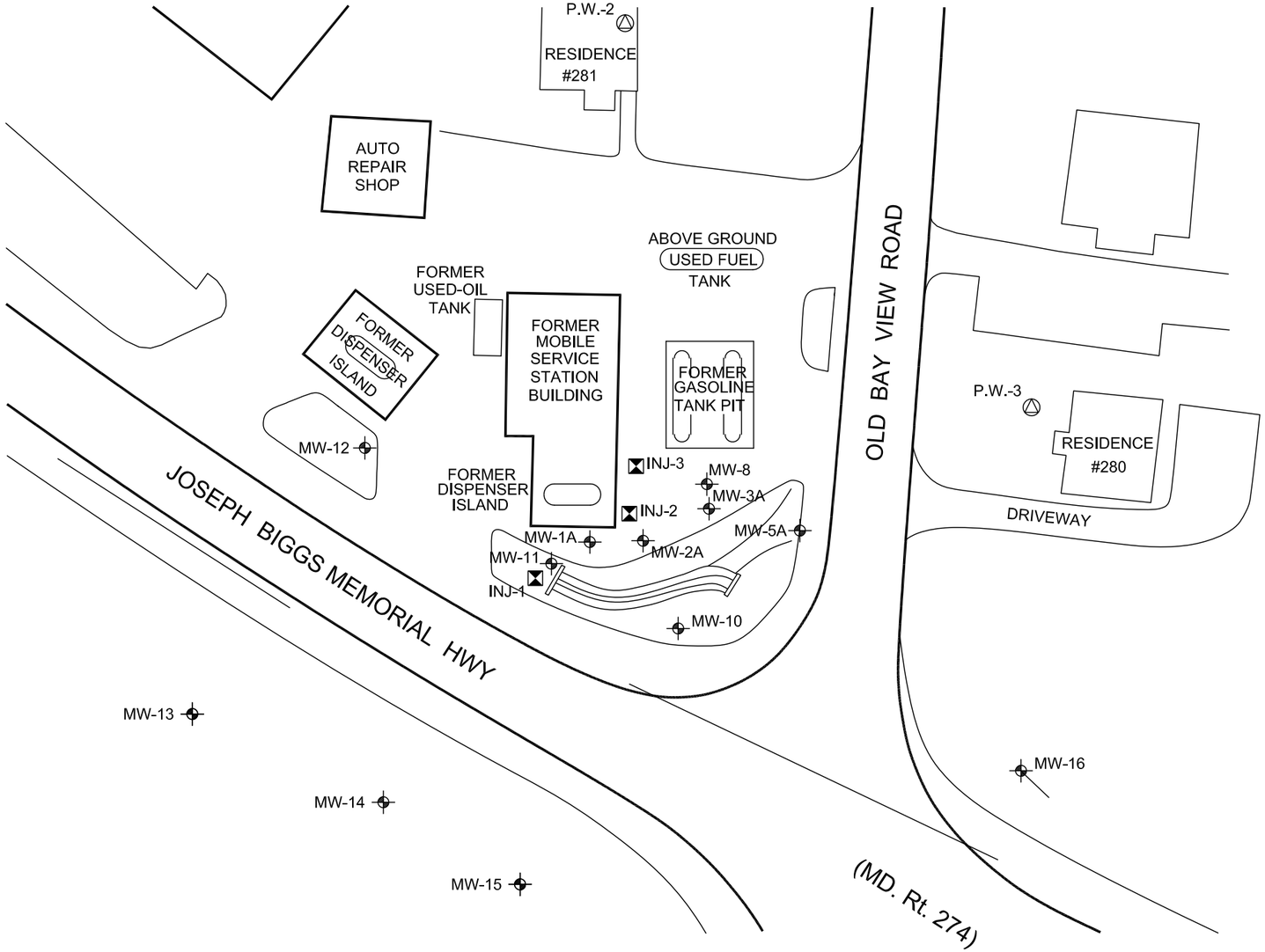


FORMER EXXON FACILITY # 14489
285 OLD BAY VIEW ROAD
NORTH EAST, MARYLAND

LOCAL AREA MAP

ARCADIS

FIGURE
1



LEGEND:

- MONITORING WELL
- DESTROYED MONITORING WELL
- POTABLE WELL
- INJECTION WELL
- INTERCEPTOR TRENCH
- REMEDIATION SYSTEM PIPING

0 20 40

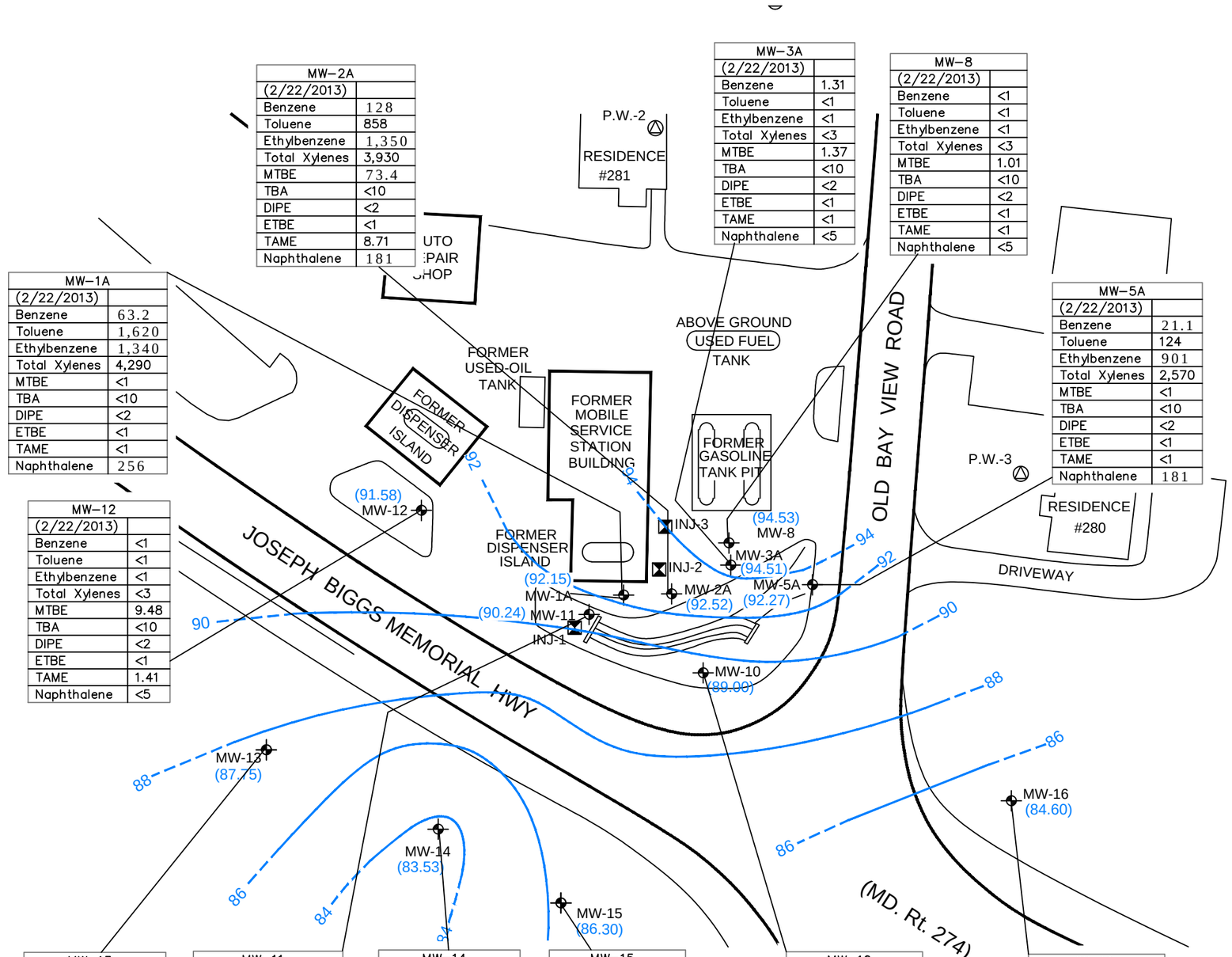
SCALE: FEET

FORMER EXXON FACILITY # 14489
285 OLD BAY VIEW ROAD
NORTH EAST, MARYLAND

SITE MAP

ARCADIS

FIGURE 2



MW–2A	
(2/22/2013)	
Benzene	128
Toluene	858
Ethylbenzene	1,350
Total Xylenes	3,930
MTBE	73.4
TBA	<10
DIPE	<2
ETBE	<1
TAME	8.71
Naphthalene	181

MW–3A	
(2/22/2013)	
Benzene	1.31
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	1.37
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–8	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	1.01
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–1A	
(2/22/2013)	
Benzene	63.2
Toluene	1,620
Ethylbenzene	1,340
Total Xylenes	4,290
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	256

MW–5A	
(2/22/2013)	
Benzene	21.1
Toluene	124
Ethylbenzene	901
Total Xylenes	2,570
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	181

MW–12	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	9.48
TBA	<10
DIPE	<2
ETBE	<1
TAME	1.41
Naphthalene	<5

LEGEND:

- MONITORING WELL
- DESTROYED MONITORING WELL
- POTABLE WELL
- INJECTION WELL
- INTERCEPTOR TRENCH
- REMEDIATION SYSTEM PIPING
- 90 GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- (81.33) GROUND WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

Notes	
all results listed in µg/L (micrograms per liter)	
[254] – MDE Residential Groundwater Standard	
MDE – Maryland Department of the Environment	
boldface values exceed RBSL	
MTBE	methyl tertiary butyl ether
TBA	Tertiary Butyl Alcohol
TAME	Tertiary Amyl Methyl Ether
ETBE	Ethyl Tertiary Butyl Ether
DIPE	Di–Isopropyl Ether
TPH–GRO	total petroleum hydrocarbons – gasoline range organics
TPH–DRO	total petroleum hydrocarbons – diesel range organics

MDE Residential Groundwater Standards	
Benzene	5
Toluene	1000
Ethylbenzene	700
Total Xylenes	10000
MTBE	20
TBA	--
TAME	--
ETBE	--
DIPE	--
Naphthalene	0.65
TPH–GRO	47
TPH–DRO	47

MW–13	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	2.8
Total Xylenes	5.07
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–11	
(2/22/2013)	
Benzene	8.17
Toluene	4.39
Ethylbenzene	92.7
Total Xylenes	70.3
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	24.6

MW–14	
(2/22/2013)	
Benzene	<1
Toluene	1.32
Ethylbenzene	3.46
Total Xylenes	12.2
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–15	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–10	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

MW–16	
(2/22/2013)	
Benzene	<1
Toluene	<1
Ethylbenzene	<1
Total Xylenes	<3
MTBE	<1
TBA	<10
DIPE	<2
ETBE	<1
TAME	<1
Naphthalene	<5

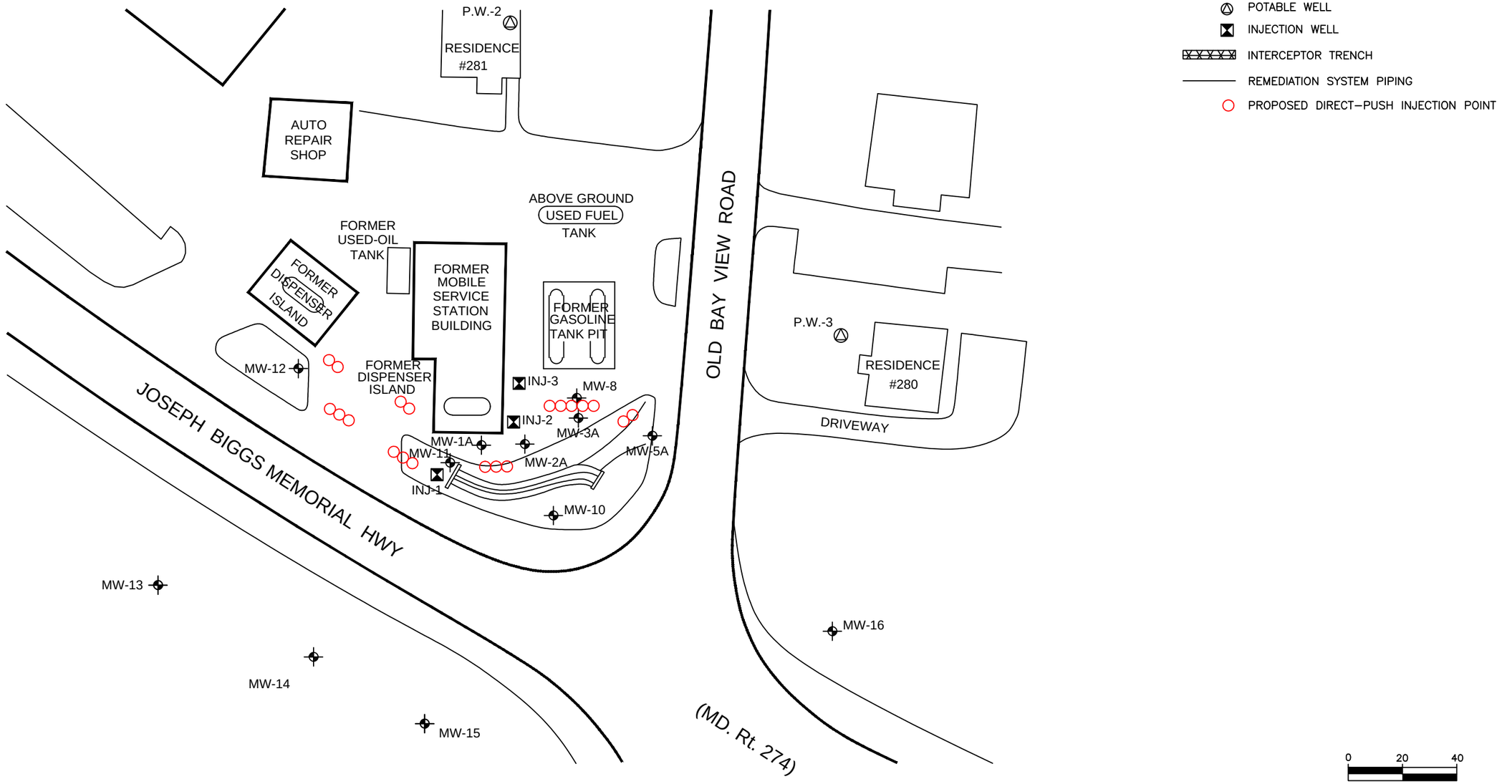
0 20 40
SCALE: FEET

FORMER EXXON FACILITY # 14489
285 OLD BAY VIEW ROAD
NORTH EAST, MARYLAND

GROUNDWATER ELEVATION CONTOURS AND ANALYTICAL DATA 22 FEBRUARY 2013

ARCADIS

FIGURE 3



LEGEND:

- MONITORING WELL
- DESTROYED MONITORING WELL
- POTABLE WELL
- INJECTION WELL
- INTERCEPTOR TRENCH
- REMEDIATION SYSTEM PIPING
- PROPOSED DIRECT–PUSH INJECTION POINT

0 20 40

SCALE: FEET

FORMER EXXON FACILITY # 14489
285 OLD BAY VIEW ROAD
NORTH EAST, MARYLAND

PROPOSED INJECTION LOCATIONS

ARCADIS

FIGURE
4

ARCADIS

Appendix A

MDE Correspondence

KLEINFELDER

CERTIFIED MAIL: 7009 3400 0012 1818 4544

January 16, 2008

Ms. Yolande Norman
Chief Remediation and State-Lead Division
Maryland Department of the Environment
Oil Control Program
Suite 620, 1800 Washington Blvd
Baltimore, Maryland 21230

RE: Response to Site Status Letter Dated November 16, 2007
Case No. 6-1205-CE
Former BayView Mobil Service Station No. 16-G1R
285 Old Bayview Road
North East, Maryland
Facility I.D. No. 2615

Dear Ms Norman:

Kleinfelder, on behalf of Exxon Mobil Corporation (ExxonMobil), has prepared this correspondence in follow up to the requirements specified in the *Site Status Letter* correspondence from the Maryland Department of Environment (MDE) dated November 16, 2007. The requirements are commented on below, but it should be noted that Kleinfelder accepts the requirements as stated by the MDE

"*1) Submit the UST Removal and Post Excavation Sampling Report;*"

The MDE required the submittal of the UST Removal and Post-excavation sampling report no later than January 15, 2007. The UST removal, excavation, and sampling activities were completed by Mr. Curtis Abrams (Property Owner and Current Operator). ExxonMobil does not have responsibility for this requirement and expects that the MDE will receive the report from Mr. Abrams.

