

**Drinking Well Impact and Environmental Investigation
 Gamber/Finksburg, Carroll County, Maryland**

<i>Site Location</i>	<i>MDE-Oil Control Program Case No.</i>	<i>Status</i>
<i>Gamber Groundwater Investigation (Sykesville Rd.)</i>	<i>Case No. 2005-1155-CL</i>	<i>Open</i>
<i>Discovery Carpets & Floors (3950 Sykesville Rd.)</i>	<i>Case No. 1995-1752-CL</i>	<i>Closed</i>
	<i>Case No. 2006-0063-CL</i>	<i>Open</i>
<i>Former Gamber Volunteer Fire Dept (4000 Sykesville Rd.)</i>	<i>Case No. 2004-1015-CL</i>	<i>Open</i>
<i>Wantz Construction Co. (4004 Sykesville Rd)</i>	<i>Case No. 1992-2124-CL</i>	<i>Closed</i>
<i>Dix Property (1701 Sandra Lane)</i>	<i>Case No. 2004-0140-CL</i>	<i>Open</i>
<i>Royal Farms Store (4007 Sykesville Rd.)</i>	<i>Case No. 2005-1001-CL</i>	<i>Open</i>
<i>High's Dairy Store (3949 Sykesville Rd.)</i>	<i>Case No. 2005-1013-CL</i>	<i>Open</i>
	<i>Case No. 1990-2240-CL</i>	<i>Closed</i>
<i>Arnold Property (4118 Sykesville Rd)</i>	<i>Case No. 1997-1178-CL</i>	<i>Open</i>

The Maryland Department of the Environment (MDE), Oil Control Program (OCP), is investigating the source of methyl tertiary-butyl ether (MTBE) and other gasoline compounds found in several drinking water wells in the Gamber/Finksburg community. The MDE-OCP has been coordinating this investigation with the Carroll County Health Department (CCHD).

On March 22, 2005, the CCHD alerted MDE of elevated concentrations of MTBE in a supply well serving the Royal Farms Store. 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 based on taste and odor of 20 to 40 parts per billion (ppb). Although the EPA has not established a regulated Maximum Contaminant Level (MCL) for MTBE, the MDE has adopted an action level of 20 ppb.

After conducting several field reconnaissance in the Gamber community, the MDE-OCP identified several potential sources in the area including: two active gas stations (High's Store, 3949 Sykesville Road; Royal Farms Store, 4007 Sykesville Road); a former gasoline facility (Discovery Carpet, 3950 Sykesville Road); and several other locations with petroleum underground storage tanks (Wantz Construction, 4004 Sykesville Road; the former Arnold Residence, 4118 Sykesville Road; former Gamber Fire Station, 4000 Sykesville Road; Raver property, 4015 Sykesville Road).

To date, the CCHD has sampled over 41 drinking water wells in the area. The MDE currently maintains granular activated carbon (GAC) filtration systems on 5 private drinking water wells that have been impacted by petroleum constituents. The GAC systems are being monitored and maintained by the Department at no expense to the residents. On August 25, 2005, the CCHD provided written notification to residents in the area regarding the MTBE impact to drinking water wells. The MDE is currently undertaking a groundwater investigation in the Gamber study area to delineate the source(s) of the problem. During this preliminary phase of the study, eight monitoring wells will be installed.

- 41 drinking water wells have been sampled:
 - 23 wells - No detectable levels of MTBE
 - 10 wells - Detectable levels of MTBE below 5 ppb (2 locations had benzene <5 ppb)
 - 1 well - Detectable levels of MTBE between 10 and 20 ppb
 - 7 wells - MTBE detected above 20 ppb and/or benzene above 5 ppb. GAC systems have been installed.

