

Land Management Administration • Oil Control Program

**Environmental Investigation**  
**Sheetz Store #132**  
**226 East Baltimore Street**  
**Taneytown, Carroll County, Maryland**  
**Case # 1992-2159CL**

The Maryland Department of the Environment (MDE) Oil Control Program (OCP) in coordination with the Carroll County Health Department (CCHD) continues to evaluate the petroleum impacts at the Sheetz store located in Taneytown. Located in a mixed use, residential/commercial area served by municipal water, the Sheetz store is located within the Wellhead Protection Area established for the community of Taneytown. None of the supply wells serving the Town's municipal well field have been impacted by petroleum constituents directly attributable to this facility.

The Taneytown Sheetz is an active gasoline retail station and convenience store. Administrative records show that Sheetz installed the active underground storage tank system in April 1986. Sheetz registered the UST system with the Department in May 1998. The facility has one 10,000-gallon, and two 6,000-gallon gasoline storage tanks and one 4,000-gallon kerosene storage tank. The tanks are comprised of cathodically protected steel. Product piping is made of fiberglass reinforced plastic. The UST systems have Stage I and Stage II vapor recovery systems on the gasoline storage tanks.

In July 2005, Sheetz conducted a subsurface investigation at the station upon receiving groundwater sampling results from the three newly installed groundwater monitoring wells. MTBE was detected in the monitoring wells up to 1500 ppb.

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-OCP has adopted an action level of 20 parts per billion (ppb)

In February 2008, a soil vapor extraction system was installed on the active tank field. Currently there are six (6) on-site monitoring wells, two (2) temporary soil vapor monitoring (SVE) points and four (4) tank field monitoring pipes. Depth to groundwater is approximately four (4) to ten (10) feet below ground surface. Groundwater flow is generally to the southwest. The site and vicinity are underlain by the Triassic New Oxford Formation comprised of sandstone and quartz conglomerates.

**Chronology:**

- April 9, 1992. MDE-OCP on-site to ensure that all tank upgrades are performed by a Maryland-certified contractor.
- April 22, 1992. MDE-OCP on-site in response to report of petroleum contaminated soil encountered during USTs upgrade. Required to complete the following:
  - Install three on-site groundwater monitoring wells
  - Impacted soils were left in place on-site.
- April 29, 1992. MDE-OCP on-site to observe completion of UST system piping upgrades.

- May 8, 1992. MDE-OCP on-site to observe precision testing of UST system.
  - Three monitoring wells have been installed on-site
  - These wells do not coincide with the existing monitoring wells of the same designation
- May 27, 1992. MDE-OCP on-site to verify the completed installation of the UST system.
  - No free product or odors noted in the three groundwater monitoring wells
- October 12, 1992. MDE-OCP received fax confirming passing test results for the UST system.
- November 23, 1992. MDE-OCP received fax of sampling results from 3 former monitoring wells.
  - 05/1992 MTBE up to 1810 ppb, benzene at 20 ppb
  - 09/1992 MTBE up to 1447 ppb, benzene at 48 ppb
- October 13, 1994. MDE-OCP on-site to perform a Compliance Assistance Inspection. Minor issue noted relating to vent pipes not being manifolded properly
- November 28, 1994 and November 2, 1995. MDE-OCP received a Quarterly sampling data for the three former groundwater monitoring wells. (*see table for results*)
- March 8, 1996. MDE-OCP site visit and report of observations notifying Sheetz to complete semi-annual sampling of the three on-site groundwater monitoring wells.
- May 2, 1996. MDE-OCP received sampling results for the three former monitoring wells. (*see table for results*)
- May 31, 1996. MDE-OCP on-site to perform a Compliance Assistance Inspection. Repairs required at the shear valve on the kerosene dispenser and dispenser #4.
- December 12, 1997. MDE-OCP report of observations regarding on-site visit to observe the status of the monitoring wells. Moderate odor noted at monitoring well MW1.
- June 26, 1998. MDE-OCP report of observations regarding on-site visit to observe the status of the monitoring wells. Instructed Sheetz to collect samples from the existing groundwater monitoring wells on-site and complete analysis for MTBE, BTEX and TPH-DRO and TPH-GRO.
- September 2, 1998. MDE-OCP received sampling results for the three former monitoring wells. (*see table for results*)
- March 3, 2000. MDE-OCP site visit to gauge monitoring wells. Musty odor noted in the monitoring wells. Odors not similar to petroleum.
- May 10, 2005. MDE-OCP received verbal notification from consultant that MTBE contamination detected in the on-site monitoring well during the April 2005 sampling event.
- June 23, 2005. MDE-OCP visited the property to observe site conditions. Good housekeeping practices observed.