"*2) Begin Quarterly (every three months) sampling of the monitoring well network;*"

A review of the historic groundwater analytical data suggests that primarily the trends in dissolved phase hydrocarbon concentrations, in the monitoring wells, are either decreasing or stable; suggesting that quarterly groundwater sampling may not be necessary at this time. Therefore, Kleinfelder, on behalf of ExxonMobil, proposes that this site remain on a semi-annual groundwater sampling schedule, unless a significant deviation from existing trends is observed. The groundwater samples will be analyzed for full suite volatile organic compounds (VOCs) including fuel oxygenates using Environmental Protection Agency (EPA) Method 8260, and total petroleum hydrocarbons – gasoline range organics (TPH-GRO) and total petroleum hydrocarbons – diesel range organics (TPH-DRO) using EPA Method 8015 as proposed by the MDE.

"3) *Provide written documentation of a schedule for when area drinking water wells will be connected to public water.*"

Kleinfelder and ExxonMobil are currently in the process of securing easements from the residents and town for installation and connection of the water line. It is expected that the easement requests will be approved by the town and the permitting process will be completed by June 2008.

Kleinfelder, on behalf of ExxonMobil, will continue to coordinate the connection of the residence to municipal water, and will update the MDE when the approved easements are received from the town, with an anticipated schedule of installation and connection. If you have any questions or require any additional information, please contact us at (410) 850-0404

Sincerely,
Kleinfelder East, Inc.

Brian P. Shedd
Environmental Scientist

Ann Harris
Senior Project Manager

cc: Mr. Curtis Abrams – Property Owner and Current Operator
Ms. Ann F. Barker – Town of North East
Mr. Charles Smyser – Cecil County Health Department
Mr. Herbert M. Meade – Maryland Department of the Environment
Ms. Beth S. Conklin – Exxon Mobil Corporation

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Oil Control Program, Suite 620, 1800 Washington Blvd , Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

April 14, 2008

Ms Anne F. Barker, Clerk/Treasurer
Town of North East
106 South Main Street
P.O Box 528
North East MD 21901-0528

RE: SITE STATUS LETTER
Case No. 1986-1205-CE
Former Bayview Mobil Service Station No. 16-G1R
285 Old Bayview Road, North East
Facility ID No. 2615

Dear Ms Barker:

The Oil Control Program is in receipt of your letter dated February 29, 2008 concerning the status of the pending connection of Bayview area citizens to public water as a result of petroleum contamination documented and monitored at the above-referenced property located in Cecil County The Department has been in communication with the new project manager for the ExxonMobil Corporation, Ms. Beth Conklin. The Department was assured that attorneys for ExxonMobil were instructed to work with area residents to secure the necessary easements prior to approaching the Town of North East for water allocations

The Oil Control Program appreciates your assistance in this matter. If you have any questions, please contact the case manager, Ms Susan Bull, at 410-537-3499 or via email: sbull@mde state md us.

Sincerely,

Yolande J C. Norman, Chief
Remediation and State-Lead Division
Oil Control Program

SRB
cc: Ms Beth Conklin (ExxonMobil Corp)
Mr. Curtis Abrams (Property Owner)
Mr. Brian P. Shedd (Kleinfelder, Inc.)
Mr. Charles Smyser (Cecil County Health Dept.)
Mr Herbert M. Meade
Mr Horacio Tablada

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

May 5, 2009

Mrs. Mary Hughes
77 Fair Hill Drive
Elkton MD 21921

RE: Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, North East
Cecil County, Maryland

Dear Mrs. Hughes:

The Oil Control Program (OCP) recently completed a review of the analytical data (*enclosed)* for samples collected from the drinking water supply well at 280 Old Bayview Road. Between February 1996 and February 2009, ExxonMobil monitored the quality of the drinking water at your residential property. The sample collected on September 6, 2001 detected the highest level of methyl tertiary-butyl ether (MTBE) at 2.6 parts per billion (ppb). The most recent sample collected from this well on February 11, 2009 was non-detect for petroleum constituents.

The State's action level for MTBE is 20 ppb. For close to 13 years of sampling, MTBE within your well water has never reached the State's action level. Based on the analytical data, the Department does not require ExxonMobil to continue sampling or maintaining treatment on your drinking water well. The Department appreciates your cooperation and will continue to monitor groundwater conditions at the former Bayview Mobil facility under MDE-OCP Case No. 1986-1205-CE. The Department reserves the right to require future sampling of private off-site drinking water wells should site conditions change.

If you have any questions regarding the groundwater investigation, please contact the case manager, Mr. Chad Widney at 410-537-3386 (email: cwidney@mde.state.md.us) or me at 410-537-3499 (email: sbull@mde.state.md.us).

Sincerely,

Susan Bull, Western Region Section Head
Remediation and State-Lead Division, Oil Control Program

CW/nln
Enclosure
cc: Ms. Natalie Morales Hendricks (Kleinfelder East, Inc.)
Ms. Ann F. Baker (Town of North East)
Mr. Charles Smyser (Cecil County Health Department)
Mr. Christopher H. Ralston
Mr. Herbert M. Meade
Mr. Horacio Tablada

Off-site Private Drinking Water Sampling Results for 280 Old Bayview Road

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
280 Old Bayview Road (PW-3)	2/12/96	ND (pre/post-filtration)	ND (pre/post-filtration)
	2/21/96	ND (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	3/27/96	ND (pre/post-filtration)	NS (pre/post-filtration)
	11/8/96	ND (post-filtration)	NS (post-filtration)
	4/16/97	ND (post-filtration)	ND (post-filtration)
	10/15/97	ND (post-filtration)	ND (post-filtration)
	12/30/97	ND (post-filtration)	ND (post-filtration)
	4/28/98	ND (post-filtration)	ND (post-filtration)
	10/30/98	ND (post-filtration)	ND (post-filtration)
	2/20/99	ND (post-filtration)	ND (post-filtration)
	6/17/99	ND (pre/post-filtration)	1.1 (pre-filtration) ND (post-filtration)
	8/18/99	ND (pre/post-filtration)	0.8 (pre-filtration) ND (post-filtration)
	11/8/99	ND (post-filtration)	ND (post-filtration)
	2/16/00	ND (post-filtration)	ND (post-filtration)
	5/18/00	ND (pre/post-filtration)	0.6 (pre-filtration) ND (post-filtration)
	8/23/00	ND (post-filtration)	ND (post-filtration)
	2/12/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/29/01	ND (pre/post-filtration)	0.8 (pre-filtration) ND (post-filtration)
	9/6/01	ND (pre/post-filtration)	2.6 (pre-filtration) 1.5 (post-filtration)
	12/11/01	ND (pre-filtration)	0.40 estimated value (pre-filtration)
	3/14/02	ND (pre/post-filtration)	0.29 estimated value (pre-filtration) ND (post-filtration)
	9/17/02	ND (pre/post-filtration)	ND (pre-filtration) 0.65 estimated value (post-filtration)
	12/18/02	ND (pre/post-filtration)	0.29 estimated value (pre-filtration) 0.36 estimated value (post-filtration)
	3/12/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/29/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/16/04	ND (pre/post-filtration)	0.25 estimated value (pre-filtration) 0.31 estimated value (post-filtration)
	9/29/04	ND (post-filtration)	ND (post-filtration)
	12/21/04	ND (pre/post-filtration)	0.23 (pre-filtration) ND (post-filtration)
	3/30/05	ND (pre/post-filtration)	0.27 estimated value (pre-filtration) ND (post-filtration)
	6/23/05	ND (pre/post-filtration)	0.29 (pre-filtration) ND (mid-filtration) 0.23 (post-filtration)
	9/26/05	ND (pre/post-filtration)	0.32 estimated value (pre-filtration) 0.34 estimated value (post-filtration)
	12/19/05	ND (pre/mid/post-filtration)	0.19 (pre-filtration) ND (mid/post-filtration)
	3/27/06	ND (pre/post-filtration)	0.22 (pre-filtration) ND (post-filtration)
	6/12/06	ND (pre/mid/post filtration)	0.36 (pre-filtration) ND (mid/post-filtration)
	10/31/06	ND (pre/mid/post filtration)	0.24 (pre-filtration) ND (mid/post-filtration)
	12/19/06	ND (pre/post-filtration)	0.24 estimated value (pre-filtration) ND (post-filtration)
	3/15/07	ND (pre/mid/post-filtration)	0.23 (pre-filtration) ND (mid/post-filtration)
	5/31/07	ND (pre/mid/post-filtration)	0.17 (pre-filtration) ND (mid/post-filtration)
	7/27/07	ND (pre/mid/post-filtration)	0.15 (pre-filtration) ND (mid/post-filtration)
	10/23/07	ND (pre/mid/post filtration)	0.15 (pre-filtration) ND (mid/post-filtration)
	03/24/08	ND (pre/mid/post filtration)	0.15 (pre-filtration) ND (mid/post-filtration)

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
280 Old Bayview Road (PW-3) cont.	06/30/08	ND (pre/mid/post filtration)	0.18 (pre-filtration) 0.09 (mid-filtration) ND (post-filtration)
	09/23/08	ND (pre/mid/post filtration)	0.13 (pre-filtration) ND (mid/post-filtration)
	11/20/08	ND (pre/mid/post filtration)	0.14 (pre-filtration) ND (mid/post-filtration)
	02/11/09	ND (pre/mid/post filtration)	ND (pre/mid/post filtration)

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

February 27, 2008

Ms. Beth Conklin (Former Operator)
ExxonMobil Corporation
217 Country Club Park, PMB #101
Birmingham AL 35213

Mr. Curtis Abrams (Property Owner and Former Operator)
285 Old Bay View Road
North East MD 21901

RE: SITE STATUS LETTER
Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, Northeast
Facility No. 2615

Dear Ms. Conklin and Mr. Abrams:

The Oil Control Program recently completed a review of the *Response to Site Status Letter Dated November 16, 2007 - January 16, 2008* and the *UST Removal and Post-Excavation Sampling Report - December 2, 2007* for the above-referenced property located in Cecil County. ExxonMobil is in the process of securing easements from the residents and the town for the installation and connection of the municipal water line. ExxonMobil projects that the easement requests will be approved by the Town of North East and the permitting process will be completed by June 2008. Construction and connection to municipal water will commence thereafter

The Department is in receipt of the tank disposal receipts and post-excavation sampling data. Post-excavation soil samples collected on July 10, 2007 revealed the continued presence of petroleum constituents including: total petroleum hydrocarbons/gasoline range organics (TPH-GRO) at 345,900 parts per billion (ppb). The Department is still awaiting soil disposal receipts.

The Department does not agree with ExxonMobil's consultant that quarterly sampling of the monitoring well network is not necessary at this time Although the underground storage tanks (USTs) and petroleum-impacted soils were removed in July 2007, groundwater samples collected in December 2007 revealed the continued presence of residual groundwater contamination [benzene at 275 ppb; toluene at 3,730 ppb; ethylbenzene at 2,380 ppb; and methyl tertiary butyl ether (MTBE) at 934 ppb]. The Department also notes seasonal fluctuations in the sampling data provided.

Upon completion of the connection of residential properties to municipal water, the Department will be reviewing this case for potential closure. Given that the site is located is a high-risk groundwater use area; off-site impacts to private wells have been documented. Until the connection to municipal water has been completed, the Department hereby requires the following:

1. No later than April 1, 2008, submit soil disposal receipts.

2. To ensure the Department has the seasonal time series data required to properly assess this site for closure, quarterly (**every three months)** sampling of all remaining monitoring wells must begin on April 1, 2008. All samples collected must be analyzed for full-suite volatile organic compounds (VOCs), including fuel oxygenates, using EPA Method 8260.

3. Beginning April 2008, the granular activated carbon (GAC) filtration unit retro-fitted to the drinking water supply well servicing 259 Old Bayview Road must be sampled quarterly (**every three months)**. Samples must be collected pre-; mid-; and post-filtration and analyzed for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.

If you have any questions regarding this case, please contact the case manager, Ms. Susan Bull, at 410-537-3499 or via email sbull@mde.state.md.us.