GAC systems installed and maintained by MDE:

4014 Howard Place	-	Benzene 81.5 to 128 ppb (<i>MCL at 5 ppb</i>)
1701 Sandra Lane	-	Benzene 54.2 to 110 ppb
4016 Sykesville Road	-	MTBE up to 21.1 ppb (<i>action level 20 ppb</i>)

1704 Georgia Avenue - MTBE up to 45 ppb (recent sample –MTBE not detected)
1703 Georgia Avenue - MTBE up to 25 ppb (recent sample –MTBE not detected)
GAC systems installed and maintained by Owner/Operator:
Royal Farms Store (4007 Sykesville Rd) - MTBE 34.7 to 37.8 ppb
Discover Carpets (3950 Sykesville Road) - Benzene 63.4 to 76.3 ppb

Gamber Groundwater Investigation: Case No. 2005-1155CL (open)

- March 2005. CCHD commenced sampling of select drinking water samples in the Gamber area.
- April 15, 2005. CCHD faxed sampling results to MDE regarding drinking water samples collected in the area. 03/25/05 – Drinking water well samples collected by CCHD
- April & May 2005. CCHD letters dated 04/25/2005 and 05/19/2005 were mailed to property owners concerning the drinking water sampling results collected in March 2005.
- May 19, 2005. CCHD letters dated 05/17/2005 mailed to property owners regarding the April 2005 drinking water sampling results.
- May 27, 2005. CCHD letter to Lake Forest Estate (Section 2) residents requesting permission to sample drinking water wells due to elevated levels reported on the property located at 4014 Howard Place.
- June 2005. Field reconnaissance activities conducted by MDE to identify potential sources and receptors (i.e. drinking water wells) in the area.
 - Faith Family Church (4150 Sykesville Road). Construction on-going at site. USTs were removed a year ago. Two aboveground storage tanks located in basement.
 - Auto Repair Shop/Meilke Service (4044 Sykesville Road). Operator indicated that tanks might have been at the facility but not since his tenure. There are no registered tanks or cases for this site.
 - 1800,1801, 1810, 1811 and 1820 Grassmere Road. No tanks identified.
 - 3950, 3968, 3972, 3990, and 3998 Gamber Road; Calvary United Methodist Church 3939 -3939B.
 - An apartment building in rear of High's, located at 3998 Gamber Road, was observed and card left for the Bohannon and Fringer residents to call inspector. Strawberry Drive was visited to plot the course of the spring located to the rear of the Mey property.
 - Field reconnaissance along Georgia Avenue (south of Sykesville Road).
- June 8 & 10, 2005. CCHD letters to property owners concerning drinking water samples collected in May 2005.
- August 2, 2005. CCHD faxed sampling results to MDE of drinking water samples collected in the Gamber area. Drinking water well samples collected by CCHD on July 19, 2005. MDE notified of new drinking water well impact.
 - 1704 Georgia Avenue MTBE - 41.2 ppb; TAME - 1.42 ppb.
- August 12, 2005. MDE received via fax a summary of the water samples collected to date by the CCHD.
- August 18, 2005. MDE letter to property owner at 1704 Georgia Avenue regarding drinking water samples collected by MDE on 8/11/05.
 - DW (untreated) MTBE at 45 ppb; TBA at 22 ppb
- August 24, 2005. MDE installed a GAC system at 1704 Georgia Avenue at no cost to the resident.
- August 30, 2005. MDE representatives met on-site with contractor to evaluate the Gamber study area.
- September 6, 2005. MDE received CCHD letters to property owners regarding water samples collected by CCHD on August 9-10, 2005.