- July 12, 2005. MDE-OCP received the *Limited Phase II Assessment Report-July 11, 2005*.
  - Groundwater flow generally to the west.
  - Twenty-one potable wells identified within a half-mile radius of the site.
  - Municipal water is supplied to the site and the surrounding residential/commercial area.
  - Helium pressure test conducted on 03/03/05 2005 – a master and slave fill adapter required tightening - no helium detected – passed.
  - Testing of sumps and spill buckets conducted on 05/05/05 – all passed
  - Tightness test of the USTs and piping conducted on 05/24/05 – all passed.
  - Three groundwater monitoring wells installed
  - Soil samples collected every five feet and analyzed using a PID.
  - One soil sample collected from each boring.
  - Groundwater sampling event completed on 11/04/04 (*see table for results*)
  - April 26, 2005 – Sampling event for 3 new groundwater monitoring wells installed in March 2005. Two other non-viable monitoring wells to be abandoned.
    - MW1 (new)            MTBE - 800 ppb
    - MW2 (new)            MTBE - 1500 ppb
    - MW3 (new)            MTBE- 610 ppb
  
- August 16, 2005. MDE-OCP received a copy of the *Site Activities Schedule-August 15, 2005*.
  - Proposed installation of three additional monitoring wells (MW-5, MW-6 and VMW-4)
  - One soil sample to be collected from each monitoring well boring.
  - Two existing wells of unknown origin will be abandoned
  
- August 29, 2005. MDE-OCP received a *Site Status Report- Second Quarter of 2005*.
  - No LPH detected in the on-site monitoring wells.
  - Groundwater sampling conducted 07/15/05. (*see table for results*)
  
- September 14, 2005. MDE-OCP received copies of the Access Agreement Request-September 13, 2005.
  - Sheetz attempting to gain access for the purpose of installing off-site monitoring wells
  
- November 1, 2005. MDE-OCP received the *Site Status Report-Third Quarter 2005*
  - No liquid phase hydrocarbons observed
  - Groundwater flow to South
  - Three additional monitoring wells installed – VMW-4, MW-5, MW-6
  - Groundwater samples collected on 09/20/05 (*see table for results*)
  
- November 4, 2005. MDE-OCP directive letter to Sheetz requiring the following activities to be completed.
  - Completion of a self-audit no later than 12/05/05
  - Continued quarterly sampling of all on-site monitoring wells and tankfield monitoring pipes.
  - Explanation required regarding monitoring well abandonment.
  
- December 2005. MDE-OCP received sampling results for two supply wells serving Taneytown municipal well field as collected on 12/14/05 (*see table for results*)
  - Municipal well #9            MTBE at 2.11 ppb, PCE at 4.34, 1,1 Dichlorethene at 0.76 ppb
  - Municipal well #13            Non-detect for petroleum constituents, PCE at 1.05 ppb
  
- December 9, 2005. MDE-OCP received *Monitoring Wells and Sampling for the Emergency Regulations – December 5, 2005*.
  - Conducted testing of spill catchment basins completed on 05/24/05- all passed
  - Testing of the USTs and associated piping completed on 05/24/05 – all passed following minor repairs
  - Helium testing completed with passing results following minor repairs to a master and slave fill adapter.