Sincerely,

Yolande J.C. Norman, Chief
Remediation and State Lead Division
Oil Control Program

SRB

cc: Mr. Brian P. Shedd (Kleinfelder East, Inc.)
Mr. Charles Broomall (resident 259 Old Bayview Road)
Ms. Ann F. Baker (Town of North East)
Mr. Chuck Smyser (Cecil County Health Department)
Mr. Herbert M. Meade
Mr. Horacio Tablada

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

May 5, 2009

Mr. Mike Geci (Former Operator)
Project Manager
ExxonMobil Corporation
PO Box 221436
Chantilly VA 20153

Mr. Curtis Abrams (Property Owner and Former Operator)
285 Old Bayview Road
North East MD 21901

RE: SITE STATUS LETTER
Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, North East
Cecil County, Maryland
Facility No. 2615

Dear Messrs. Geci and Abrams:

The Oil Control Program recently completed a review of the case file for the above-referenced property, including the *Fourth Quarter 2008 Groundwater Monitoring Report - January 30, 2009* and the *February 2009 Potable Well Analytical Results - April 6, 2009* report. Since the final decommission of all known underground storage tanks (USTs) in July 2007, ExxonMobil has monitored a network of 16 on-site and off-site monitoring wells. Recent sampling in November 2008 revealed the continued presence of residual groundwater contamination [benzene at 817 parts per billion (ppb); toluene at 2,330 ppb; ethylbenzene at 1,860 ppb; and methyl tertiary-butyl ether (MTBE) at 624 ppb] in the vicinity of the former UST system.

Between 1995 and 2009, 15 off-site private drinking water supply wells were sampled. Granular activated carbon (GAC) filtration systems were retrofitted to four private drinking water wells (259, 280, 281, and 285 Old Bayview Road). Petroleum constituents remain in one off-site private well above regulatory levels (259 Old Bayview Road).

Based on the current and historical groundwater sampling data, removal of the former UST system, and excavation of petroleum impacted soil, the Department no longer requires the continued operation of the GAC systems retrofitted to 280, 281, and 285 Old Bayview Road. The Department is aware that ExxonMobil continues to secure easements from the residents located at 259 Old Bayview Road for the installation and connection of the municipal water line. Until easements are secured, the Department will continue to require ExxonMobil to provide, monitor, and maintain the GAC system at this location.

Until further notice the Department requires:

(1) Continued **quarterly (every three months)** sampling of the on-site and off-site monitoring well network. All samples collected must be analyzed for **full-suite** volatile organic compounds (VOCs), including fuel oxygenates, using EPA Method 8260.

(2) Continue **quarterly (every three months)** monitoring of the GAC system retro-fitted to the drinking water well serving 259 Old Bayview Road. Samples must be collected pre-, mid-, and post-filtration and analyzed for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.

(3) Continue **quarterly (every three months)** sampling of the drinking water well located at 261 Old Bayview Road. Samples collected must be analyzed for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.

If you have any questions, please contact the case manager, Mr. Chad Widney, at 410-537-3386 (email cwidney@mde.state.md.us) or me at 410-537-3499 (email: sbull@mde.state.md.us).

Sincerely,

Susan R. Bull, Western Region Section Head
Remediation and State Lead Division
Oil Control Program

SRB/nln

cc: Ms. Natalie Morales Hendricks (Kleinfelder East, Inc.)
Mr. and Mrs. Thomas Murtaugh (261 Old Bayview Road)
Mrs. Mary Hughes (280 Old Bayview Road)
Mr. Charles Broomall (259 Old Bayview Road)
Ms. Ann F. Baker (Town of North East)
Mr. Charles Smyser (Cecil County Health Department)
Mr. Christopher H. Ralston
Mr. Herbert M. Meade
Mr. Horacio Tablada

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

May 5, 2009

Mr. Mike Geci (Former Operator)
Project Manager
ExxonMobil Corporation
PO Box 221436
Chantilly VA 20153

Mr. Curtis Abrams (Property Owner and Former Operator)
285 Old Bayview Road
North East MD 21901

RE: SITE STATUS LETTER
Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, North East
Cecil County, Maryland
Facility No. 2615

Dear Messrs. Geci and Abrams:

The Oil Control Program recently completed a review of the case file for the above-referenced property, including the *Fourth Quarter 2008 Groundwater Monitoring Report - January 30, 2009* and the *February 2009 Potable Well Analytical Results - April 6, 2009* report. Since the final decommission of all known underground storage tanks (USTs) in July 2007, ExxonMobil has monitored a network of 16 on-site and off-site monitoring wells. Recent sampling in November 2008 revealed the continued presence of residual groundwater contamination [benzene at 817 parts per billion (ppb); toluene at 2,330 ppb; ethylbenzene at 1,860 ppb; and methyl tertiary-butyl ether (MTBE) at 624 ppb] in the vicinity of the former UST system.

Between 1995 and 2009, 15 off-site private drinking water supply wells were sampled. Granular activated carbon (GAC) filtration systems were retrofitted to four private drinking water wells (259, 280, 281, and 285 Old Bayview Road). Petroleum constituents remain in one off-site private well above regulatory levels (259 Old Bayview Road).

Based on the current and historical groundwater sampling data, removal of the former UST system, and excavation of petroleum impacted soil, the Department no longer requires the continued operation of the GAC systems retrofitted to 280, 281, and 285 Old Bayview Road. The Department is aware that ExxonMobil continues to secure easements from the residents located at 259 Old Bayview Road for the installation and connection of the municipal water line. Until easements are secured, the Department will continue to require ExxonMobil to provide, monitor, and maintain the GAC system at this location.

Until further notice the Department requires:

(1) Continued **quarterly (every three months)** sampling of the on-site and off-site monitoring well network. All samples collected must be analyzed for **full-suite** volatile organic compounds (VOCs), including fuel oxygenates, using EPA Method 8260.

(2) Continue **quarterly (every three months)** monitoring of the GAC system retro-fitted to the drinking water well serving 259 Old Bayview Road. Samples must be collected pre-, mid-, and post-filtration and analyzed for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.

(3) Continue **quarterly (every three months)** sampling of the drinking water well located at 261 Old Bayview Road. Samples collected must be analyzed for full-suite VOCs, including fuel oxygenates, using EPA Method 524.2.

If you have any questions, please contact the case manager, Mr. Chad Widney, at 410-537-3386 (email cwidney@mde.state.md.us) or me at 410-537-3499 (email: sbull@mde.state.md.us).

Sincerely,

Susan R. Bull, Western Region Section Head
Remediation and State Lead Division
Oil Control Program

SRB/nln

cc: Ms. Natalie Morales Hendricks (Kleinfelder East, Inc.)
Mr. and Mrs. Thomas Murtaugh (261 Old Bayview Road)
Mrs. Mary Hughes (280 Old Bayview Road)
Mr. Charles Broomall (259 Old Bayview Road)
Ms. Ann F. Baker (Town of North East)
Mr. Charles Smyser (Cecil County Health Department)
Mr. Christopher H. Ralston
Mr. Herbert M. Meade
Mr. Horacio Tablada

MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

Martin O'Malley
Governor

Anthony G. Brown
Lieutenant Governor

Shari T. Wilson
Acting Secretary

Robert M. Summers, Ph.D.
Deputy Secretary

May 5, 2009

Mr. Curtis Abrams
285 Old Bayview Road
North East MD 21901

RECEIVED
MAY 06 2009
BY: lpapscin

RE: Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, North East
Cecil County, Maryland
Facility No. 2615

Dear Mr. Abrams:

The Oil Control Program (OCP) recently completed a review of the analytical data *(enclosed)* for samples collected from the drinking water supply wells located at 281 and 285 Old Bayview Road. Between December 1995 and February 2009, ExxonMobil monitored the quality of the drinking water at both of these properties.

281 Old Bayview Road

The sample collected on June 12, 2003 detected the highest level of methyl tertiary-butyl ether (MTBE) in the well serving 281 Old Bayview Road [4.5 parts per billion (ppb)]. The most recent sample collected on February 11, 2009 detected MTBE at 0.75 ppb. The State's action level for MTBE is 20 ppb. For close to 13 years of sampling, MTBE within your well water has never reached the State's action level.

285 Old Bayview Road

The sample collected on December 27, 1995 detected the highest level of benzene in the well serving 281 Old Bayview Road (9.4 ppb). The sampling history reveals that benzene was last detected in this well in September 2005 (1.4 ppb) and has not been detected since. Benzene is a compound generally found in petroleum products. The maximum contaminant level (MCL) for benzene is 5 ppb. Benzene contamination has not exceeded the MCL since February 2001.

Sampling of this well also detected MTBE. The sample collected on February 12, 2001 detected the highest level of MTBE at 1.6 ppb. The most recent sample collected on February 11, 2009 was non-detect for MTBE in the pre-treatment sample. For close to 13 years of monitoring, MTBE within your well water has never reached the State's action level of 20 ppb.

Based on the analytical data, the Department does not require ExxonMobil to continue sampling or maintaining treatment on your drinking water wells. The Department appreciates your cooperation and will continue to monitor groundwater conditions at the former Bayview Mobil facility under MDE-OCP Case No. 1986-1205-CE. The Department reserves the right to require future sampling of private off-site drinking water wells should site conditions change.

If you have any questions regarding the groundwater investigation, please contact the case manager, Mr. Chad Widney at 410-537-3386 (email: cwidney@mde.state.md.us) or me at 410-537-3499 (email: sbull@mde.state.md.us).

Sincerely,

Susan Bull, Western Region Section Head
Remediation and State-Lead Division
Oil Control Program

CW/nln

Enclosure

cc: Ms. Natalie Morales Hendricks (Kleinfelder East, Inc.)
Ms. Ann F. Baker (Town of North East)
Mr. Charles Smyser (Cecil County Health Department)
Mr. Christopher H. Ralston
Mr. Herbert M. Meade
Mr. Horacio Tablada

Private Drinking Water Sampling Results for 281 Old Bayview Road

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
Off-site Private Wells cont.			
281 Old Bayview Road (residence)	12/27/95	ND (pre/post-filtration)	NS (pre/post-filtration)
	3/27/96	ND (pre/post-filtration)	NS (pre/post-filtration)
	7/24/96	ND (post-filtration)	NS (post-filtration)
	11/8/96	ND (post-filtration)	NS (post-filtration)
	1/27/97	ND (pre/post-filtration)	ND (pre/post-filtration)
	4/16/97	ND (pre/post-filtration)	ND (pre/post-filtration)
	7/24/97	ND (pre/post-filtration)	ND (pre/post-filtration)
	10/15/97	ND (pre/post-filtration)	ND (pre/post-filtration)
	12/30/97	ND (pre/post-filtration)	ND (pre/post-filtration)
	4/28/98	ND (pre/post filtration)	3.3 (pre-filtration); ND (post-filtration)
	7/30/98	ND (pre/post filtration)	2.9 (pre-filtration); ND (post-filtration)
	10/30/98	ND (pre/post filtration)	1.4 (pre-filtration); ND (post-filtration)
	2/20/99	ND (pre/post filtration)	0.8 (pre-filtration); ND (post-filtration)
	6/17/99	ND (pre/post filtration)	0.7 (pre-filtration); ND (post-filtration)
	8/18/99	ND (pre/post filtration)	1 (pre-filtration); ND (post-filtration)
	11/8/99	ND (pre/post-filtration)	ND (pre/post-filtration)
	2/16/00	ND (pre/post-filtration)	ND (pre/post-filtration)
	5/18/00	ND (pre/post-filtration)	ND (pre/post-filtration)
	8/23/00	ND (pre/post-filtration)	ND (pre/post-filtration)
	2/12/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/29/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/6/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	12/11/01	ND (pre/post filtration)	0.33 estimated value (pre-filtration) ND (post-filtration)
	3/14/02	ND (pre/post filtration)	0.48 estimated value (pre-filtration) ND (post-filtration)
	6/13/02	ND (pre/post filtration)	0.37 estimated value (pre-filtration) ND (post-filtration)
	9/17/02	ND (pre/post-filtration)	ND (pre/post-filtration)
	12/18/02	ND (pre/post-filtration)	ND (pre/post-filtration)
	3/12/03	ND (pre/post filtration)	2.5 (pre-filtration); ND (post-filtration)
	6/12/03	ND (pre/post filtration)	4.5 (pre-filtration); ND (post-filtration)
	9/29/03	ND (pre/post filtration)	4.1 (pre-filtration); ND (post-filtration)
	12/18/03	ND (pre/post filtration)	2.1 (pre-filtration); ND (post-filtration)
	3/10/04	ND (pre/post filtration)	3.0 (pre-filtration); ND (post-filtration)
	6/16/04	ND (pre/post filtration)	1.8 (pre-filtration); ND (post-filtration)
	9/29/04	ND (pre/post filtration)	2.0 (pre-filtration); ND (post-filtration)
	12/21/04	ND (pre/post filtration)	1.4 (pre-filtration); ND (post-filtration)
		ND (pre/post filtration)	0.51 (pre); ND (post-filtration)
	6/23/05	ND (pre/mid/ post-filtration)	0.49 (pre); ND (mid/post-filtration)
	9/26/05	ND (pre/post filtration)	0.64 (pre-); ND (post-filtration)
	12/19/05	ND (pre/post filtration)	0.76 (pre-); ND (post-filtration)
	04/03/06	ND (pre/mid/ post-filtration)	0.57 (pre); 0.51 (mid); D (post-filter)
	6/12/06	ND (pre/mid/ post-filtration)	0.36 (pre-); ND (mid/post-filtration)
	10/31/06	ND (pre/mid/ post-filtration)	0.24 (pre-);ND (mid/post-filtration)
	12/19/06	ND (pre/post-filtration)	0.74 (pre-);ND (post-filtration)
	3/15/07	ND (pre/mid/post filtration)	0.69 (pre); 0.58 (mid); ND (post-filter)
	5/31/07	ND (pre/mid/post-filtration)	0.67 (pre-); ND (mid/post-filtration)
	7/27/07	ND (pre/mid/post-filtration)	ND (pre); 0.11 (mid); ND (post filter)
	10/23/07	ND (pre/mid/post-filtration)	ND (pre); 0.70 (mid); ND (post-filter)
	03/24/08	ND (pre/mid/post filtration)	0.66 (pre-); ND (mid/post-filtration)
	06/30/08	ND (pre/mid/post filtration)	0.70 (pre-); ND (mid/post-filtration)
	09/23/08	ND (pre/mid/post filtration)	ND (pre/mid/post-filtration)
	11/18/08	ND (pre/mid/post filtration)	0.66 (pre-); ND (mid/post-filtration)
	02/11/09	ND (pre/mid/post filtration)	0.75 (pre-); ND (mid/post-filtration)