- September 8, 2005. MDE received a fax from the CCHD for the results of the drinking water sample collected on August 30, 2005 at 1703 Georgia Avenue.
- September 19-21, 2005. MDE letter to property owners regarding drinking water samples collected August 25, and 30, 2005.
- October 11, 2005. MDE letter to property owners regarding drinking water samples collected on 9/21/05.
- October 25, 2005. MDE installed a GAC system at 1703 Georgia Avenue at no cost to the resident.
- November 17, 2005. MDE letter to property owner regarding drinking water samples collected on 10/31/05.
- January 10, 2006. MDE letter to property owners regarding drinking water samples collected on 12/20/05.
- January 25, 2006. MDE letter to contractor finalizing the *Work Plan* for the Gamber Study Area:
 - Perform a file compilation and review pertinent case file;
 - Conduct a site GPS survey;
 - Conduct a literature survey for fracture trace analysis;
 - Install eight (8) monitoring wells;
 - Develop GIS database and CADD drawings; and
 - Summary of findings reports to be submitted in mid-2006.
- March 1, 2006. MDE letter to property owners regarding drinking water samples collected on February 9, 2006.
- March 7, 2006. Representatives of MDE and the CCHD collected water samples from the drinking water supply wells at ten properties within the Gamber Study Area.
 - MDE received CCHD notification letter regarding the public informational meeting on March 16, 2006.
- March 16, 2006. Public informational meeting held at the Gamber Fire Hall on Niner Road.
- March 29, 2006. MDE personnel were on-site to determine potential locations for the monitoring wells that will be installed by MDE's contractor (Maryland Environmental Services).
- May 15, 2006. MDE received private drinking water sample results from a homeowner at 3929 Poole Road.
 - Non-detect for petroleum constituents; PCE at 0.9 ppb
- May 2006. CCHD letters dated 05/25/06 to property owners concerning drinking water samples collected on 04/19-20/2006.
- June 13, 2006. MDE letter to property owners regarding drinking water samples collected on May 18, 2006.
- July 2006. CCHD letters dated 06/23/06 - 07/03/06 to property owners concerning drinking water samples collected on 05/2006 and 06/2006
- July 11, 2006. MDE letters to 7 property owners requesting site access to install monitoring wells. To date only 3 property owners have responded favorably.
 - 4014 Howard Place
 - 1701 Sandra Lane (Dix property) - signed
 - 4016 Sykesville Road - signed
 - 4000 Sykesville Road
 - 4004 Sykesville Road
 - 4015 Sykesville Road
 - 3950 Sykesville Road (Discover Carpets) - signed

- The MDE-OCP has commissioned a preliminary subsurface investigation that will include the initial installation of 5 monitoring wells in the study area. Installation of the monitoring wells is expected to begin in mid-October 2006. A *Hydrogeological Report* on the findings of this investigation is expected to be completed by early-December 2006.

Discovery Carpets & Floors – 3950 Sykesville Rd. Case No. 2006-0063CL (open)

Discovery Carpets and Floors is a mixed-use residential/commercial property that was formerly a gas station. The commercial space is currently vacant, however, tenants reside in the upper apartment unit. Prior to 1965, the front portion property was improved with a service station operated by Lawrence Berry up until 1984. Historically, several unregistered USTs (installed prior to 1965) were located at this former gas station. In 1966, the facility expanded with the construction of apartment units. In 1967, a car wash was built, followed by an auto repair shop (Auto Body Shop) located at the rear of the facility. In October 1984, the County granted Lawrence C. and Dorothy J. Berry permission to utilize a portion of the property for non-conforming use as a used car sales lot, provided that the gasoline, fuel pumps, and dispenser islands were removed. On October 9, 1987, the property was sold by Mr. Berry to Larry C. Harp and, with this change in ownership, used car sale activities ceased. In February 1990, the County granted Mr. Harp's request for a rezoning designation of the site. Later, a carpet sale business began as Discover Carpet & Floors. On January 26, 1995, Mr. Harp, who had purchased the property, removed four improperly abandoned USTs. Greenprop Incorporated (Garnet Bean) purchased the property on December 7, 2004.

The Department opened a case (*Case No. 2006-0063-CL*) in response to petroleum impacts to the on-site, non-transient drinking water well. Two small, unregistered tanks were discovered in 2005 and subsequently removed.