- February 28, 2006. MDE-OCP received the *Site Status Report-Fourth Quarter 2005*
  - No liquid phase hydrocarbons observed
  - Groundwater flow to northeast and southwest
  - Work plan to be submitted prior to installing additional off-site wells
  - Groundwater samples collected on 1/18/06 (*see table for results*)
- March 16, 2006. MDE-OCP received a corrected copy of the groundwater monitoring map for the sampling event completed on 01/18/06.
- April 21, 2006. MDE-OCP received the *Site Activities Schedule-April 20, 2006*.
  - Installation of three additional on-site monitoring wells (MW7, MW8, and MW9) and two temporary soil vapor extraction points (SVE1 and SVE2)
  - Proper abandonment of two previously installed, non-viable monitoring wells
- April 25, 2006. MDE-OCP on-site to complete a compliance assistance inspection.
  - Secure shear valves on Stage II piping
  - Remove fuel from the kerosene dispenser sump
  - Investigate elevated PID readings in the ATG manway at tank #2
  - Properly secure all monitoring wells
  - Properly label all fill pipes and indicate tank capacity and product stored
- June 1, 2006. MDE-OCP received the *Site Status Report: First Quarter 2006-May 31, 2006*.
  - Groundwater sampling completed on 04/14/06. (*see table for results*)
- June 5, 2006. MDE-OCP on-site to complete a follow up to the 04/25/06 compliance assistance inspection. All requirements completed.
  - Shear valves on Stage II piping secured
  - All dispenser sumps clean and dry
  - PID readings in the ATG manway at tank #2 were normal
  - All monitoring wells properly secured
  - All fill caps painted properly to indicate product stored
- August 25, 2006. MDE-OCP received the *Site Status Report: Second Quarter 2006-August 31, 2006*.
  - Groundwater sampling completed on 07/12/06. (*see table for results*)
- November 1, 2006. MDE-OCP letter requesting the completion of the following activities:
  - Submittal of an Interim Corrective Action Plan to address the subsurface vapor conditions in the vicinity of the tank field
  - Continued quarterly sampling of all monitoring wells and tank field pipes
  - Conduct enhanced vapor testing of the UST system
  - Test all containment sumps and spill catchment basins
- November 13, 2006. MDE-OCP received the *Site Status Report: Third Quarter 2006-November 9, 2006*.
  - Groundwater sampling completed on 10/13/06. (*see table for results*)
- November 17, 2006. MDE-OCP received a response to the November 1, 2006 letter.
  - Requested extension of deadline to submit *Interim Corrective Action Plan* (ICAP)
  - Feasibility testing being conducted to evaluate bioremediation at site
  - UST testing completed in November 2006 and will be submitted with ICAP

- December 14, 2006. MDE-OCP received the *Response to Directive Letter-December 12, 2006*. Results of UST system testing as completed in November 2006.
  - Spill catchment basins and containment sumps – all passed 11/15/06
  - Failure, repair and re-testing of Kerosene dispenser pan (9/10) – all passed
  - Failure, repair and re-testing of Regular spill bucket – all passed
  - Helium Testing of UST system 11/13/06 – passing results following minor repairs
  - All dry breaks replaced during pressure decay testing
  
- January 8, 2007. MDE-OCP letter to Sheetz extending the deadline to submit the Interim CAP. The MDE-OCP is in receipt of the following:
  - UST system test results- All passed following minor repairs – 11/15/06.
  
- February 1, 2007. MDE-OCP received notification regarding failure of the cathodic protection system for the UST system.
  
- February 15, 2007. MDE-OCP received the *Quarterly Monitoring Report-February 12, 2007*. Sampling event completed on January 3, 2007. (*see table for results*).
  
- February 16, 2007. MDE-OCP received the *Interim Corrective Action Plan-February 15, 2007*. Soil Vapor Extraction pilot testing proposed by consultant for Sheetz.
  - Bench scale testing indicates bioremediation is only effective on the BTEX concentrations and not the MTBE concentrations
  - SVE pilot testing to be completed in the vicinity of the tank field and MW1
  - Tank field to be dewatered and hydraulic control to be maintained during SVE pilot test activities
  - Cathodic protection of the UST system is to be upgraded – tentatively scheduled for 2<sup>nd</sup> Quarter 2007.
  