Drinking Water Sampling Results from 285 Old Bayview Road, Northeast

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
285 Old Bayview Road (Bayview Mobil)	12/27/95	9.4 (pre-filtration) ND (post-filtration)	NS (pre-filtration) NS (post-filtration)
	3/27/96	9.2 (pre-filtration) ND (post-filtration)	NS (pre-filtration) NS (post-filtration)
	5/14/96	ND (post-filtration)	NS (post-filtration)
	7/24/96	ND (post-filtration)	NS (post-filtration)
	11/8/96	ND (post-filtration)	NS (post-filtration)
	1/27/97	8.1 (pre-filtration) ND (post-filtration)	NS (pre-filtration) NS (post-filtration)
	4/16/97	4.6 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	7/24/97	4.5 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	10/15/97	8.2 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	12/30/97	6 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	4/28/98	1.4 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	7/30/98	0.9 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	10/30/98	10 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	2/20/99	17 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	6/17/99	2.8 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	8/18/99	25 (pre-filtration) ND (post-filtration)	1.2 (pre-filtration) ND (post-filtration)
	11/8/99	2.9 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	2/16/00	1.4 (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	5/18/00	10 (pre-filtration) ND (post-filtration)	0.8 (pre-filtration) ND (post-filtration)
	8/23/00	5.9 (pre-filtration) ND (post-filtration)	0.7 (pre-filtration) ND (post-filtration)
	2/12/01	7.3 (pre-filtration) ND (post-filtration)	1.6 (pre-filtration) ND (post-filtration)
	6/29/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/6/01	ND (pre-filtration) ND (post-filtration)	0.7 (pre-filtration) ND (post-filtration)
	12/11/01	ND (pre-filtration) ND (post-filtration)	0.68 (pre-filtration) ND (post-filtration)
	3/14/02	ND (pre-filtration) ND (post-filtration)	0.46 estimated value (pre-filtration) ND (post-filtration)
	6/13/02	ND (pre-filtration) ND (post-filtration)	0.35 estimated value (pre-filtration) ND (post-filtration)
	9/17/02	ND (pre-filtration) ND (post-filtration)	1.1 (pre-filtration) ND (post-filtration)
	12/18/02	ND (pre-filtration) ND (post-filtration)	0.45 estimated value (pre-filtration) ND (post-filtration)
	3/12/03	ND (pre-filtration) ND (post-filtration)	0.34 estimated value (pre-filtration) ND (post-filtration)
	6/12/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/29/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	12/18/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	3/10/04	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/16/04	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/29/04	ND (pre-filtration) ND (post-filtration)	0.4 estimated value (pre-filtration) ND (post-filtration)
	12/21/04	ND (pre-filtration) ND (post-filtration)	0.62 (pre-filtration) ND (post-filtration)
	3/30/05	ND (pre-filtration) ND (post-filtration)	0.66 (pre-filtration) ND (post-filtration)

Drinking Water Sampling Results from 285 Old Bayview Road, Northeast (cont.)

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
Transient Non-Community Supply Well			
285 Old Bayview Road	6/23/05	ND (pre-filtration) ND (mid/post-filtration)	0.53 (pre-filtration) 0.56 (mid-filtration) ND (post-filtration)
	9/26/05	1.4 (pre-filtration) ND (post-filtration)	1.0 (pre-filtration) ND (post-filtration)
	12/19/05	ND (pre-filtration) ND (post-filtration)	0.80 (pre-filtration) ND (post-filtration)
	3/27/06	ND (pre-filtration) ND (post-filtration)	0.36 (pre-filtration) ND (post-filtration)
	6/12/06	ND (pre-filtration) ND (mid/post-filtration)	0.72 (pre-filtration) 0.68 (mid-filtration) 0.31 (post-filtration)
	10/31/06	ND (pre-filtration) ND (mid/post-filtration)	0.71 (pre-filtration) 0.66 (mid-filtration) ND (post-filtration)
	12/19/06	ND (pre-filtration) ND (post-filtration)	0.27 estimated (pre-filtration) ND (post-filtration)
	3/15/07	ND (pre/mid/post-filtration)	ND (pre/mid/post-filtration)
	5/31/07	ND (pre/mid/post-filtration)	ND (pre/mid/post-filtration)
	7/27/07	ND (pre/mid/post-filtration)	0.65 (pre-filtration) ND (mid/post-filtration)
	10/23/07	ND (pre/mid/post-filtration)	ND (pre-filtration) 0.11 (mid-filtration) ND (post-filtration)
	03/24/08	ND (pre/mid/post-filtration)	ND (pre-filtration) 0.17 (mid-filtration) ND (post-filtration)
	06/30/08	ND (pre/mid/post-filtration)	ND (pre-filtration) 0.26 (mid-filtration) ND (post-filtration)
	09/23/08	ND (pre/mid/post-filtration)	ND (pre-filtration) ND (mid-filtration) ND (post-filtration)
	11/18/08	ND (pre/mid/post-filtration)	ND (pre-filtration) 0.20 (mid-filtration) ND (post-filtration)
	02/11/09	ND (pre/mid/post-filtration)	ND (pre-filtration) 0.16 (mid-filtration) ND (post-filtration)

MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719
410-537-3442 • 410-537-3092 (fax) 1-800-633-6101

May 5, 2009

Mrs. Mary Hughes
77 Fair Hill Drive
Elkton MD 21921

RE: Case No. 1986-1205-CE
Former Bayview Mobil Service Station #16-G1R
285 Old Bayview Road, North East
Cecil County, Maryland

Dear Mrs. Hughes:

The Oil Control Program (OCP) recently completed a review of the analytical data (*enclosed)* for samples collected from the drinking water supply well at 280 Old Bayview Road. Between February 1996 and February 2009, ExxonMobil monitored the quality of the drinking water at your residential property. The sample collected on September 6, 2001 detected the highest level of methyl tertiary-butyl ether (MTBE) at 2.6 parts per billion (ppb). The most recent sample collected from this well on February 11, 2009 was non-detect for petroleum constituents.

The State's action level for MTBE is 20 ppb. For close to 13 years of sampling, MTBE within your well water has never reached the State's action level. Based on the analytical data, the Department does not require ExxonMobil to continue sampling or maintaining treatment on your drinking water well. The Department appreciates your cooperation and will continue to monitor groundwater conditions at the former Bayview Mobil facility under MDE-OCP Case No. 1986-1205-CE. The Department reserves the right to require future sampling of private off-site drinking water wells should site conditions change.

If you have any questions regarding the groundwater investigation, please contact the case manager, Mr. Chad Widney at 410-537-3386 (email: cwidney@mde.state.md.us) or me at 410-537-3499 (email: sbull@mde.state.md.us).

Sincerely,

Susan Bull, Western Region Section Head
Remediation and State-Lead Division, Oil Control Program

CW/nln
Enclosure
cc: Ms. Natalie Morales Hendricks (Kleinfelder East, Inc.)
Ms. Ann F. Baker (Town of North East)
Mr. Charles Smyser (Cecil County Health Department)
Mr. Christopher H. Ralston
Mr. Herbert M. Meade
Mr. Horacio Tablada

Off-site Private Drinking Water Sampling Results for 280 Old Bayview Road

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
280 Old Bayview Road (PW-3)	2/12/96	ND (pre/post-filtration)	ND (pre/post-filtration)
	2/21/96	ND (pre-filtration) ND (post-filtration)	ND (pre-filtration) ND (post-filtration)
	3/27/96	ND (pre/post-filtration)	NS (pre/post-filtration)
	11/8/96	ND (post-filtration)	NS (post-filtration)
	4/16/97	ND (post-filtration)	ND (post-filtration)
	10/15/97	ND (post-filtration)	ND (post-filtration)
	12/30/97	ND (post-filtration)	ND (post-filtration)
	4/28/98	ND (post-filtration)	ND (post-filtration)
	10/30/98	ND (post-filtration)	ND (post-filtration)
	2/20/99	ND (post-filtration)	ND (post-filtration)
	6/17/99	ND (pre/post-filtration)	1.1 (pre-filtration) ND (post-filtration)
	8/18/99	ND (pre/post-filtration)	0.8 (pre-filtration) ND (post-filtration)
	11/8/99	ND (post-filtration)	ND (post-filtration)
	2/16/00	ND (post-filtration)	ND (post-filtration)
	5/18/00	ND (pre/post-filtration)	0.6 (pre-filtration) ND (post-filtration)
	8/23/00	ND (post-filtration)	ND (post-filtration)
	2/12/01	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/29/01	ND (pre/post-filtration)	0.8 (pre-filtration) ND (post-filtration)
	9/6/01	ND (pre/post-filtration)	2.6 (pre-filtration) 1.5 (post-filtration)
	12/11/01	ND (pre-filtration)	0.40 estimated value (pre-filtration)
	3/14/02	ND (pre/post-filtration)	0.29 estimated value (pre-filtration) ND (post-filtration)
	9/17/02	ND (pre/post-filtration)	ND (pre-filtration) 0.65 estimated value (post-filtration)
	12/18/02	ND (pre/post-filtration)	0.29 estimated value (pre-filtration) 0.36 estimated value (post-filtration)
	3/12/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	9/29/03	ND (pre/post-filtration)	ND (pre/post-filtration)
	6/16/04	ND (pre/post-filtration)	0.25 estimated value (pre-filtration) 0.31 estimated value (post-filtration)
	9/29/04	ND (post-filtration)	ND (post-filtration)
	12/21/04	ND (pre/post-filtration)	0.23 (pre-filtration) ND (post-filtration)
	3/30/05	ND (pre/post-filtration)	0.27 estimated value (pre-filtration) ND (post-filtration)
	6/23/05	ND (pre/post-filtration)	0.29 (pre-filtration) ND (mid-filtration) 0.23 (post-filtration)
	9/26/05	ND (pre/post-filtration)	0.32 estimated value (pre-filtration) 0.34 estimated value (post-filtration)
	12/19/05	ND (pre/mid/post-filtration)	0.19 (pre-filtration) ND (mid/post-filtration)
	3/27/06	ND (pre/post-filtration)	0.22 (pre-filtration) ND (post-filtration)
	6/12/06	ND (pre/mid/post filtration)	0.36 (pre-filtration) ND (mid/post-filtration)
	10/31/06	ND (pre/mid/post filtration)	0.24 (pre-filtration) ND (mid/post-filtration)
	12/19/06	ND (pre/post-filtration)	0.24 estimated value (pre-filtration) ND (post-filtration)
	3/15/07	ND (pre/mid/post-filtration)	0.23 (pre-filtration) ND (mid/post-filtration)
	5/31/07	ND (pre/mid/post-filtration)	0.17 (pre-filtration) ND (mid/post-filtration)
	7/27/07	ND (pre/mid/post-filtration)	0.15 (pre-filtration) ND (mid/post-filtration)
	10/23/07	ND (pre/mid/post filtration)	0.15 (pre-filtration) ND (mid/post-filtration)
	03/24/08	ND (pre/mid/post filtration)	0.15 (pre-filtration) ND (mid/post-filtration)

Sample Location	Sample Date	Petroleum Constituents of Concern	
		Benzene *(MCL - 5 ppb)*	MTBE *(20 ppb – action level)*
280 Old Bayview Road (PW-3) cont.	06/30/08	ND (pre/mid/post filtration)	0.18 (pre-filtration) 0.09 (mid-filtration) ND (post-filtration)
	09/23/08	ND (pre/mid/post filtration)	0.13 (pre-filtration) ND (mid/post-filtration)
	11/20/08	ND (pre/mid/post filtration)	0.14 (pre-filtration) ND (mid/post-filtration)
	02/11/09	ND (pre/mid/post filtration)	ND (pre/mid/post filtration)

ARCADIS

Appendix B

Soil Boring Logs

DRILL LOG

CLIENT: Mobil Corporation LOCATION: Northeast Maryland Station #16-G1R	MONITOR WELL#: MW-12 TOTAL DEPTH: 18 Feet LOGGED BY: George Flam DRILLER: KCI Drilling Company DRILL RIG: Truck Mounted B-61 METHOD: Hollow Stem Auger DATE DRILLED: 3/7/91
WELL CONSTRUCTION: 3 Feet Riser 15 Feet Screen Locking Cap and Cover	

DEPTH (FT)	CLASSIFICATION	LITHOLOGICAL DESCRIPTION	OVA (ppm)
0-1	OL	Topsoil (FILL)	
1-6	CL	Red sandy CLAY with gravel and cobbles (fill)	1 @ 2'-4' 94 @ 4'-6'
6-18	ML	Light brown and yellow clayey SILT	24 @ 6'-8' 105 @ 8'-10'

REMARKS: Water at 18 feet upon completion.

Form F/0583.1

DRILL LOG

CLIENT: Mobil Corporation LOCATION: Northeast Maryland Station #16-G1R	MONITOR WELL#: MW-13 TOTAL DEPTH: 18 Feet LOGGED BY: George Flam DRILLER: KCI Drilling Company DRILL RIG: Truck Mounted B-61 METHOD: Hollow Stem Auger DATE DRILLED: 3/7/91
WELL CONSTRUCTION: 3 Feet Riser 15 Feet Screen Locking Cap and Cover	

DEPTH (FT)	CLASSIFICATION	LITHOLOGICAL DESCRIPTION	OVA (ppm)
0-1	OL	Topsoil (FILL)	
1-5	ML	Yellow-brown SILT with trace gravel	0 @ 2'-4' 0 @ 4'-6'
5-19	ML	Yellow to red-yellow SILT (saprolite)	0 @ 6'-8' 0 @ 8'-10'

REMARKS: Caved at 18 feet; water at 12 feet upon completion. Large quartz fragments at 5 feet.

Form F/0518

DRILL LOG

CLIENT: Mobil Corporation LOCATION: Northeast Maryland Station #16-G1R	MONITOR WELL#: MW-14 TOTAL DEPTH: 18 Feet LOGGED BY: George Flam DRILLER: KCI Drilling Company DRILL RIG: Truck Mounted B-61 METHOD: Hollow Stem Auger DATE DRILLED: 3/7/91
WELL CONSTRUCTION: 3 Feet Riser 15 Feet Screen Locking Cap and Cover	

DEPTH (FT)	CLASSIFICATION	LITHOLOGICAL DESCRIPTION	OVA (ppm)
0-1	OL	Topsoil (FILL)	
1-4	ML	Red to white-yellow SILT, trace mica, sand, and gravel	0 @ 2'-4' 0 @ 4'-6'
4-18	ML	Gray and yellow micaceous SILT with trace sand (saprolite)	0 @ 6'-8' 0 @ 8'-10'

REMARKS: Water at 16 feet upon completion. Large quartz fragment and difficult drilling from 4.5 to 5 feet.