Site Chronology:

- January 16, 1995. MDE-OCP received a notification to remove tanks from contractor.
- January 26-27, 1995. Four gasoline USTs (two 1,000-gallon and two 2,000-gallon) were removed under MDE oversight. Case number *1995-1753-CL* was opened. Surface rust and pitting observed on tanks but no perforations noted. Soils were backfilled in excavation. No soil or groundwater samples were collected.
- February 1995. The improperly abandoned tanks were registered with the MDE by the new owners of the property, Larry & Teresa Harp.
- February 28, 1995. MDE issued a "Notice of Compliance" to Discover Carpets & Floors. Case No. *1995-1753-CL* was closed.
- August 21, 2003. MDE received sampling results from the on-site drinking water well.
 - DW (untreated sink) TAME - 0.63 ppb;
 - DW (before tank) Benzene - 63.4 ppb; 1,2-Dichloroethane - 17.7 ppb
- April 4, 2005. MDE conducted a site visit and interviewed the property owner. Commercial space unoccupied.
- May 2, 2005. CCHD letter to Discover Carpet & Flooring regarding drinking water samples collected 03/25/05.
 - DW (untreated) 1,2-Dichlorethane - 6.5 ppb
- June 14, 2005. CCHD letter to Discover Carpet & Flooring regarding sampling results for the drinking water well (samples collected April 22, 2005).
 - DW (untreated) Benzene -76.3 ppb; 1,2-Dichloroethane - 26.7 ppb; naphthalene - 11.4 ppb
- July 18, 2005. MDE, via verbal communication with Greenprop Inc., became aware that tenants currently reside in the apartments at the site. Discussed treatment options concerning the responsibilities of the property owner to provide alternative drinking water source.
- August 1, 2005. MDE, via verbal communication with CCHD, confirmed that the GAC filtration system was to be installed at the premises at the expense of the property owner.

- December 1, 2005. MDE on site with property owner to oversee the tank removal.
 - A 550-gallon heating oil tank and piping removed from the southwest corner of the property
 - Some rust and pitting noted on the tank, but no obvious perforations observed.
 - One post-excavation soil sample collected for VOC and TPH-GRO/DRO analyses.
 - Additional vent pipes observed indicating the presence of another tank.
- December 14, 2005. MDE received, via fax, a copy of the soil sample results collected beneath the 550-gallon heating oil tank.
 - Soil sample - Non-detect for petroleum constituents.
- January 16, 2006. MDE personnel on site with property owner to oversee the tank removal.
 - A 550-gallon used oil tank removed from underneath the building.
 - Some rust present on the tank, but no perforations observed.
 - Approximately 2.5 gallons of used oil recovered and properly disposed.
 - One post-excavation soil sample collected for laboratory analysis.
 - Tank registration form provided to property owner.
 - No visual evidence of contamination observed.
- February 1, 2006. MDE received the tank closure report and soil sampling results for the used oil tank removed on 1/16/06.
 - The post-excavation soil sample was non-detect for petroleum constituents.
- March 29, 2006. MDE personnel observed that heavy equipment was on-site removing the asphalt layer from the front parking area in preparation for the placement of new asphalt.
- July 2006. Property owner has signed the MDE's *Site Access Agreement*.

Former Gamber Volunteer Fire Department/Gamber Firehouse, 4000 Sykesville Road

There is no active case on the Former Gamber Volunteer Fire Department, no USTs on-site, and the building is currently occupied. Historically, a 275-gallon improperly abandoned UST (2004-1015-CL) was removed. The property was previously owned by State Highway Administration (SHA) prior to March 30, 2004 and then sold to Later LLC.