- May 21, 2007. MDE-OCP received the *Second Quarterly Monitoring Report-May 14, 2007*.
  - Groundwater sampling completed on 04/10/07 (*see table for results*)
  - Predominant groundwater flow is to the southwest
  
- June 20, 2007. MDE-OCP approval, with modifications, of the *Interim Corrective Action Plan-February 15, 2007*.
  - Include tank field monitoring pipe TF3 in the SVE pilot testing
  - Ensure compliance with applicable discharge permit requirements
  
- June 28, 2007. MDE-OCP received correspondence from the City of Taneytown regarding the continued presence of PCE, a chlorinated solvent, in municipal well #9 and also municipal well # 13 – no analytical results provided. Contamination has been recorded for over nine (9) years in this well. Treatment will be added to wells if contaminant levels increase. Both wells remain on-line.
  
- August 1, 2007. MDE-OCP on-site to observe the SVE pilot testing activities. Vacuum being applied to tank field monitoring pipe #4. Strong petroleum vapors noted during SVE pilot testing.
  
- September 21, 2007. MDE-OCP received the *Third Quarterly Monitoring Report-September 17, 2007*.
  - Groundwater sampling completed on 07/10/07 (*see table for results*)
  - Predominant groundwater flow is to the southwest
  - Tank field dewatering event completed on 07/31/07 – 12,098 gallons of contact water removed
  - SVE pilot testing completed on 08/01/07 utilizing tank field monitoring pipe TF4
  - SVE pilot testing completed on 08/02/07 utilizing monitoring well MW1
  - Reduction of monitoring requirements requested
  
- November 6, 2007. MDE-OCP correspondence to Sheetz, Inc. requiring the submittal of an *Interim Corrective Action Plan* for the purpose of dewatering the active UST field and initiating soil vapor extraction.

- November 16, 2007. MDE-OCP received the *Fourth Quarterly Monitoring Report-November 13, 2007*.
  - Groundwater sampling completed on 10/02/07 (*see table for results*)
  - Predominant groundwater flow is to the southwest
- November 19, 2007. MDE-OCP received the *Interim Corrective Action Work Plan-November 15, 2007*.
  - Proposed remedial option is soil vapor extraction (SVE) in combination with periodic tank field dewatering
- January 4, 2008. MDE-OCP correspondence to Sheetz approving the installation of the SVE system to tank field monitoring pipes TF1 and TF3.
  - Continued quarterly gauging/sampling of the monitoring well network
- February 27, 2008. MDE-OCP received the *Quarterly Monitoring Report-February 22, 2008*.
  - Groundwater monitoring completed on 01/08/08. (*see table for results*)
  - SVE system installation completed in January 2008 with startup in February 2008
  - Tank field dewatering in February 2008- 18,852 gallons
- June 13, 2008. MDE-OCP received the *Quarterly Monitoring Report-June 11, 2008*.
  - Groundwater monitoring completed on 04/03/08. (*see table for results*)
  - SVE system removed 505.35 lbs. of vapor phase petroleum hydrocarbons
  - Tank field dewatering in March 2008- 11,402 gallons
- January 5, 2009. MDE-OCP received the *Quarterly Monitoring Report-December 30, 2008*.
  - Soil vapor extraction system on TF1 with 406.38 lbs of vapor phase hydrocarbons removed during fourth quarter 2008 and approximately 4,142 lbs of vapor phase hydrocarbons removed to date
  - Groundwater monitoring completed on 10/23/08 (*see table for results*)

### Future Updates

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

### Contacts:

- Maryland Department of the Environment (MDE-OCP) Oil Control Program: 410-537-3443
- Carroll County Health Department (CCHD) 410-876-1884

### 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-OCP. To fully understand the site and surrounding environmental conditions, MDE-OCP recommends that the reader review the case file that is available at MDE-OCP 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-OCP on liability, involvement in a wrongful act or contribution to environmental damage.