Form F/0518

DRILL LOG

CLIENT: Mobil Corporation LOCATION: Northeast Maryland Station #16-G1R	MONITOR WELL#: MW-15 TOTAL DEPTH: 18 Feet LOGGED BY: George Flam DRILLER: KCI Drilling Company DRILL RIG: Truck Mounted B-61 METHOD: Hollow Stem Auger DATE DRILLED: 3/7/91
WELL CONSTRUCTION: 3 Feet Riser 15 Feet Screen Locking Cap and Cover	

DEPTH (FT)	CLASSIFICATION	LITHOLOGICAL DESCRIPTION	OVA (ppm)
0-1	OL	Topsoil (FILL)	
1-5	ML	Red to light yellow SILT, trace mica and sand	0 @ 2'-4' 0 @ 4'-6'
5-18	ML	Gray-yellow SILT with some mica and sand (saprolite)	.2 @ 6'-8' .2 @ 8'-10'

REMARKS: Water at 17 feet upon completion.

Form F/0518

DRILL LOG

CLIENT: Mobil Corporation LOCATION: Northeast Maryland Station #16-G1R	MONITOR WELL#: MW-16 TOTAL DEPTH: 18 Feet LOGGED BY: George Flam DRILLER: KCI Drilling Company DRILL RIG: Truck Mounted B-61 METHOD: Hollow Stem Auger DATE DRILLED: 3/7/91
WELL CONSTRUCTION: 3 Feet Riser 15 Feet Screen Locking Cap and Cover	

DEPTH (FT)	CLASSIFICATION	LITHOLOGICAL DESCRIPTION	OVA (ppm)
0-1	OL	Topsoil (FILL)	
1-5	CL	Red micaceous sandy CLAY with gravel and some cobbles (fill)	0 @ 2'-4' 0 @ 4'-6'
5-19	ML	Gray-orange micaceous SILT with trace sand	0 @ 6'-8' 0 @ 8'-10'

REMARKS: Caved at 18.5 feet; water at 18 feet upon completion.

Form F/0518

TABLE 1

Summary of Soil Boring and Well Point Construction Details

Mobil Oil Corporation
Service Station No. 16-G1R
Northeast, Maryland

Boring ID	Sample Depth (feet below grade)	VOC Concentration ppm	Soil Composition
SB-1	3 - 7	18.3	Brown, gray clay, dry
	7 - 10	12.8	Same as Above
	10 - 13	20.2	Yellow/green clay, some pebbles, moist @ 12 feet
			End of Boring at 20 feet
			Well completed with 10 feet of screen and 10 feet of riser
SB-2	6 - 8	18.7	Brown clay, some pebbles, moist @ 7.5 feet
			End of Boring at 20 feet
			Well completed with 10 feet of screen and 10 feet of riser
SB-3	8 - 10	1,243	Brown clay, some pebbles, moist @ 9 feet
			End of Boring at 25 feet
			Well completed with 15 feet of screen and 10 feet of riser

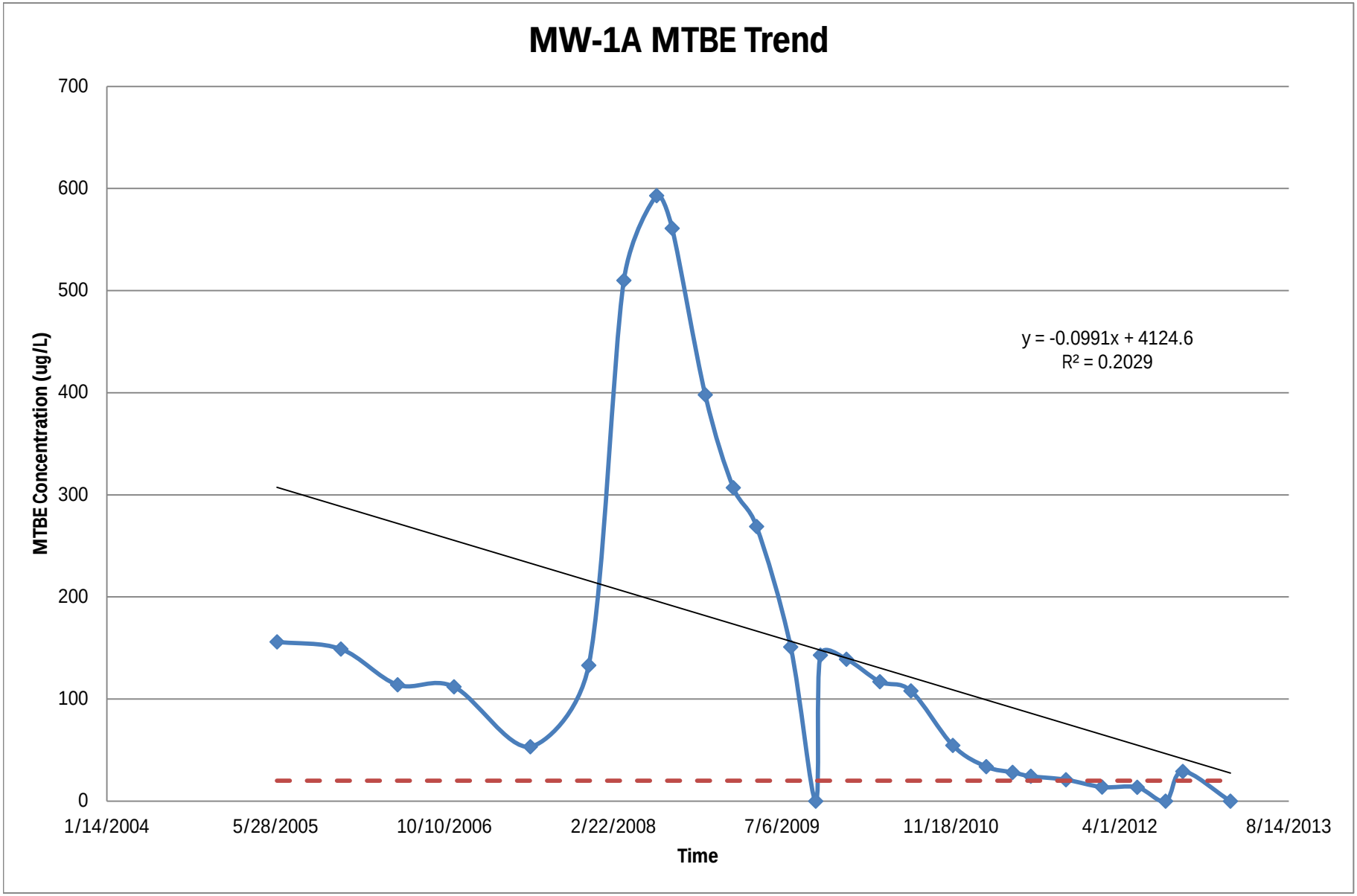
VOC - Volatile organic compounds (parts per million) as measured with a photo ionization detector
ppm - parts per million

ARCADIS

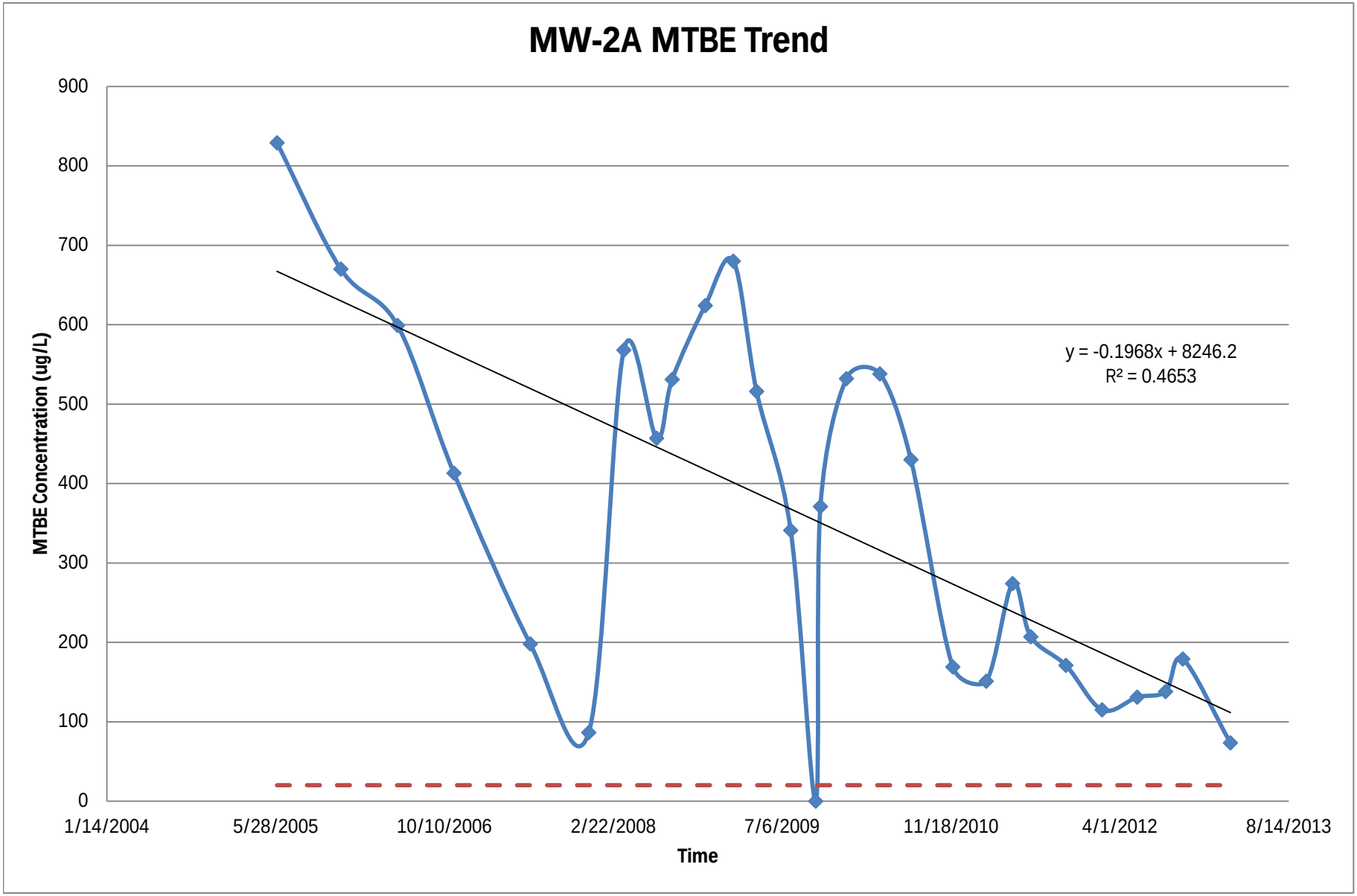
Appendix C

Trend Plots for Benzene and MTBE

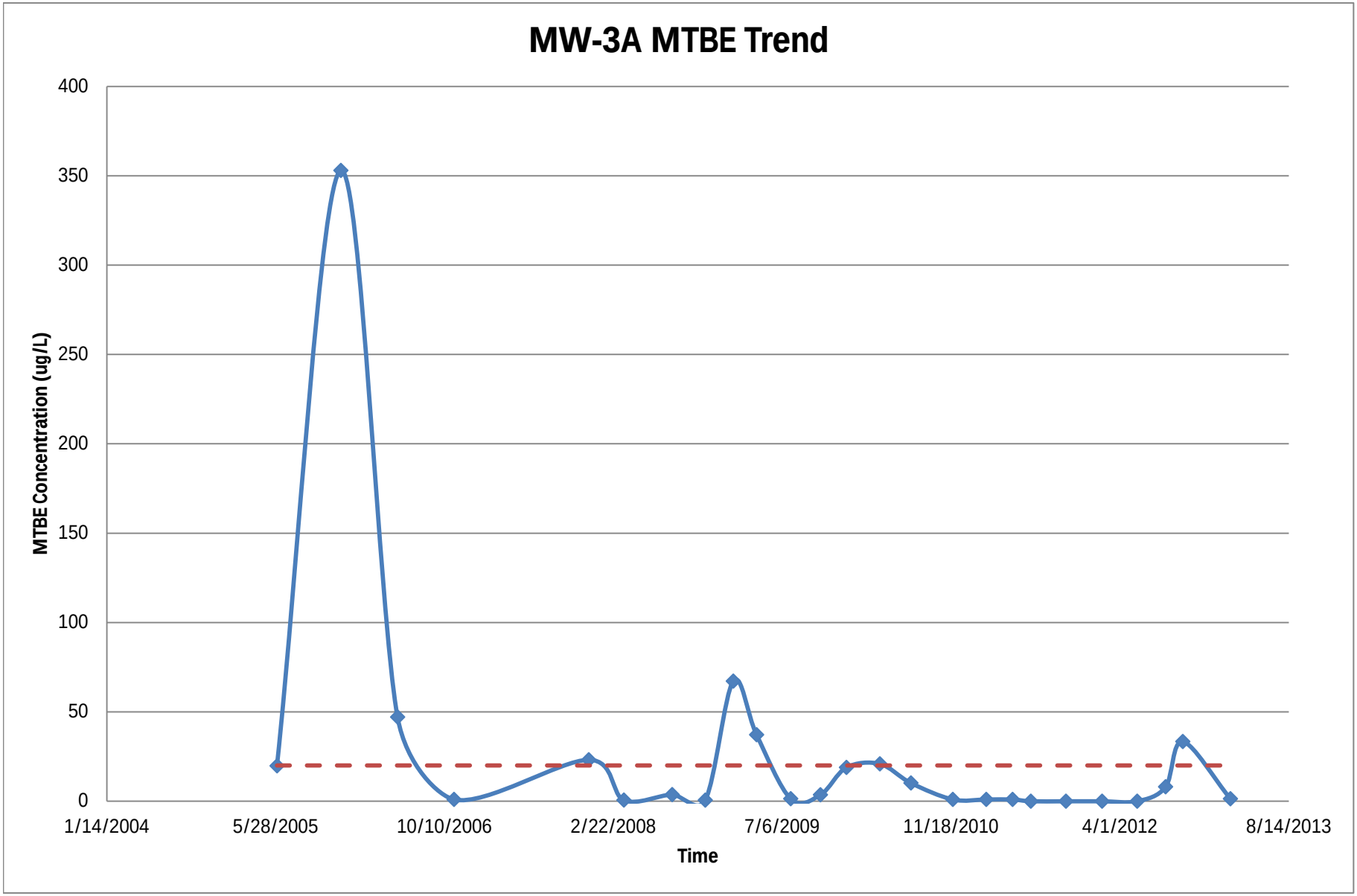
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



