

Land Management Administration • Oil Control Program

**Former Exxon Service Station  
19308 York Road  
Baltimore County  
Parkton, Maryland  
Case No. 2006-1077-BA2**

Parkton Exxon was an active service station that operated four fiberglass underground storage tank (UST) systems (a 4,000-gallon gasoline; two 8,000-gallon gasoline; and a 10,000-gallon diesel) with double wall flexible plastic underground piping until January 2007 when the station was closed. The three gasoline USTs were installed in May 1973 and the 10,000-gallon diesel was installed in May 1984. The site and vicinity are served by private drinking water wells. The former Parkton Exxon is located in a mixed-use area surrounded by residential, farmland, and commercial businesses, including the closed Parkton Landfill located on Stablers Church Road.

The on-site drinking water supply well was fitted with a granular activated carbon (GAC) filtration system in 1996. ExxonMobil maintains and monitors the station's supply well. To date, the levels of petroleum constituents detected in neighboring wells have been below the U.S. Environmental Protection Agency's (EPA) drinking water standards and State action levels.

In July 2005, four monitoring wells were installed at the station in accordance with Code of Maryland Regulations (COMAR) 26.10.02.03-4A(3). Groundwater samples have routinely shown levels of MTBE (see table page 3). The station's drinking water supply well is routinely sampled on a monthly basis and the most recent samples showed non-detectable levels of petroleum constituents in the treated water.

MTBE is a fuel additive commonly used to reduce carbon monoxide and ozone levels caused by auto emissions. There is no national regulatory standard for MTBE in drinking water. In 1997, the U.S. Environmental Protection Agency (EPA) issued an advisory for MTBE of 20 to 40 parts per billion (ppb), based on taste and odor. Although the EPA has not established a regulated Maximum Contaminant Level (MCL) for MTBE, the MDE has adopted an action level of 20 ppb.

The Maryland Department of the Environment (MDE), Oil Control Program (OCP), currently has an open case for this location. Based on the April 2006 sampling results, the MDE-OCP adjusted sampling frequency for the site. On June 1, 2006, the Department issued a directive letter to ExxonMobil increasing the sampling frequency to quarterly for the monitoring well network at the station and expanding the sampling effort to include a total of eleven neighboring drinking water wells. On June 7, 2006, the MDE-OCP conducted a compliance assistance inspection and found several issues related to the submittal of testing data. This information was subsequently submitted and based on the Department's review; the facility was in compliance with current regulations for the operation of UST systems.

In April 2007, the UST system was removed from the site, including: four fiberglass USTs, product dispensers and associated piping. At the time of removal, the gasoline tanks were noted as 33 years of age and the diesel UST was noted as 22 years of age. No odors or staining were observed in the tank excavation and no perforations were observed in the tanks or piping. Currently, there are no USTs located on the subject property.

## Chronology

Historically there are three closed OCP cases related to this site.

### *Case No. 1995-1203-BA3 (closed)*

This case was opened in response to the removal of two USTs as part of the station's renovation. A 1,000-gallon fiberglass reinforced plastic used oil UST was removed in November 1994. No perforations were observed and the results of the soil samples collected were non-detect for petroleum constituents. MDE required the installation of a GAC filtration system to treat the drinking water on-site.

- August 1996. Baltimore County required ExxonMobil to collect a water sample from the station's water supply well. Petroleum constituents were identified (benzene at 46 ppb and MTBE at 1,780 ppb). A GAC filtration system was subsequently installed on the water supply.
- October 1996. ExxonMobil provided information that the tanks, lines, and leak detectors were tested and found to be tight.
- November 1996. ExxonMobil drilled a new water supply well on-site. Dissolved petroleum levels were detected below applicable drinking water standards. A GAC filtration system was installed on this new drinking water supply well and the former well was abandoned.

Supply Well		MTBE
1996	Raw water	60.4 to 92 ppb
	Treated water	<5 ppb
1997	Raw water	50 to 96 ppb
	Treated water	<5 ppb

- February 1997. ExxonMobil submitted a groundwater sampling report for the three on-site monitoring wells sampled in October, November, and December 1996. The groundwater flow was determined to be in a northwest direction.