## Groundwater Sampling Data collected for the Sheetz Taneytown Facility

Sample Location	Sampling Date	Benzene <i>MCL – 5 ppb</i>	MTBE <i>Action Level – 20 ppb</i>	Tertiary butyl alcohol (TBA) is an unregulated compound	Other Petroleum Constituents of Concern <i>Ethylbenzene – MCL at 700 ppb</i> <i>Toluene – MCL at 1000 ppb</i> <i>Total Xylenes – MCL at 10000 ppb</i> <i>Tertiary –amyl-methyl ether (TAME) – unregulated compound</i>
<b>MW1</b> Installed 03/18/05 Total Depth - 24 ft.	04/26/05	ND	800	---	---
	07/15/05	ND	510	---	---
	09/20/05	ND	910	---	---
	01/18/06	ND	65	280	---
	04/14/06	1.6j	850 Diluted (D)	1700	---
	07/12/06	1.2j	950 D	2700 D	---
	10/13/06	ND	300	1700 D	---
	01/03/07	ND	1200 D	3100 D	---
	04/10/07	1.6j	1300 D	5600 D	---
	07/10/07	3.65	1110	6960	---
	10/02/07	ND	558	4080	---
	01/08/08	ND	531	3270	---
	04/03/08	ND	212	882	---
	07/08/08	ND	304	1330	---
10/23/08	ND	309	1450	---	
<b>MW2</b> Installed 03/18/05 Total Depth - 24 ft.	04/26/05	ND	1500	---	---
	07/15/05	ND	1000	---	---
	09/20/05	ND	480	---	---
	01/18/06	ND	380	1100	---
	04/14/06	1.3j	89	760	---
	07/12/06	1.0j	140	880	---
	10/13/06	1.1j	110	1700 D	---
	01/03/07	ND	300	3800 D	---
	04/10/07	0.93j	490 D	490 D	---
	07/10/07	ND	534	4420	---
	10/02/07	ND	347	1710	---
	01/08/08	ND	428	3540	---
	04/03/08	ND	264	434	---
	07/08/08	ND	487	435	---
10/23/08	ND	346	319	---	
<b>MW3</b> Installed 03/18/05 Total Depth - 24 ft.	04/26/05	ND	610	---	---
	07/15/05	ND	1100	---	---
	09/20/05	ND	660	---	---
	01/18/06	ND	660	60	---
	04/14/06	ND	600 D	220	---
	07/12/06	2.9 (est)	1500 D	3800 D	---
	10/13/06	ND	1600 D	5100 D	---
	01/03/07	ND	800 D	630	---
	04/10/07	ND	620 D	370	---
	07/10/07	ND	743	661	---
	10/02/07	ND	424	534	---
	01/08/08	ND	513	339	---
	04/03/08	ND	220	81.9	---
	07/08/08	ND	435	86.7	---
10/23/08	ND	365	ND	---	

Sample Location	Sampling Date	Benzene <i>MCL – 5 ppb</i>	MTBE <i>Action Level – 20 ppb</i>	Tertiary butyl alcohol (TBA) is an unregulated compound	Other Petroleum Constituents of Concern <i>Ethylbenzene – MCL at 700 ppb</i> <i>Toluene – MCL at 1000 ppb</i> <i>Total Xylenes – MCL at 10000 ppb</i> <i>Tertiary –amyl-methyl ether (TAME) – unregulated compound</i>
<b>VMW4</b> Installed 08/24/05 Total Depth – 40 ft.	09/20/05	ND	1800	---	---
	01/18/06	ND	2100	65	---
	04/14/06	ND	2.3 (est)	4.8 (est)	---
	07/12/06	ND	810 D	100	---
	10/13/06	ND	1300 D	400	---
	01/03/07	ND	1700 D	670	---
	04/10/07	ND	1700 D	2200	---
	07/10/07	ND	1270	1170	---
	10/02/07	ND	1220	930	Toluene 325 ppb
	01/08/08	ND	410	698	---
	04/03/08	ND	658	197	Toluene 6.68
	07/08/08	ND	688	180	---
	10/23/08	ND	711	169	---