- November 6, 2003. MDE-OCP received notice of intent to remove a 275-gallon UST.
- December 4, 2003. MDE oversaw the removal of a 275-gallon bare steel tank (content suspected to be gasoline). This UST had been out-of-service for at least 20 years. Perforations observed and a soil sample was collected.
- December 13, 2003. Faxed soil sample results submitted to MDE-OCP.
 - Soil sample beneath UST - below MDE action levels for TPH.
- December 19, 2003. *Underground Storage Tank Closure Report - December 19, 2003* report submitted for review. Shallow domestic well within 30 feet of UST. Consultant recommended no further action.
- January 13, 2004. Faxed drinking water sampling results to MDE-OCP.
 - DW Non-detect for petroleum constituents (note samples were only analyzed for BTEX).
- January 26, 2004. Fax from contractor with on-site drinking water sample results. No MTBE was detected.
- March 2, 2004. MDE issued a "Notice of Compliance" to SHA.
- June 10, 2005. CCHD letter dated 06/08/05 to new property owner (Later LLC) of the drinking water sampling results.

04/19/05 - Groundwater samples collected by CCHD. No petroleum constituents detected.

- March 7, 2006. The CCHD collected a water sample from the on-site drinking water supply well. Results pending.

Wantz Rental/Construction Company, 4004 Sykesville Road:

There is no active case on the Wantz Rental/Construction Company and no USTs are present on-site. Historically, a 550-gallon gasoline UST (1992-2124-CL) failed a tank tightness test and was subsequently removed. Wantz Construction Company owns the property.

- February 1986. A bare-steel gasoline tank was registered with MDE by Wantz Construction.
- March 20, 1992. MDE received an initial report of a spill due to a hydrostatic tank test failure.
- March 25, 1992. Carroll Independent Fuel Company notified MDE of a tank test failure.
- April 3, 1992. MDE oversaw the removal of a 550-gallon bare-steel gasoline UST. Tank in poor condition with severe surface rusting and pitting; however, no perforations observed. Soils PID screened showed non-detect. No soils were removed. *Case No. 1992-2124-CL* was opened and closed.
- August 21, 2003. Sampling results received by MDE from the State Lab. CCHD collected sample 08/11/03.
 - DW (untreated) Non-detect for petroleum constituents.
- April 28, 2005. CCHD letter dated 04/2005 to property owner of the drinking water sampling results. 03/30/05 - Groundwater samples collected by CCHD. No petroleum constituents detected.
- June 16, 2005. CCHD letter dated 06/10/05 to property owner regarding drinking water sampling results. 04/22/05 - Groundwater samples collected by CCHD. No petroleum constituents detected.
- March 7, 2006. The CCHD collected a water sample from the on-site drinking water supply well.
- April 2006. CCHD letters to property owners on drinking water sample results collected in 03/2006.
- July 2006. Property owner has not yet signed the MDE's *Site Access Agreement*.

Dix Property (1701 Sandra Lane) - Case No. 2004-0140-CL (open)

- July 7, 2003. Property owner reported "ruptured oil tanks on an abandoned property (4004 Sandra Lane)."
- July 21, 2003. MDE collected a groundwater sample from Mr. Dix drinking water well.
- August 21, 2003. MDE received sampling results from the State Lab. 7/21/2003. Sampled collected by MDE.
 - DW (untreated) Benzene - 58.2 ppb;
- January 6, 2004. Nutshell Enterprises faxed to MDE a copy of a database search that listed two sites in the Gamber area that previously had USTs including Wantz Construction and Discover Carpets.
- April 15 and 22, 2005. CCHD faxed drinking water sampling results to MDE. 03/25/05 - Groundwater samples collected by CCHD
 - DW (untreated) Benzene - 61.2 ppb;
- April 27, 2005. MDE received the access agreement signed by the property owner at 1701 Sandra Lane.
- MDE received faxed results of the raw tap water sampling results collected by CCHD 03/18/2005.