Well #	Benzene	MTBE
MW-1 (old)	310-330 ppb	3,400 to 4,200 ppb
MW-2 (old)	Non-detect	94 to 170 ppb
MW-3 (old)	Non-detect	100 to 270 ppb

*(These wells were abandoned when the case was closed in 1998)*

- In May 1997. A 1,000-gallon fiberglass reinforced plastic #2 fuel oil UST was removed. No perforations were noted and the results of the soil samples collected showed levels below MDE soil standards.
- June 1997. During upgrade activities at the station, a 1,000-gallon steel #2 fuel oil UST was discovered when a water line was installed. This abandoned-in-place UST was removed. No perforations were detected in the tank and results of the soil sample collected showed levels below MDE soil standards.
- May 1998. MDE issued a "Notice of Compliance" for the site with the directive that Exxon maintain the GAC filtration system and sample the on-site water supply well.

- August 2003. MDE required Exxon to sample the nearest water supply at an adjacent property due to an increase in MTBE concentrations at the Exxon Station potable well. The Post Office, located at 645 Happy Lane, was sampled and only toluene was detected 0.18 ppb.

**Case No. 1991-2352-BA (closed)**

Case was opened in May 1991 in response to two test failures for the 8,000 gallon unleaded gasoline plus and the 1,000-gallon used oil USTs.

- June 1991. Exxon stated that the cause of the failure of the 8,000-gallon UST was a loose coupling on the fill line and that the used oil UST had a loose bung. Repairs were made and the USTs tested tight.
- July 1991. MDE closed *Case No. 1991-2352-BA*.

**Case No. 1989-1814-BA3 (closed)**

MDE opened this case in May 1989 after it was discovered that a motorist struck the high-grade and mid-grade dispenser, which resulted in a small fire. The damaged dispenser was replaced.

- January 1991. Exxon submitted the line test data.
- June 1991. Tightness testing was conducted and line passed.
- November 1992. MDE closed *Case No. 1989-1914-BA3*.

**Case No 2006-1077BA3 (open)**

- February 10, 2004. MDE-OCP issued a letter to ExxonMobil requiring a half-mile potable well search be conducted for the subject property. This requirement was issued due to elevated concentrations of MTBE and benzene detected in the on-site potable well in the last two quarters of 2002.
- March 18, 2004. ExxonMobil submitted the well search information to MDE. Based on the review, MDE required ExxonMobil to sample four additional domestic wells.
- December 2004. MDE requested Baltimore County Department of Environmental Protection and Resource Management (BADEPRM) to sample the drinking water well at St. James Episcopal Church (19200 York Road).
- December 21, 2004. MDE-OCP received sampling results collected from the potable wells at 19221, 19225, 19231, and 19301 York Road on October 24, 2004 (*see Table-1 for results*).
- May 2, 2005. ExxonMobil submitted *1st Quarter 2005 Water Treatment System Sampling Report – April 29, 2005* for monthly samples collected from the potable water treatment system at the subject property (*See Table-1 for results*).
- June 24, 2005. MDE-OCP received *Well Installation Activities – June 21, 2005*. ExxonMobil proposed to install four monitoring wells on the subject property to assess groundwater conditions at the site.
- June 30, 2005. MDE-OCP received sample results collected by the BADEPRM on May 4, 2005 from St. James Episcopal Church. Sample results were non-detect for all petroleum constituents.
- July 29, 2005. ExxonMobil submitted *2<sup>nd</sup> Quarter 2005 Water Treatment System Sampling Report – July 29, 2005* for monthly samples collected from the potable water treatment system at the subject property (*See Table-1 for results*).
- August 30, 2005. ExxonMobil submitted *High Risk Groundwater Use Area Regulations – August 30, 2005*. A total of four monitoring wells (MW1-MW4) were installed on-site on July 13, 2005. Well logs are

included with this report. Soil samples results collected during monitoring well installation activities MTBE up to 13.5 ppb in MW2. Groundwater samples were collected from each monitoring well on August 1, 2005 (See Table-2 for results).