Sample Location	Sampling Date	Benzene MCL – 5 ppb	MTBE Action Level – 20 ppb	Tertiary butyl alcohol (TBA) is an unregulated comp.	Other Petroleum Constituents of Concern Ethylbenzene – MCL at 700 ppb Toluene – MCL at 1000 ppb Total Xylenes – MCL at 10000 ppb Tertiary –amyl–methyl ether (TAME) – unregulated compound
<b>MW5</b> Installed 08/24/05 Total Depth – 24 ft.	09/20/05	ND	440	---	---
	01/18/06	ND	390	4000	---
	04/14/06	1.9 (est)	1000 D	8000 D	---
	07/12/06	ND	410	7700 D	---
	10/13/06	ND	320	7300 D	---
	01/03/07	ND	310	3900 D	---
	04/10/07	ND	230	3400 D	---
	07/10/07	ND	287	3880	---
	10/02/07	ND	186	3000	---
	01/08/08	ND	103	2100	---
	04/03/08	ND	76	1050	---
	07/08/08	ND	112	3060	---
	10/23/08	ND	36.1	950	---
<b>MW6</b> Installed 08/24/05 Total Depth – 24 ft.	09/20/05	ND	85	---	---
	01/18/06	ND	96	ND	---
	04/14/06	ND	98	52	---
	07/12/06	ND	95	62	---
	10/13/06	ND	100	52	---
	01/03/07	ND	78	250	---
	04/10/07	ND	75	ND	---
	07/20/07	ND	79	17.7	---
	10/02/07	ND	57.4	ND	---
	01/08/08	ND	43.8	25	ND
	04/03/08	ND	45.3	129	---
	07/08/08	ND	57.9	ND	---
	10/23/08	ND	55.5	ND	ND

Tankfield Monitoring Pipes	Sampling Date	Benzene MCL – 5 ppb	MTBE Action Level – 20 ppb	Tertiary butyl alcohol (TBA) is an unregulated comp.	Other Petroleum Constituents of Concern
					<i>Ethylbenzene – MCL at 700 ppb Toluene – MCL at 1000 ppb Total Xylenes – MCL at 10000 ppb Tertiary –amyl-methyl ether (TAME) – unregulated compound</i>
TF1	11/19/04	41	40000	---	
	04/26/05	---	---	---	
	07/15/05	340	62000	---	
	09/20/05	---	---	---	
	01/18/06	1900	490000	170000	
	04/14/06	5400 D	270000 Diluted (D)	250000 D	Toluene 1600 ppb (D); Xylenes 35000 ppb (D) ethylbenzene 4200 ppb (D)
	07/12/06	960 D	140000 D	180000j	
	10/13/06	710 D	9800 D	490000 D	
	01/03/07	190	2900	13000	
	04/10/07	620jD	23000 D	81000 D	Toluene 300, xylenes 4300 D; ethylbenzene 640j ppb, TAME 470
	07/10/07	667	6070	39900	Toluene 342, xylenes 4180; ethylbenzene 582ppb, TAME 210
	10/02/07	1570	5270	ND	Toluene 363, xylenes 5240; ethylbenzene 921 ppb, TAME 127
	01/08/08	849	775	7490	Toluene 462, xylenes 3410
	04/03/08	17.1	1180	12400	---
	07/08/08	30.5	996	7750	---
10/23/08	19.2	1290	10800	---	
TF2	11/19/04	24	5000	---	
	04/26/05	---	---	---	
	07/15/05	34	1800	---	
	09/20/05	---	---	---	
	01/18/06	170	13000	28000	
	04/14/06	240	15000 D	150000 D	
	07/12/06	1000	72000 D	77000 D	Toluene 1400 ppb (D)
	10/13/06	74	1500 D	250000 D	
	01/03/07	65	1500 D	21000 D	
	04/10/07	210	20,000 D	57000 D	TAME 300
	07/10/07	48.1	27.6	14400j (estimated )	---
	10/02/07	212	228	15300	---
	01/08/08	21.4	46.4	8340	---
	04/03/08	2.6	193	2610	---
	07/08/08	ND	101	740	---
10/23/08	ND	8.52	1750	---	
TF3	04/26/05	Not sampled (NS)	NS	NS	NS
	07/15/05	NS	NS	NS	NS
	01/18/06	NS	NS	NS	NS
	04/14/06	NS	NS	NS	NS
	07/12/06	NS	NS	NS	NS
	10/13/06	NS	NS	NS	NS
	01/03/07	1100 D	11000 D	53000 D	
	04/10/07	1100 jD	19000 D	66000 D	Toluene 1400jD, TAME 300
	07/10/07	2270	5980	51500	Toluene 2160, TAME 150
	10/02/07	3550	7230	28800	Toluene 5750, TAME 169
	01/08/08	855	4610	17800	Toluene 1560; TAME 188
	04/03/08	17	268	6640	Toluene 36.9; TAME 3.16
	07/08/08	11.7	300	1890	---
	10/23/08	Not sampled			