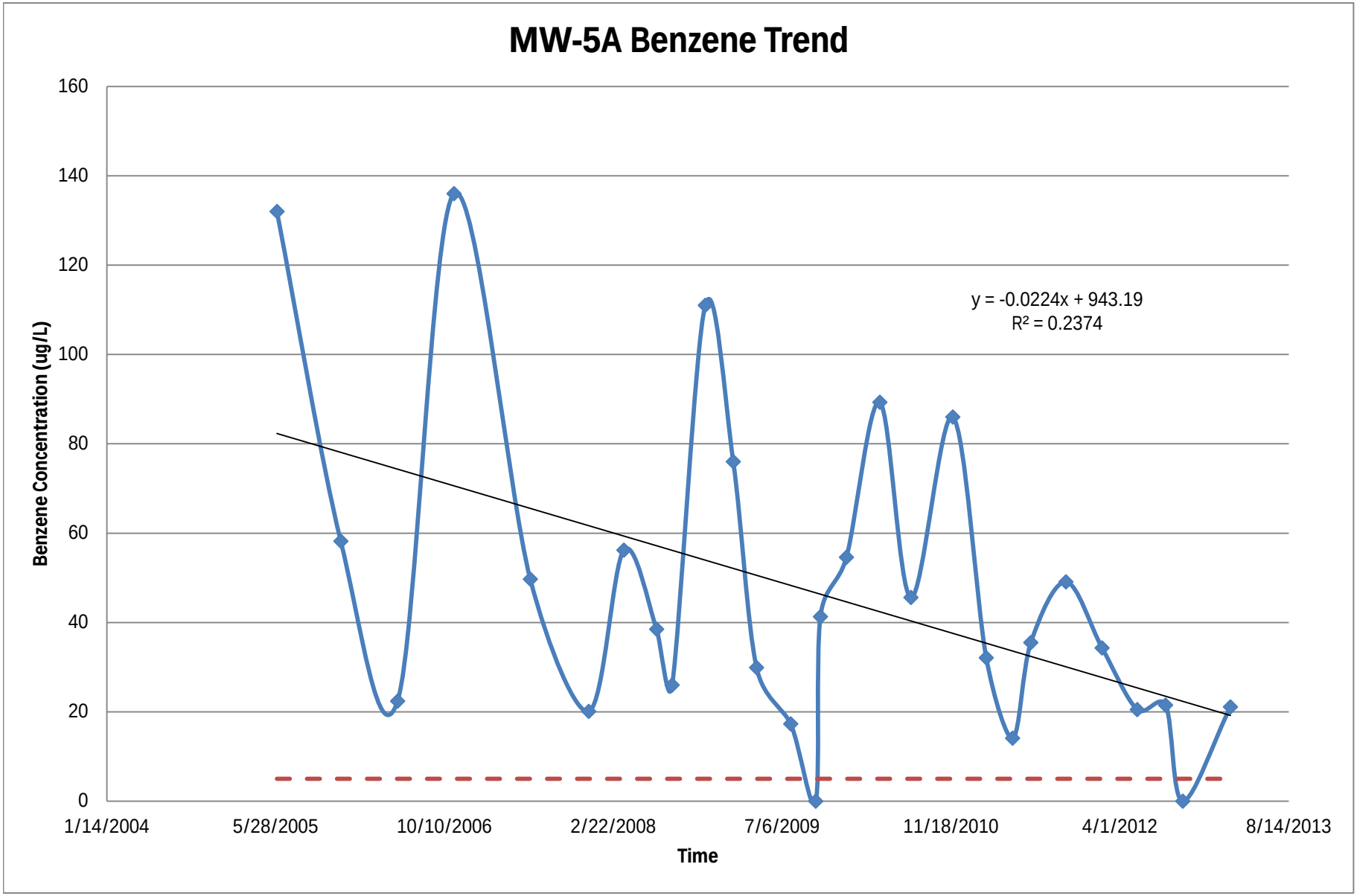
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



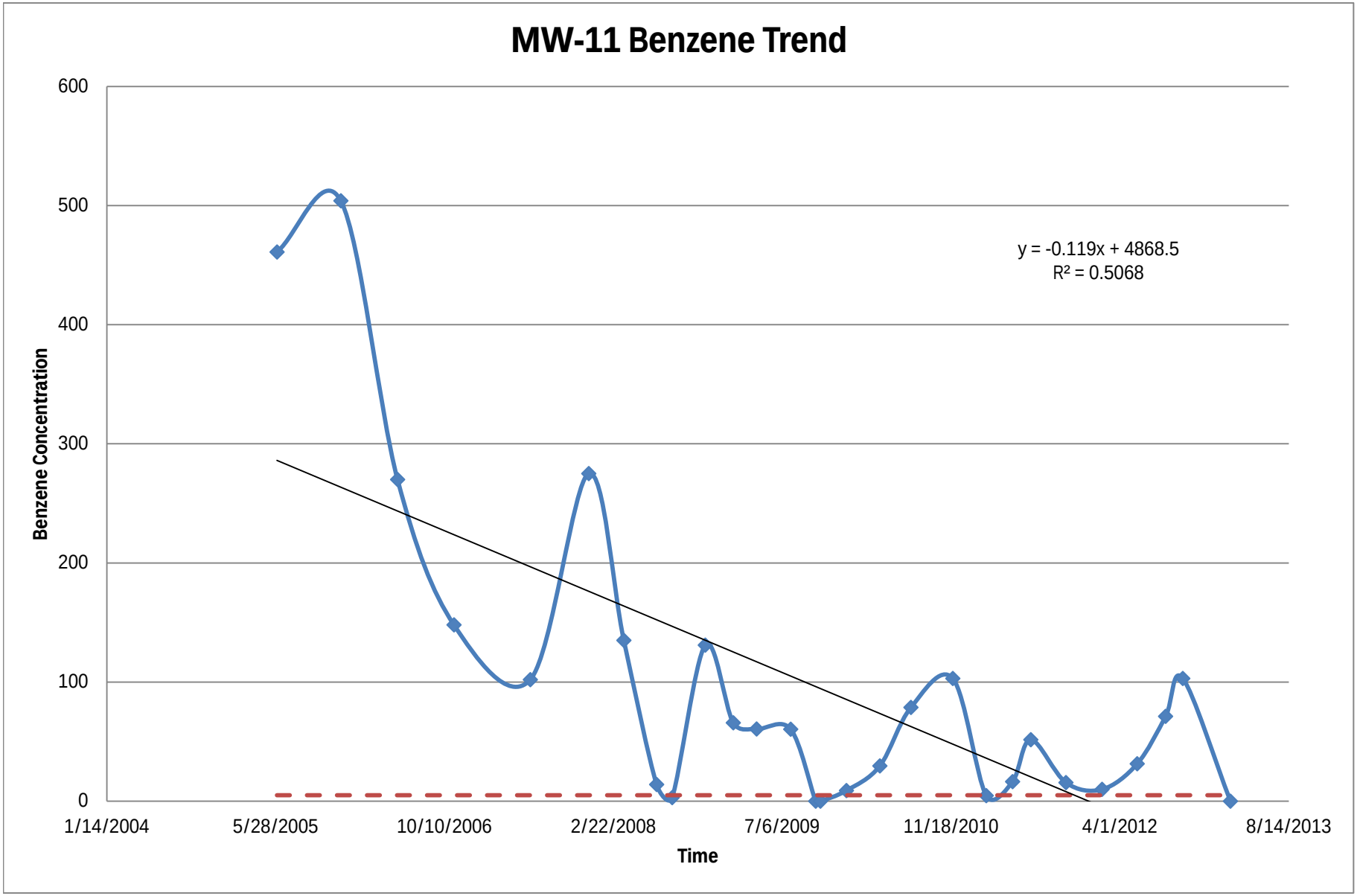
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



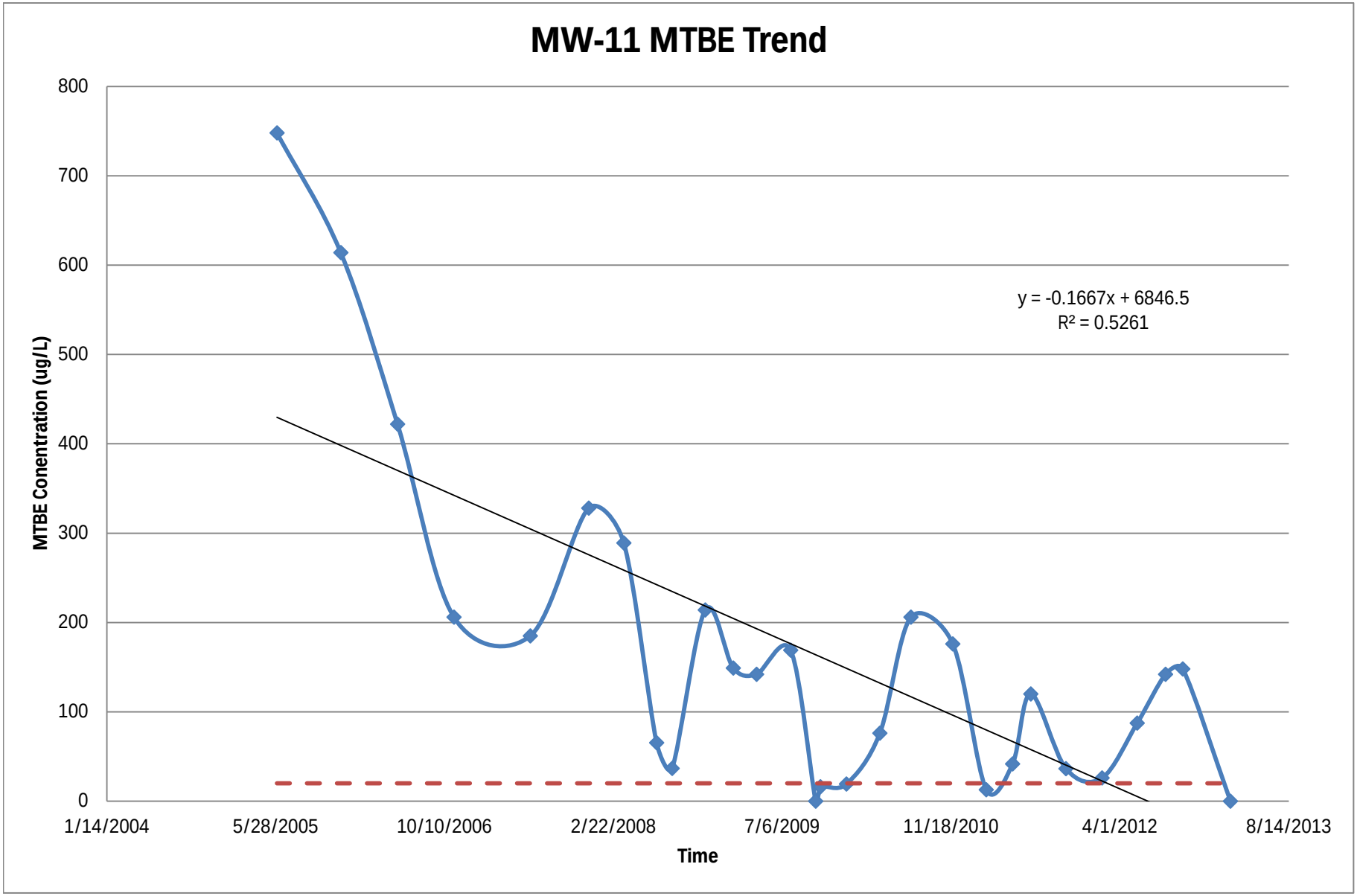
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



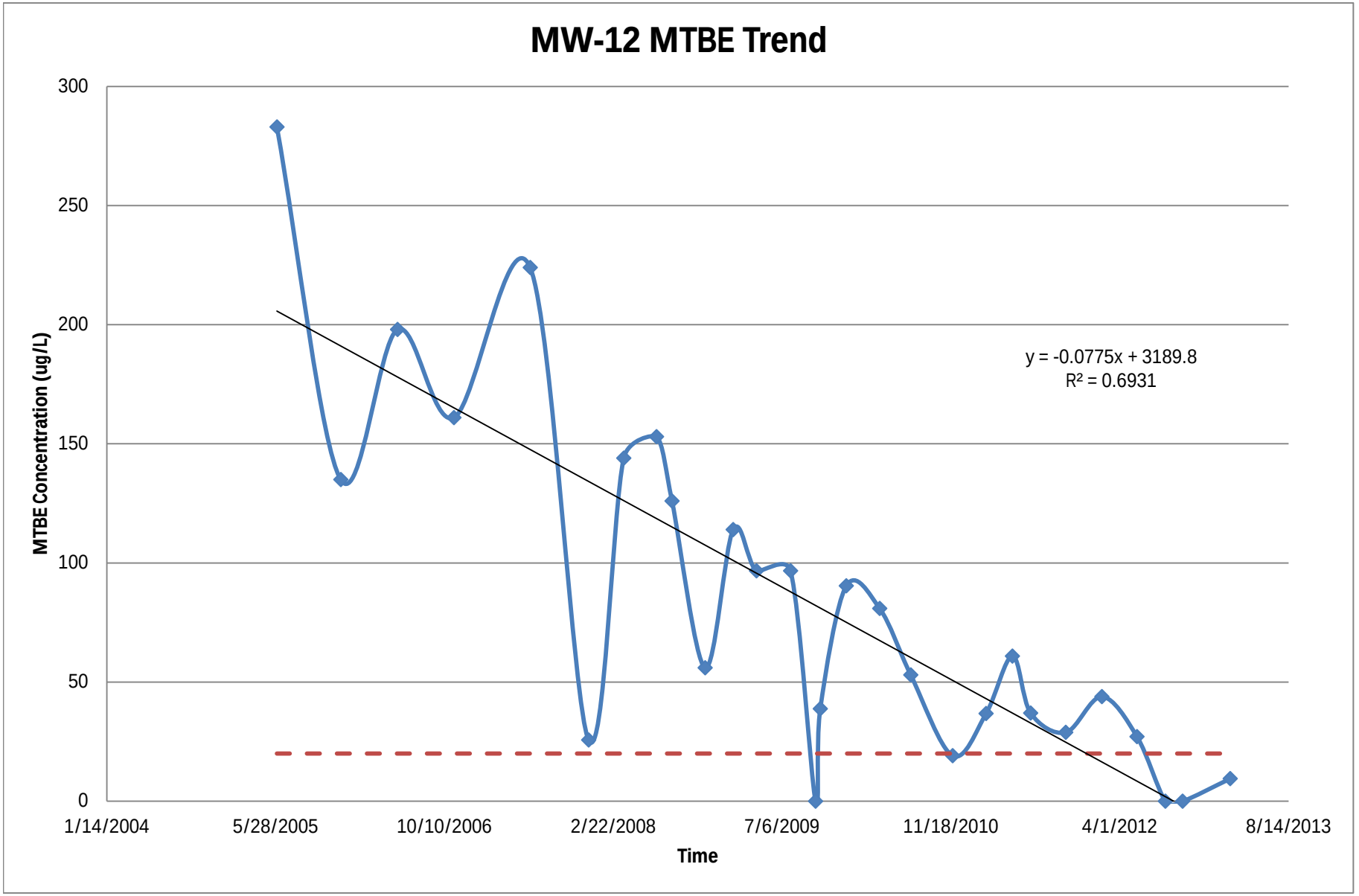
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