- October 25, 2005. ExxonMobil submitted *3<sup>rd</sup> Quarter 2005 Water Treatment System Sampling Report – October 24, 2005* for monthly samples collected from the potable water treatment system at the subject property (See Table-1 for results).
- January 30, 2006. ExxonMobil submitted *4<sup>th</sup> Quarter 2005 Water Treatment System Sampling Report – January 30, 2006* for monthly samples collected from the potable water treatment system at the subject property (See Table-1 for results).
- April 28, 2006. ExxonMobil submitted *1<sup>st</sup> Quarter 2006 Quarterly Monitoring Report – April 28, 2006* for groundwater sampling data collected in February 2006 (See Table-2 for results).
- May 2006. MDE-OCP required ExxonMobil to increase monitoring well sampling at the station from bi-annually to quarterly and to analyze the samples for petroleum constituents. MDE also required all UST testing data be submitted to the OCP.
- June 1, 2006. MDE-OCP required ExxonMobil to sample select nearby drinking water wells, including:
  - U.S. Post Office (645 Happy Lane);
  - St. James Episcopal Church (19200 York Road);
  - Four remaining parcels east of the station that were previously sampled (19221, 19225, 19231, and 19301 York Road); and
  - Five properties located to the northwest on Stablers Church Road (313, 315, 321, 323, and 331 Stable Church Road).
- June 7, 2006. MDE-OCP conducted a compliance assistance inspection. Outstanding compliance issues to be corrected within 30 days include: helium and sump catchment basin testing; automatic line leak detection test results; and properly mark fill pipe and breakaway devices on the hoses.
- June 9, 2006. ExxonMobil submitted *Requested Compliance Test Results – June 2006* for the on-site UST system.
  - Spill buckets and Stage 1 dry breaks:
    - July 21, 2005 – Spill buckets and Stage 1 dry breaks were vacuum tested; regular grade gasoline UST spill bucket and regular/plus grade UST Stage 1 dry breaks failed
    - November 8, 2005 – Tank top upgrades conducted;
    - November 30, 2005 - Spill bucket and dry breaks retested; passed
    - March 9, 2006 – Spill buckets and dry breaks hydrostatically tested; passed
  - November 1, 2005 - Multi-product dispensers (MPDs) and submersible turbine pump (STP) sumps were hydrostatically tested, multiple MPDs and STP sumps failed;
    - November 8, 2005 – Tank top upgrades conducted;
    - March 9, 2006 – MPDs and STP sumps retested; passed
  - September 2005, November 2005, and May 2006 – Pressure decay tests on UST system; passed
  - September 6, 2005 – Enhanced Helium Leak Detection (EHL D) test conducted on UST system gasoline tank tops and line; passed
  - March 2006 - Leak detector and UST monitoring system tests were conducted; passed
  - May 23, 2006 – EHL D test conducted on UST system gasoline tank tops and pressure decay system; passed
  - June 1, 2006 – EHL D test conducted on UST system and lines; premium secondary failed at the STP containment sump. Repairs were completed and confirmation testing to be conducted.

- June 12, 2006. MDE-OCP attended community meeting at the 7<sup>th</sup> District Elementary School regarding both the open ExxonMobil and Parkton Landfill cases.
- July 31, 2006. ExxonMobil submitted the *Second Quarter 2006 Quarterly Monitoring Report – July 28, 2006* for groundwater sampling data collected in May 2006 (*See Table-2 for results*).
- August 18, 2006. MDE-OCP received domestic well sampling results collected from adjacent properties on July 20, 2006 (*See Table-1 for results*).
- October 31, 2006. ExxonMobil submitted the *Third Quarter 2006 Monitoring Report – October 27, 2006* for groundwater sampling data collected in August 2006 (*see Table-2 for results*).
- January 12, 2007. ExxonMobil electronically submitted the most recent sampling data of the monitoring wells, as requested for the upcoming community meeting.
- January 14, 2007. ExxonMobil closed the service station. The UST registration was amended to identify the tanks as temporarily out of use.
- January 24, 2007. MDE attended community association meeting to update attendees on status of the case. In addition, the open Parkton Landfill case (MDE Case No. 2006-1005-BA2) was discussed.
- January 31, 2007. ExxonMobil submitted the *Fourth Quarter 2006 Monitoring Report – January 29, 2007* for groundwater sampling data collected in August 2006 (*see Table-2 for results*).
- February 1, 2007. MDE-OCP granted approval via electronic mail (email) to suspend POET sampling activities at the service station. In addition, the Department required that an additional round of sampling be conducted on surrounding residential property potable wells.
- April 27, 2007. MDE Tank Removal Report. Four underground storage tanks, product dispensers and associated piping were removed from the site. One 4,000-gal gasoline UST, two 8,000-gal USTs, and one 10,000 diesel UST, all fiberglass tanks and lines were removed. The gasoline tanks were noted as 33 years of age and the diesel UST was noted as 22 years of age. According to the inspection report, slight staining was noted around the fills, no odors or staining observed in the tank excavation. No perforations were observed in the tanks or piping. MDE required a closure report showing soil sampling locations and soil sampling results. A total of 19 soil samples were collected.
- April 30, 2007. ExxonMobil submitted the 1<sup>st</sup> *Quarter 2007 Monitoring Report – April 30, 2007* for groundwater sampling data collected in March 2007 (*see Table-2 for results*).
- May 8, 2007. ExxonMobil submitted a *Divestment Initial Environmental Site Assessment (Phase I) Report - May 8, 2007*.
- June 5, 2007. ExxonMobil submitted the *Tank Excavation Assessment Report and Case Closure Request Report - June 1, 2007*. Three gasoline underground storage tanks (1-4,000 gal, 2-8,000-gal), one 10,000-gal diesel UST, and dispensers and piping were removed and confirmatory soil sampling data was provided in the report. No perforations were observed in the lines or tanks. Results of the soil samples showed levels below MDE groundwater protection guidance criteria and residential standards for TPH DRO/GRO. Soils excavated during UST system removal activities were permitted to be used as backfill on the property. ExxonMobil requested case closure.