Tankfield Monitoring Pipes	Sampling Date	Benzene MCL – 5 ppb	MTBE Action Level – 20 ppb	Tertiary butyl alcohol (TBA) is an unregulated comp.	Other Petroleum Constituents of Concern
					Ethylbenzene – MCL at 700 ppb Toluene – MCL at 1000 ppb Total Xylenes – MCL at 10000 ppb Tertiary –amyl-methyl ether (TAME) – unregulated compound
TF4	01/18/06	NS	NS	NS	NS
	04/14/06	NS	NS	NS	NS
	07/12/06	NS	NS	NS	NS
	10/13/06	NS	NS	NS	NS
	01/03/07	91	8200 D	18000 D	
	04/10/07	230	26000 D	65000 D	TAME 400
	07/10/07	323	6770	33200	TAME 240
	10/02/07	500	3490	15900	Ethylbenzene 1490
	01/08/08	459	6290	21400	Ethylbenzene 1080
	04/03/08	ND	754	15800	---
07/08/08	6.26	262	2800	---	
10/23/08	14.6	540	6910	---	

**Former Monitoring Well Sample Results at the Sheetz Taneytown Facility  
located at 226 East Baltimore Street**

On-site Monitoring Wells at the Sheetz Taneytown facility	Sampling Date	Benzene MCL – 5 ppb	MTBE Action Level – 20 ppb- established in 1997	Other Petroleum Constituents of Concern
				Ethylbenzene – MCL at 700 ppb Toluene – MCL at 1000 ppb Total Xylenes – MCL at 10000 ppb Tertiary –amyl-methyl ether (TAME) – unregulated compound
Former MW1 (Installed 05/1992) abandoned	04/09/92	9200	---	Toluene – 5820 ppb, ethylbenzene – 2130 ppb
	05/06/92	ND	665	ND
	09/03/92	ND	1447	---
	10/12/92	ND	1135	---
	02/18/93	11	2550	---
	05/25/93	41	99	---
	10/14/93	ND	830	---
	01/26/94	ND	ND	ND
	04/21/94	ND	120	ND
	07/26/94	ND	4650	---
	11/11/94	ND	840	ND
	05/23/95	ND	427	---
	08/23/95	ND	8100	ND
04/16/96	ND	1859	ND	
07/28/98	390	9200	ethylbenzene – 2300 ppb	
Former MW2 (installed 05/1992) abandoned	04/09/92	1780		Toluene – 7200 ppb, ethylbenzene – 1530 ppb
	05/06/92	ND	1810	ND
	09/03/92	31	981	---
	10/12/92	32	1137	---
	02/18/93	23	2035	---
	05/25/93	15	38	---
	10/14/93	30	860	---
	01/26/94	ND	ND	ND
	04/21/94	ND	730	ND
	07/26/94	20	5970	ND
	11/11/94	ND	1240	ND
05/23/95	15	503	---	
08/23/95	16	9110	---	

	04/16/96	7	2250	ND
	07/28/98	ND	1300	---
<b>Former MW3</b> (installed 05/1992) abandoned	04/09/92	Not sampled (NS)		
	05/06/92	20	710	---
	09/03/92	48	265	---
	10/12/92	76	469	---
	02/18/93	23	238	---
	05/25/93	44	35	---
	10/14/93	90	570	--
	01/26/94	ND	ND	ND
	04/21/94	ND	190	ND
	07/26/94	60	4430	---
	11/11/94	20	880	---
	05/23/95	15	367	---
	08/23/95	91	8336	---
	04/16/96	ND	1259	ND
	07/28/98	97	22000	ethylbenzene – 1700 ppb