- DW (pre-filter) Benzene - 54.2 ppb
 - DW (post-filter) MTBE - 0.72 ppb
- May 6, 2005. CCHD letter dated 05/02/2005 concerning drinking water samples collected on 03/25/05.
 - May 9, 2005. MDE installed a GAC system at no cost to the resident.
 - June 14, 2005. MDE letter to property owner concerning drinking water samples collected May 27, 2005. Well was retrofitted with a GAC filtration system by MDE.
 - DW (pre-filter) benzene - 110 ppb; TBA -120 ppb;
 - DW (mid-filter) non-detect for petroleum constituents
 - DW (post-filter) non-detect for petroleum constituents
 - June 16, 2005. MDE letter to property owner for the drinking water sample results collected on 5/31/05.
 - June 22, 2005. CCHD letter dated 06/13/2005 to property owner concerning drinking water samples collected on 04/18/2005.
 - July 6, 2005. MDE letter to property owner concerning drinking water sample results collected on 6/20/05.
 - August 11, 2005. MDE letter to property owner concerning drinking water sample results collected on 7/25/05.
 - September 19, 2005. MDE letter to property owner concerning drinking water sample results collected on 8/25/05.
 - October 11, 2005. MDE letter to property owner concerning drinking water sample results collected on 9/21/05.
 - November 14, 2005. MDE letter to property owner concerning drinking water sample results collected on 10/26/05.
 - January 9, 2006. MDE letter to property owner concerning drinking water sample results collected on 12/12/05
 - March 1, 2006. MDE letter to property owner concerning drinking water sample results collected on 02/09/06.
 - June 13, 2006. MDE letter to property owner concerning drinking water sample results collected on 05/18/06.
 - July 6, 2006. MDE letter to property owner concerning drinking water sample results collected on 06/14/06.
 - July 7, 2006. MDE site visit.
 - Quarterly sampling and monitoring of the GAC filtration system continue to be conducted by the MDE-OCP.
 - July 2006. Property owner has signed the MDE's *Site Access Agreement*.

Raver Property, 4015 Sykesville Road:

CCHD reported an out-of service gasoline UST. This property is located adjacent to the Royal Farms Store.

- April 22, 2005. CCHD faxed drinking water sampling results to MDE. 03/25/05 - Groundwater samples collected by CCHD
 - DW (untreated) MTBE at 0.87 ppb.
- May 12, 2005. MDE conducted a site visit and observed an out-of-service #2 heating oil tank.

- June 16, 2005. MDE conducted a site visit and observed a partially uncovered gasoline UST. No one on site; odors detected. Tank had surface rust but no obvious perforations were noted on top of tank.
- January 23, 2006. MDE letter to the Raver property owner's attorney requiring the following activities be completed:
 - Test the heating oil UST system;
 - Collect and analyze a water sample from the drinking water supply well; and
 - Conduct a limited geoprobe investigation in the vicinity of the UST systems, including the collection of soil and groundwater samples.
- February 7, 2006. MDE received a letter from an attorney in response to the MDE letter dated 1/23/06. A water sample was collected from the drinking water supply well on 1/9/06.
 - DW (untreated) – MTBE at 10.8 ppb
- February 13, 2006. MDE received a request for information from a prospective purchaser for the property at 4015 Sykesville Road.
- February 24, 2006. MDE provided a *Site Status Letter* to the prospective purchaser in response to the 2/13/06 request.
- February 22, 2006. MDE received a letter from the contractor who removed the gasoline UST at 4015 Sykesville Road.
 - Tank was removed using pick and shovel (this out-of service tank was relocated to another location)
 - The tank was approximately $\frac{3}{4}$ full of gasoline at the time of removal
 - Contractor did not observe any contamination.
- February 28, 2006. Based on information provided by the contractor who removed the gasoline UST, MDE conducted a site visit at 4424 Sykesville Road and observed a steel gasoline storage tank sitting above ground. This tank was reported to be the same UST observed by MDE on June 16, 2005 at 4015 Sykesville Rd.
 - The tank has a capacity of approximately 275 to 300 gallons
 - Tank had surface rust and small perforations on both ends of the tank.
- March 9, 2006. MDE received a *Closure In Place Request – March 6, 2006* for the removal/abandonment of the heating oil tank at 4015 Sykesville Road.
- March 10, 2006. MDE received a copy of a *Proposed Scope of Work – March 8, 2006*, for the removal/abandonment of the heating oil tank at 4015 Sykesville Road.
- March 13, 2006. MDE responded, via e-mail, to the attorney regarding the proposals submitted for the removal/abandonment of the heating oil tank and testing to be completed in the vicinity of the former gasoline UST.
- May 11, 2006. MDE *Site Status* letter to the attorney for the Raver property.
- June 5 and 8, 2006. MDE site visit to observe the removal of the 1000-gallon heating oil steel tank.
 - A perforation observed in the base of the tank. Very little liquid remained in the tank
 - Impacted soil had petroleum odor but not visibly stained. 16 cubic feet of soils removed and staged on plastic.
 - Post-excavation soil samples collected 2 ft. below the tank bottom.
- June 23, 2006. MDE received via e-mail, post excavation soil sample results collected from 3 locations. Other petroleum constituents detected were below the residential cleanup standard.
 - SS1A TPH-DRO 5390 ppm; TPH-GRO 153 ppm
 - SS1B TPH-DRO 192 ppm; TPH-GRO –ND
 - SS2A TPH-DRO 41200 ppm; TPH-GRO 1940 ppm
- July 2006. Property owner has not yet signed the MDE's *Site Access Agreement*.