- July 27, 2007. ExxonMobil submitted the *2<sup>nd</sup> Quarter 2007 Monitoring Report – July 30, 2007* for groundwater sampling data collected in June 2007 (*see Table-2 for results*).
- August 10, 2007. MDE letter in response to the Tank Excavation Report and site closure request. The MDE-OCP denied the case closure request and required continued monitoring well sampling for one year (Second Quarter 2008). The Department stated that ExxonMobil could request case closure after one year of monitoring is completed and the on-site potable well and monitoring wells have been properly abandoned by a Maryland-licensed well driller.
- October 30, 2007. ExxonMobil submitted the *3<sup>rd</sup> Quarter 2007 Monitoring Report- October 31, 2007* for groundwater sampling data collected from on-site monitoring wells in September 2007 (*see Table-2 for results*).
- October 31, 2007. ExxonMobil submitted *Area Potable Well Sampling – October 30, 2007* for groundwater sampling data collected from adjacent properties in September 2007 (*see Table-1 for results*).
- February 1, 2008. ExxonMobil submitted the *4<sup>th</sup> Quarter 2007 Quarterly Monitoring Report – January 31, 2008* for groundwater sampling data collected from on-site monitoring wells in December 2007 (*see Table-2 for results*).
- May 16, 2008. ExxonMobil submitted the *1<sup>st</sup> Quarter 2008 Groundwater Monitoring Report- May 15, 2008* for the groundwater sampling data collected from on-site monitoring wells in January 2008 (*see Table-2 for results*).
- August 1, 2008. ExxonMobil submitted the *2<sup>nd</sup> Quarter 2008 Groundwater Monitoring Report- July 31, 2008* for the groundwater sampling data collected from on-site monitoring wells in May 2008 (*see Table-2 for results*).
- October 31, 2008. Exxon Mobile submitted the *Third Quarter 2008 Groundwater Monitoring Report- October 30, 2008* for the groundwater sampling data collected from on-site monitoring wells in August 2008 (*see Table-2 for results*).

### **Future Updates**

- Future updates on this case investigation will be posted at [www.mde.state.md.us](http://www.mde.state.md.us) [at the MDE home page, (select) Land, (select) Program, (select) Oil Control, (select) Remediation Sites].

### **Related Cases**

*Case No. 1995-1203-BA3 Closed, Case No. 1991-2352-BA3 Closed, Case No. 1989-1814-BA3 Closed*

### **Contacts:**

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### **Disclaimer:**

The intent of this fact sheet is to provide the reader a summary of site events as they are contained within documents available to MDE. To fully understand the site and surrounding environmental conditions, MDE recommends that the reader review the case file that is available at MDE through the Public Information Act. The inclusion of a person or company's name within this fact sheet is for informational purposes only and should not be considered a conclusion by MDE on guilt, involvement in a wrongful act, or contribution to environmental damage.