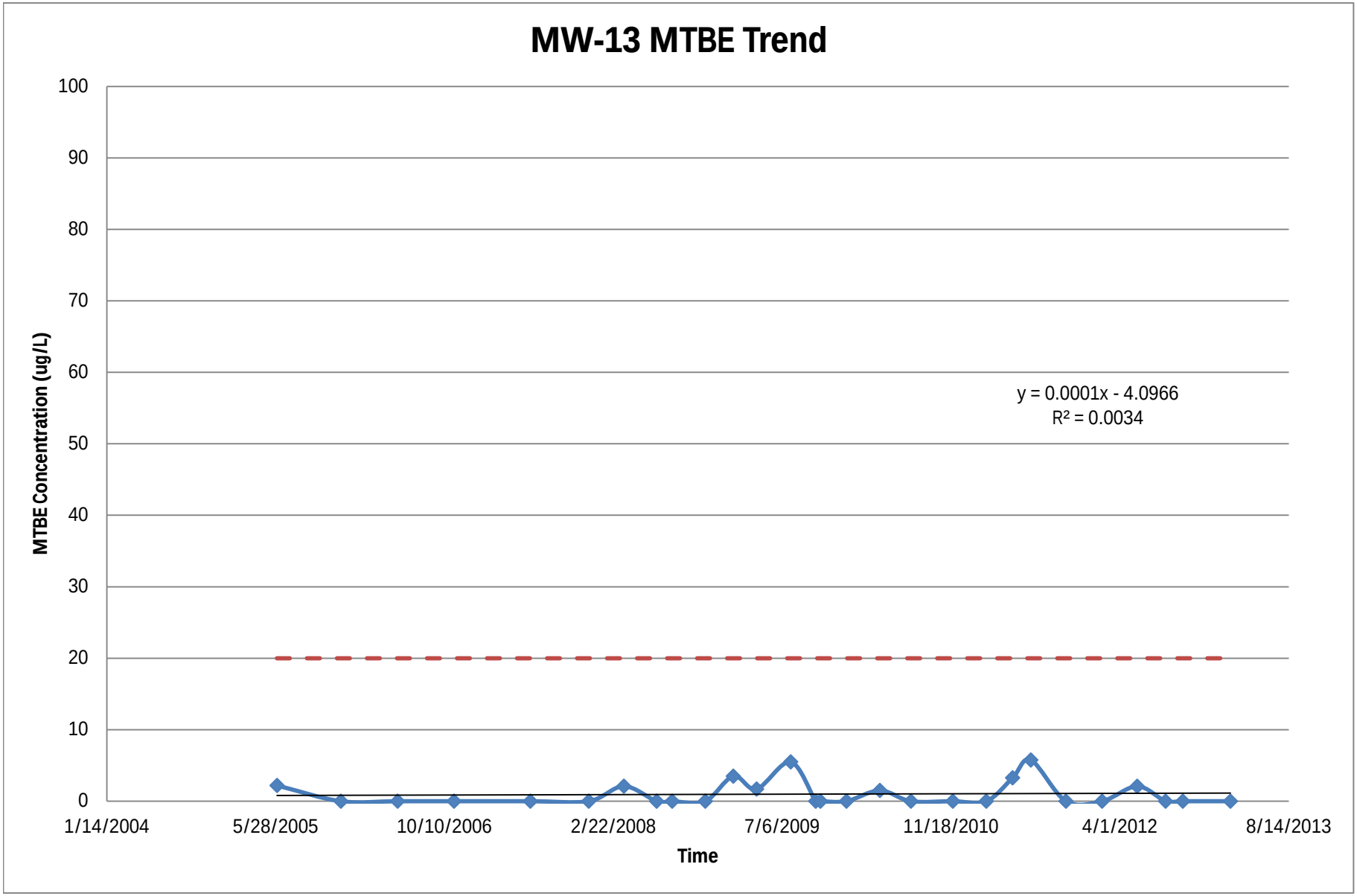
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



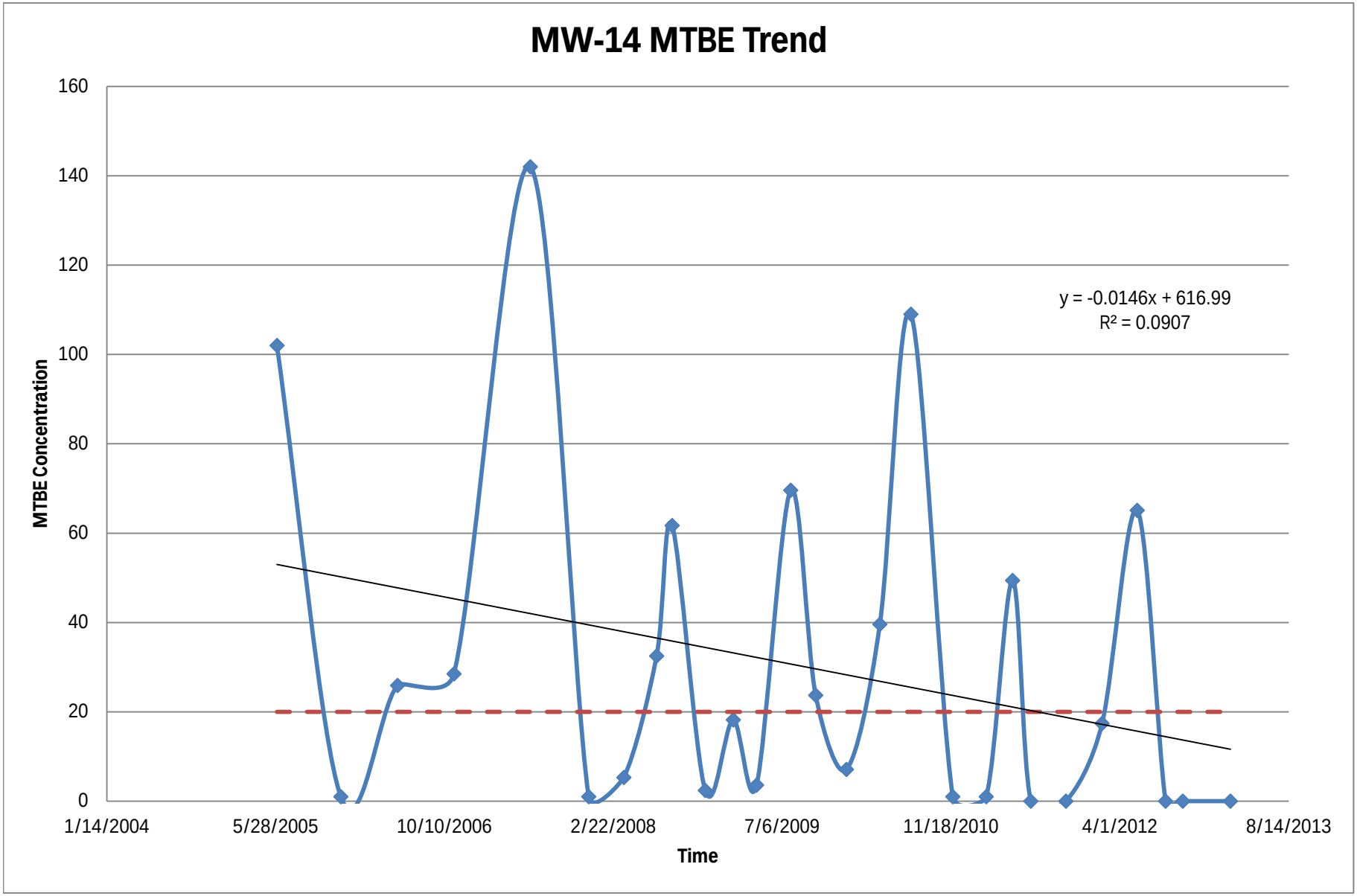
Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



Appendix C
Trend Plots
Exxon Service Station #14489
285 Old Bayview Drive
North East, Maryland



ARCADIS

Appendix D

MSDS Sheets

Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Issue Date: 2006-06

Calcium Sulfate
CAL8200

Section 1 - Chemical Product and Company Identification 61

Material Name: Calcium Sulfate **CAS Number:** 7778-18-9
Chemical Formula: CaO_4S
Structural Chemical Formula: $CaSO_4$
EINECS Number: 231-900-3
ACX Number: X1000184-2
Synonyms: ANHYDROUS CALCIUM SULFATE; ANHYDROUS GYPSUM; ANHYDROUS SULFATE OF LIME; CALCIUM SALT OF SULFURIC ACID; CALCIUM SUFATE; CALCIUM SULFATE; CALCIUM SULFATE (1:1); CALCIUM SULPHATE; CRYSALBA; DRIERITE; GIBS; GYPSUM; KARSTENITE; MURIACITE; NATURAL ANHYDRITE; SULFURIC ACID CALCIUM SALT; SULFURIC ACID CALCIUM(2+) SALT (1:1); SULFURIC ACID,CALCIUM SALT (1:1); THIOLITE
General Use: Laboratory reagent for drying, desiccant.
Used as portland cement retarder; tile and plaster; source of sulphur and sulphuric acid; polishing powders; paints (white pigment, filler, drier); paper (size filler, surface coating); dyeing and calico printing.
Also used in metallurgy (reduction of zinc minerals); drying industrial gases, solids and many organic liquids; in granulated form as soil conditioner; quick-setting cements, moulds, and surgical casts; wallboard; food additive and desiccant.

Section 2 - Composition / Information on Ingredients

Name	CAS	%
calcium sulfate	7778-18-9	100

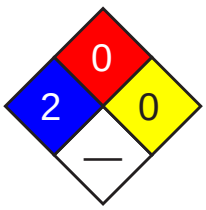
OSHA PEL
TWA: 15 mg/m^3 (total), 5 mg/m^3 (respirable).

NIOSH REL
TWA: 10 mg/m^3 (total); TWA: 5 mg/m^3 (resp).

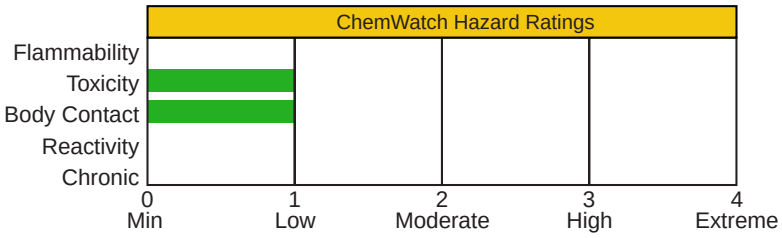
DFG (Germany) MAK
TWA: 6 mg/m^3; measured as resirable fraction of the aerosol.

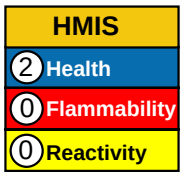
ACGIH TLV
TWA: 10 mg/m^3; Value is for particulate matter containing no asbestos and less than 1% crystalline silica.

Section 3 - Hazards Identification



Fire Diamond





ANSI Signal Word

Caution

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

White powder or crystals; odorless. Irritating to eyes/skin/respiratory tract. Chronic: inflammation of the nasal passages, impaired sense of smell and taste.

Potential Health Effects

Target Organs: skin, eyes, upper respiratory system
Primary Entry Routes: inhalation
Acute Effects
Inhalation: The dust may be discomforting to the upper respiratory tract.

Persons with impaired respiratory function, airway diseases, and conditions such as emphysema or chronic bronchitis may incur further disability if excessive concentrations of particulate are inhaled.

Eye: The dust may produce eye discomfort causing transient smarting, blinking.

Skin: The material may be mildly discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis.

Solution of material in moisture on the skin or in perspiration may increase irritant effects.

Four students received severe hand burns whilst making moulds of their hands with dental plaster substituted for Plaster of Paris. The dental plaster known as "Stone" was a special form of calcium sulfate hemihydrate containing alpha-hemihydrate crystals that provide high compression strength to the moulds. Beta-hemihydrate (normal Plaster of Paris) does not cause skin burns in similar circumstances.

Ingestion: The material is moderately discomforting to the gastrointestinal tract and may be harmful if swallowed in large quantity.

Sulfate salts are poorly absorbed from the gastrointestinal tract but because of osmotic activity are able to draw water from the lumen to produce diarrhea (purging). Sulfate ion usually has little toxicological potential.

Carcinogenicity: NTP - Not listed; IARC - Not listed; OSHA - Not listed; NIOSH - Not listed; ACGIH - Not listed; EPA - Not listed; MAK - Not listed.

Chronic Effects: No data found.

Section 4 - First Aid Measures

Inhalation: Remove to fresh air.

Lay patient down. Keep warm and rested.

Other measures are usually unnecessary.

Eye Contact: Immediately hold the eyes open and flush with fresh running water.

Ensure irrigation under the eyelids by occasionally lifting upper and lower lids. If pain persists or recurs seek medical attention.

Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact: Immediately remove all contaminated clothing, including footwear (after rinsing with water).

Wash affected areas thoroughly with water (and soap if available).

Seek medical attention in event of irritation.

Ingestion: Contact a Poison Control Center. DO NOT induce vomiting. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water (or milk) to rinse out mouth. Then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: Treat symptomatically.

Section 5 - Fire-Fighting Measures

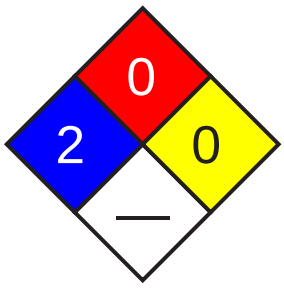
Flash Point: Noncombustible Solid

Autoignition Temperature: Not applicable

LEL: Not applicable

UEL: Not applicable

Extinguishing Media: There is no restriction on the type of extinguisher which may be used.