Royal Farms Store, 4007 Sykesville Road Case No. 2005-1001-CL (open) Facility ID # 014991:

Gasoline retail activities began at the Royal Farms Store on October 7, 2002. Currently, the property is leased by Royal Farms and owned by Enfield Realty Inc. The UST system is registered to Two Farms, Inc./Royal Farm. On March 22, 2005, the MDE-OCP opened a groundwater investigation in response to elevated MTBE levels (34.7 ppb) in the on-site drinking water supply well at the Royal Farms Store. The facility currently has a treatment system in place to remove any petroleum constituents in their drinking water supply.

- September 3, 2003. Two new USTs equipped with Stage I and Stage II vapor recovery systems registered to Two Farms Inc. and commercially insured.
 - One 30,000-gallon, double-walled gasoline tank comprising composite steel and fiberglass reinforced plastic piping.
 - One 12,000-gallon double walled diesel tank comprised of composite steel/fiberglass and fiberglass reinforced plastic piping.
- March 18, 2005. CCHD reported MTBE (34.7 ppb) in the transient non-community supply well at the Royal Farm Store. CCHD closed down the food and beverage preparations at the convenience store until filtration could be installed.
- March 19, 2005. Royal Farms installed a GAC filtration system.
- March 22, 2005. MDE conducted a compliance inspection at the station. MDE found diesel fuel in two sumps, dispenser lines showed evidence of weeping, and the spill catch basins were improperly maintained.
 - Royal Farm's contractor initiated repairs.
- March 24, 2005. MDE received drinking water sampling results from the non-community supply well at Royal Farm's store (samples were only analyzed for MTBE). Sampling event 02/14/05:
 - DW (pre-filter) MTBE – 37.8 ppb
 - DW (mid-filter) non-detect for petroleum constituents
 - DW (post-filter) non-detect for petroleum constituents
- March 25, 2005. CCHD collected drinking water samples from ten off-site properties (*see Gamber Groundwater Investigation*). During the sampling event, the residential property located adjacent to the Royal Farms was observed to have a gasoline UST (i.e. Raver property located at 4015 Sykesville Road).
- June 8, 2005. MDE conducted a compliance assistance inspection. Quantities of product observed in catch basins and sump; other violations noted.
- June 16, 2005. MDE observed the installation of three monitoring wells installed on-site in compliance with the MDE's emergency regulations for high-risk groundwater use areas.
- June 24, 2005. MDE conducted a follow-up compliance assistance inspection. All the noted violations identified during the 06/08/05 site visit had been corrected. MDE required that all sumps and catch basins be tested.
- July 1, 2005. MDE requested in a telephone conference with Royal Farms that a helium test be conducted on the gasoline UST system.
- July 7, 2005. Royal Farms submitted hydrostatic test results. MDE-OCP required Royal Farms to complete a helium test of their UST system.
- July 9, 2005. Royal Farms conducted a helium test of the UST system. The tanks tested tight.
- August 31, 2005. MDE received *Groundwater Monitoring Well Installation and Sampling Results - 07/22/ 2005*.