## Municipal Drinking Water Well Sample Results in the City of Taneytown

1

Municipal Supply Wells serving the City of Taneytown	Sampling Date	Benzene <i>MCL – 5 ppb</i>	MTBE <i>Action Level – 20 ppb</i>	Other Petroleum Constituents of Concern <i>Ethylbenzene – MCL at 700 ppb</i> <i>Toluene – MCL at 1000 ppb</i> <i>Total Xylenes – MCL at 10000 ppb</i> <i>Tertiary –amyl-methyl ether (TAME) – unregulated compound</i>
Municipal Well 9 Nearest to facility approximately 1500 feet to the northeast	01/21/91	ND	ND	ND
	05/07/91	ND	ND	ND
	08/20/91	ND	ND	ND
	02/11/92	ND	ND	ND
	05/19/92	ND	ND	ND
	08/25/92	ND	ND	ND
	02/23/93	ND	ND	ND
	06/02/93	ND	ND	ND
	08/24/93	ND	ND	ND
	02/15/94	ND	ND	ND
	05/10/94	ND	ND	ND
	11/08/94	ND	ND	ND
	07/18/95	ND	ND	ND
	08/11/98	ND	ND	ND
	07/13/99	ND	ND	ND
	04/06/00	ND	ND	ND
	04/11/00	ND	ND	ND
	02/28/02	ND	ND	ND
	04/16/02	ND	ND	ND
	08/20/02	ND	ND	ND
	01/14/03	ND	ND	ND
	04/15/03	ND	ND	ND
	07/15/03	ND	ND	ND
	10/08/03	ND	ND	ND
	02/24/04	ND	ND	ND
	05/26/04	ND	ND	ND
	09/22/04	ND	ND	ND
	02/07/05	ND	ND	ND
	04/26/05	ND	ND	ND
	07/13/05	ND	ND	ND
11/09/05	ND	ND	ND	
12/14/05	ND	2.11	ND	
01/24/06	ND	6.5	ND	
04/12/06	ND	ND	ND	
07/26/06	ND	ND	ND	
01/29/07	ND	ND	ND	
03/20/07	ND	ND	ND	
04/25/07	ND	ND	ND	
06/04/07	ND	ND	ND	

**Municipal Drinking Water Well Sample Results in the City of Taneytown**

I

Municipal Supply Wells serving the City of Taneytown	Sampling Date	Benzene <i>MCL – 5 ppb</i>	MTBE <i>Action Level – 20 ppb</i>	Other Petroleum Constituents of Concern <i>Ethylbenzene – MCL at 700 ppb</i> <i>Toluene – MCL at 1000 ppb</i> <i>Total Xylenes – MCL at 10000 ppb</i> <i>Tertiary –amyl-methyl ether (TAME) – unregulated compound</i>
<b>Well 13</b> Approximately 2500 feet to the southwest	09/11/91	ND	ND	ND
	06/30/92	ND	ND	ND
	09/14/92	ND	ND	ND
	03/10/93	ND	ND	ND
	07/18/95	ND	ND	ND
	12/02/96	ND	ND	ND
	08/11/98	ND	ND	ND
	07/13/99	ND	ND	ND
	04/06/00	ND	ND	ND
	04/16/02	ND	ND	ND
	08/20/02	ND	ND	ND
	01/14/03	ND	ND	ND
	04/15/03	ND	ND	ND
	07/15/03	ND	ND	ND
	02/24/04	ND	ND	ND
	06/29/04	ND	ND	ND
	09/22/04	ND	ND	ND
	02/07/05	ND	ND	ND
	04/26/05	ND	ND	ND
	07/13/05	ND	ND	ND
	12/13/05	ND	ND	ND
	01/24/06	ND	ND	ND
	09/06/06	Not sampled	Not sampled	1,2 –dichloroethane - 106 ppb