Fire Diamond

General Fire Hazards/Hazardous Combustion Products: Noncombustible.

Not considered to be a significant fire risk; however, containers may burn.

In a fire may decompose on heating and produce toxic/corrosive fumes.

Decomposes on heating and produces toxic fumes of sulfur oxides (SO_x) and calcium oxide.

Fire Incompatibility: Avoid reaction with aluminum, phosphorus, diazomethane and acids.

Fire-Fighting Instructions: Contact fire department and tell them location and nature of hazard.

Wear breathing apparatus plus protective gloves for fire only. Prevent, by any means available, spillage from entering drains or waterways.

Use fire fighting procedures suitable for surrounding area.

Do not approach containers suspected to be hot.

Cool fire-exposed containers with water spray from a protected location.

If safe to do so, remove containers from path of fire.

Equipment should be thoroughly decontaminated after use.

Section 6 - Accidental Release Measures

Small Spills: Clean up all spills immediately. Avoid contact with skin and eyes.

Wear impervious gloves and safety glasses.

Use dry clean-up procedures and avoid generating dust.
Vacuum up or sweep up.
Place spilled material in clean, dry, sealable, labeled container.
Large Spills: Clear area of personnel and move upwind.
Contact fire department and tell them location and nature of hazard.
Control personal contact by using protective equipment and dust respirator.
Prevent spillage from entering drains, sewers or waterways.
Recover product wherever possible. Avoid generating dust. Sweep / shovel up.
If required, wet with water to prevent dusting.
Put residues in labeled plastic bags or other containers for disposal.
Wash area down with large quantity of water and prevent runoff into drains.
If contamination of drains or waterways occurs, advise emergency services.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Limit all unnecessary personal contact.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling.
Work clothes should be laundered separately.
Use good occupational work practices. Observe manufacturer's storing and handling recommendations. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Recommended Storage Methods: Glass container; plastic container.
Multi-ply woven plastic or paper bag with sealed plastic liner.
Metal can; metal drum. Packing as recommended by manufacturer.
Check all containers are clearly labeled and free from leaks.
Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: General exhaust is adequate under normal operating conditions.
Local exhaust ventilation may be required in specific circumstances.
If risk of overexposure exists, wear NIOSH-approved respirator.
Correct fit is essential to obtain adequate protection.
Provide adequate ventilation in warehouse or closed storage areas.
Personal Protective Clothing/Equipment:
Eyes: Safety glasses with side shields; chemical goggles.
Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.
Hands/Feet: Wear chemical protective gloves, eg. PVC. Wear safety footwear.
Respiratory Protection:
Exposure Range >5 to 50 mg/m^3: Air Purifying, Negative Pressure, Half Mask
Exposure Range >50 to 500 mg/m^3: Air Purifying, Negative Pressure, Full Face
Exposure Range >500 to 5000 mg/m^3: Supplied Air, Constant Flow/Pressure Demand, Full Face
Exposure Range >5000 to unlimited mg/m^3: Self-contained Breathing Apparatus, Pressure Demand, Full Face
Cartridge Color: dust/mist filter (use P100 or consult supervisor for appropriate dust/mist filter)
Other: Overalls. Barrier cream. Eyewash unit.

Section 9 - Physical and Chemical Properties

Appearance/General Info: White, odorless, tasteless powder or crystals.
Physical State: Divided solid
Vapor Pressure (kPa): Not applicable
Vapor Density (Air=1): Not applicable
Formula Weight: 136.14
Specific Gravity (H_2O=1, at 4 °C): 2.96 (anhydrous)
Evaporation Rate: Not applicable
pH: Not applicable
pH (1% Solution): Not applicable.
Boiling Point: Decomposes
Freezing/Melting Point: 1450 °C (2642 °F)
Volatile Component (% Vol): 0
Water Solubility: Pure Anhydrous Slightly soluble

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Product is considered stable. Hazardous polymerization will not occur.
Storage Incompatibilities: Avoid storage with aluminum, diazomethane, phosphorus and acids.

Section 11 - Toxicological Information

Toxicity
for dihydrate
Inhalation (human) TC_{Lo}: 194000 mg/m^3/10Y

Irritation
Nil reported

See *RTECS* WS 6920000, for additional data.

Section 12 - Ecological Information

Environmental Fate: No data found.
Ecotoxicity: No data found.

Section 13 - Disposal Considerations

Disposal: Recycle wherever possible or consult manufacturer for recycling options.
Follow applicable federal, state, and local regulations.
Bury residue in an authorized landfill.
Recycle containers where possible, or dispose of in an authorized landfill.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Shipping Name and Description: None

Section 15 - Regulatory Information

EPA Regulations:
RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Not listed
SARA 40 CFR 372.65: Not listed
SARA EHS 40 CFR 355: Not listed
TSCA: Listed

Section 16 - Other Information

Disclaimer: Judgments as to the suitability of information herein for the purchaser's purposes are necessarily the purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, Genium Group, Inc. extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose or for consequences of its use.

Material Safety Data Sheet Collection
Genium group inc.
1171 RiverFront Center, Amsterdam, NY 12010
(518) 842-4111

Magnesium Sulfate
MAG7300

Issue Date: 2006-06

Section 1 - Chemical Product and Company Identification 61

Material Name: Magnesium Sulfate **CAS Number:** 7487-88-9
Chemical Formula: MgO_4S
Structural Chemical Formula: $MgSO_4$
EINECS Number: 231-298-2
ACX Number: X1000199-3
Synonyms: EPSOM SALT; EPSOM SALTS; FAULDING EPSOM SALTS; MAGNESIUM SULFATE; MAGNESIUM SULPHATE; SAL ANGALIS; SAL DE SEDLITZ; SULFURIC ACID MAGNESIUM SALT; SULFURIC ACID MAGNESIUM SALT (1:1); SULFURIC ACID,MAGNESIUM SALT (1:1)
Derivation: The monohydrate occurs naturally as the mineral kieserite and the heptahydrate occurs naturally as the mineral epsomite. Produced by reacting sulfuric acid with magnesium oxide, magnesium hydroxide, or magnesium carbonate.
General Use: For weighting cotton and silks, fire-proofing fabrics, dyeing and printing calicos, increasing the bleaching action of chlorinated lime, tanning leather, manufacture of mother of pearl and frosted papers, as a water-correcting agent in the brewing industry, component of nickel baths for plating other metals; in cosmetics, lotions, fertilizers, matches, and explosives. Also used medicinally to treat barium poisoning, and as a cathartic and anti-convulsant.

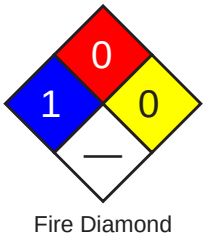
Section 2 - Composition / Information on Ingredients

Name	CAS	%
Magnesium sulfate	7487-88-9	ca 100% wt

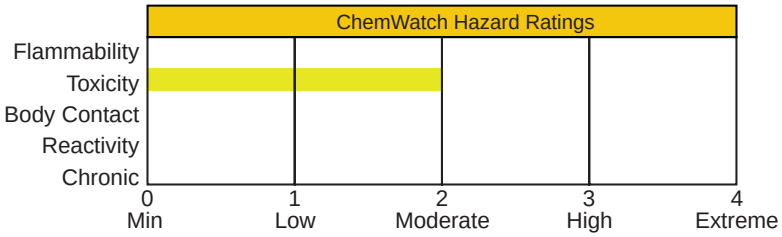
OSHA PEL **NIOSH REL**

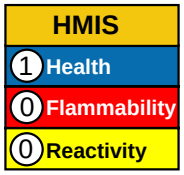
ACGIH TLV

Section 3 - Hazards Identification



Fire Diamond





☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Opaque crystals, needles, or powder; odorless. Causes: if absorbed into the body, can cause central nervous system depression, gastrointestinal effects, and lack of reflexes.

Potential Health Effects

Target Organs: Respiratory and gastrointestinal tracts, CNS.
Primary Entry Routes: Inhalation, ingestion.
Acute Effects
Inhalation: Respiratory tract irritation may occur (due to mechanical action rather than chemical).
Eye: Not specifically listed.
Skin: No data found.
Ingestion: Because magnesium sulfate is poorly absorbed, it will generally only produce vomiting and diarrhea. However, if elimination is blocked by bowel obstruction or loss of muscle contraction, magnesium absorption can occur. Symptoms include gastrointestinal irritation, CNS depression, lack of reflexes, flushing, sweating, decreased blood pressure, hypocalcemia (deficiency of calcium in the blood) and death due to respiratory paralysis.
Carcinogenicity: NTP - Not listed; IARC - Not listed; OSHA - Not listed; NIOSH - Not listed; ACGIH - Not listed; EPA - Not listed; MAK - Not listed.
Medical Conditions Aggravated by Long-Term Exposure: None reported.

Chronic Effects: None reported.

Section 4 - First Aid Measures

Inhalation: Remove exposed person to fresh air and support breathing as needed.

Eye Contact: *Do not* allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water. Consult an ophthalmologist if pain or irritation persist.

Skin Contact: *Quickly* remove contaminated clothing. Rinse with flooding amounts of water for at least 15 min. Wash exposed area with soap and water.

Ingestion: Never give anything by mouth to an unconscious or convulsing person. Contact a poison control center. Unless the poison control center advises otherwise, have the *conscious and alert* person drink 1 to 2 glasses of water to dilute. Vomiting may occur spontaneously.

After first aid, get appropriate in-plant, paramedic, or community medical support.

Note to Physicians: IV administration of calcium gluconate will partially reverse the effects of acute magnesium toxicity. Ventricular support with calcium chloride infusion and mannitol forced diuresis has also been successful. Magnesium sulfate is excreted by the kidney. Persons with compromised kidney function may experience systemic toxicity.

Section 5 - Fire-Fighting Measures

Flash Point: Noncombustible

Autoignition Temperature: Noncombustible

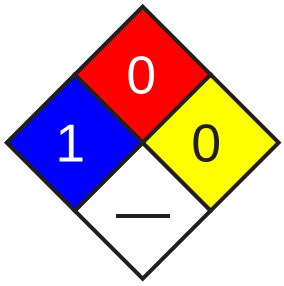
LEL: None reported.

UEL: None reported.

Extinguishing Media: Use agents suitable for surrounding fire.

General Fire Hazards/Hazardous Combustion Products: Sulfur oxides.

Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways. Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.



Fire Diamond

Section 6 - Accidental Release Measures

Spill/Leak Procedures: Notify safety personnel, isolate and ventilate area, deny entry, and stay upwind.

Small Spills: Carefully scoop up or vacuum (with appropriate filter) and place in suitable containers. Damp mop any residue.

Large Spills: Flush large spills with water to containment area for reclamation or disposal. Do not release into sewers or waterways.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid generating magnesium sulfate dust. Practice good housekeeping procedures. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using magnesium sulfate, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Recommended Storage Methods: Prevent physical damage to containers. Store in a cool, dry, well-ventilated area away from incompatibles (Sec. 10). Keep containers tightly closed.

Regulatory Requirements: Follow applicable OSHA regulations.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Enclose all processes where possible to prevent dust dispersion into work area. Provide general or local exhaust ventilation systems to maintain airborne concentrations as low as possible. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: Consider preplacement and periodic medical exams of exposed workers.

Personal Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved dust respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or nonroutine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Other: Separate contaminated work clothes from street clothes. Launder before reuse. Remove magnesium sulfate from your shoes and clean personal protective equipment. Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Section 9 - Physical and Chemical Properties

Appearance/General Info: Odorless, opaque needles, crystals, or powder with a cooling, saline taste.
Physical State: Solid
Formula Weight: 120.37 (anhydrous)
Density: 2.65 g/mL (anhydrous)
Refractive Index: 1.523, 1.535, 1.586 (monohydrate)
pH: Aqueous solution is neutral (6 to 7).
Freezing/Melting Point: 2055 °F/1124 °C (anhydrous, decomposes)
Water Solubility: 71 g/100 mL at 68 °F/20 °C and 91 g/100 mL at 104 °F/40 °C (heptahydrate), 2 parts water at 68 °F/20 °C (trihydrate)
Other Solubilities: Slightly soluble in alcohol.

Section 10 - Stability and Reactivity

Stability/Polymerization/Conditions to Avoid: Magnesium sulfate is stable at room temperature in closed containers under normal storage and handling conditions. The heptahydrate will lose water on exposure to dry air at ordinary temperatures. Hazardous polymerization does not occur. Exposure to excessive heat and incompatibles.
Storage Incompatibilities: Magnesium sulfate undergoes a potentially explosive reaction when heated with ethoxyethynl alcohols (ex. 1-ethoxy-3-methyl-1-butyn-3-ol). Alcohol may cause precipitation from aqueous solution. Reacts with arsenates, phosphates, and tartrates to precipitate the corresponding magnesium salts. Reacts with lead, barium, strontium, and calcium to precipitate respective sulfates.
Hazardous Decomposition Products: Thermal oxidative decomposition of magnesium sulfate can produce magnesium and sulfur oxide(s).

Section 11 - Toxicological Information

Acute Oral Effects:
Man, oral, TD_{Lo}: 183 mg/kg given intermittently for 4 hr caused hypermotility and diarrhea.
Man, oral, TD_{Lo}: 428 mg/kg caused muscle weakness and respiratory changes.
Other Effects:
Woman, intravenous, LD_{Lo}: 80 mg/kg given intermittently for 2 minutes caused cardiac changes and cyanosis.
E. Coli: 5 pph caused gene conversion with mitotic recombination.

See *RTECS* OM4500000, for additional data.

Section 12 - Ecological Information

Environmental Fate: No data found.
Ecotoxicity: Data not found.

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.

Section 14 - Transport Information

DOT Hazardous Materials Table Data (49 CFR 172.101):

Shipping Name and Description: Not listed.

Section 15 - Regulatory Information

EPA Regulations:
RCRA 40 CFR: Not listed
CERCLA 40 CFR 302.4: Not listed
SARA 40 CFR 372.65: Not listed
SARA EHS 40 CFR 355: Not listed

TSCA: Listed

Section 16 - Other Information

Disclaimer: Judgments as to the suitability of information herein for the purchaser's purposes are necessarily the purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, Genium Group, Inc. extends no warranties, makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to the purchaser's intended purpose or for consequences of its use.