Table 1: Drinking Water Sampling results in the Parkton Area near the Exxon Service Station

Sample location	Sample dates	Petroleum constituents of Concern	
		MTBE (20 ppb – action level)	Other petroleum constituents Toluene –MCL is 1000 ppb
<b>Exxon Service Station</b>			
19308 York Road  GAC system installed in 1996.	2000 monthly sampling	Raw water – 10.5 to 79.3 Treated water - ND to 2.3	
	2001 monthly sampling	Raw water – 0.89 to 51.1 Treated water - ND to 17.5	
	2002 monthly sampling	Raw water – 8.5 to 513 Treated water - ND	
	2003 monthly sampling	Raw water - 178 to 309 Treated water - ND to 0.44	
	2004	Raw water - 3.2 to 79.7 Treated - ND to 0.61	
	01-03/2005	Raw Water – 1.3 to 16.7 Treated - ND	
	04-06/2005	Raw Water – 0.84J to 22.7 Treated - ND	
	07-09/2005	Raw Water – 0.77J to 5.7 Treated - ND	
	10-12/2005	Raw Water - 0.92J to 1.4 Treated – ND	
	01-03/2006	Raw Water 3.3 to 15.4 Treated – ND	
	07-09/2006	Raw Water 2.2 to 0.4 Treated – ND	
<b>Private Wells</b>			
19200 York Road (church)	05/2005	ND	ND
	07/2006	ND	ND
19200 York Road (home)	07/2006	ND	ND
	09/2007	ND	ND
19221 York Road	10/2004 ND		ND
	07/2006	ND	ND
	09/2007	ND	ND
19225 York Road	10/2004 4.1		ND
	07/2006	4.8	ND
	09/2007	5.5	ND
19231 York Road	10/2004	4.8	ND
	07/2006	15.0	ND
	08/2006	8.3	ND
	09/2007	3.0	ND
19301 York Road	10/2004	ND	ND
	07/2006	ND	ND
	09/2007	ND	ND
645 Happy Lane (Post Office)	07/2006	ND	ND
	9/2007	0.11J	ND
313 Stablers Church Road	07/2006	0.55	ND
	09/2007	0.63	ND
315 Stablers Church Road	07/2006	0.59	Toluene – 0.27
	09/2007	0.39J	ND
321 Stablers Church Road	07/2006	ND	ND
	10/2007	0.64	ND
323 Stablers Church Road	07/2006	0.75	ND
	9/2007	0.29J	ND

331 Stablers Church Road	07/2006 09/2007	0.41 0.38J	ND ND
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*Table 2: Groundwater Monitoring Data at the Former ExxonMobil at 19308 York Road, Baltimore County*

Monitoring Wells (Installed 07/13/05-07/15/05)	Sampling Date	Petroleum Constituents of Concern	
		Benzene MCL – 5 ppb	MTBE Action Level – 20 ppb
<b>MW1</b> 4 inch diameter well Well Depth 42 feet Screened 22 to 42 ft	08/01/05 ND		6.6
	02/24/06 ND		5.0
	05/30/06 ND		4.7
	08/04/06	ND	25.9
	08/23/06 6.0		52.6
	11/06/06	ND	15.1
	03/21/07	ND	4.3
	06/18/07	ND	1.6
	09/12/07	ND	ND
	12/11/07	ND	ND
	01/16/08	ND	0.21J
	05/23/08	ND	0.36J
	08/21/08	ND	ND
<b>MW2</b> 4 inch diameter well Well Depth 42 feet Screened 22 to 42 ft	08/01/05	0.86J	241
	02/24/06	2.0J	1040
	05/30/06	0.58J	432
	08/04/06	ND	492
	08/23/06	0.66J	519
	11/06/06	0.27J	372
	03/21/07	ND	266
	06/18/07	ND	419
	09/12/07	ND	85.7
	12/11/07	2.1	742
	01/16/08	2.3J	856
	05/23/08	1.4J	324
	08/21/08	ND	113
<b>MW3</b> 4 inch diameter well Well Depth 42 feet Screened 22 to 42 ft	08/01/05	ND	199
	02/24/06	ND	132
	05/30/06	ND	27.3
	08/04/06	ND	0.83J
	08/23/06	2.9	24.7
	11/06/06	ND	10.0
	03/21/07	ND	0.88J
	06/18/07	ND	ND
	09/12/07	ND	ND
	12/11/07	ND	1.0
	01/16/08	ND	1.7
	05/23/08	ND	ND
	08/21/08	ND	ND
<b>MW4</b> 4 inch diameter well Well Depth 42 feet Screened 22 to 42 ft	08/01/05	ND	ND
	02/24/06	0.53J	1.1
	05/30/06	ND	0.57J
	08/04/06	ND	ND
	08/23/06	2.8	0.74J
	11/06/06	ND	0.72J
	03/21/07	ND	0.96J
	06/18/07	ND	3.2
	09/12/07	ND	5.5
	12/11/07 ND		43.8

	01/16/08	ND	32.8
	05/23/08	ND	ND
	08/21/08	ND	ND