- Three monitoring wells installed in the vicinity of the tank field.
- Groundwater flow trend to the southwest
- Sampling event 07/12/05
 - MW-1 (35ft) non-detect for petroleum constituents (ND)
 - MW-2 (35ft) ND
 - MW-3 (35ft) MTBE at 290 ppb
 - DW (200ft) non-detect for petroleum constituents - *Sample collected after carbon filtration

- January 19, 2006. MDE letter to Two Farms, Inc based on the *Groundwater Monitoring Well Installation and Sampling Results - 07/22/2005*.
 - Sample on-site monitoring wells and tank field monitoring pipes every six months
 - Sample the transient, non-community supply well every six months (pre, mid, and post filtration)
 - Identify all drinking water wells within a half-mile radius of the facility.

Current Activities:

- February 16, 2006. MDE received the *February 2006 Groundwater Sampling Results – February 14, 2006*.
 - Sampling event 02/01/2006 for the on-site supply well and monitoring wells (tank field monitoring pipes – dry).
 - MW1 – ND
 - MW2 – ND
 - MW3 – MTBE at 24 ppb
 - Drinking water sample (PW) – Non-detect for petroleum constituents
- February 2006. Royal Farms conducted a helium test of the UST system. The tanks tested tight.
- August 1, 2006, 2006. MDE received the *June 2006 Groundwater Sampling Results – July 26, 2006*.
 - Sampling event 06/30/2006 (tank field monitoring pipes – dry).
 - MW1 – ND
 - MW2 – ND
 - MW3 – MTBE at 21 ppb
 - PW (pre-filter) – ND; (mid-filter) – ND; (post-filter) -ND

Future Activities:

- Next round of samples slated to be collected in December 2006.

High's Store–Citgo (a.k.a. Gamber Store/Sandy's Carryout) at 3949 Sykesville Rd (a.k.a 3947 Sykesville Rd): Case Nos. 2005-1013-CL (open) and 96-2445-CL; 90-2240-CL (closed) Facility ID No. 8925

For over 20 years, gasoline retail activities have been ongoing at the premises. Historically, 3 USTs were present on-site. Since July 24, 1985, Stephan and Eva Timchula, the former owners/operators of historic USTs, have owned the property. The property is currently leased to High's Stores. In July 1996, two new compartmentalized tanks were installed. High's Stores currently operates a gas station under the Citgo logo. Sampling indicates petroleum constituents have not impacted the drinking water well at this site. Groundwater flow at this site is north-north-westerly.

- April 16, 1986. Three USTs registered to the Timchula's for the Gamber Store (also identified as 3947 Sykesville Rd):
 - Two 1,000-gallon bare-steel gasoline
 - One 550-gallon bare-steel kerosene
- May 1990. Three USTs registered to Charles Risko for the Gamber Store (identified as 3947 Sykesville Rd). Tanks estimated to be 30 yrs old.
 - Two 1,000-gallon bare-steel gasoline
 - One 550-gallon bare-steel kerosene
- October 19, 1990. MDE collected drinking water sample from Sandy's Carryout (a.k.a. Gamber Store).

- DW (untreated) Non-detect for petroleum constituents.
- December 5, 1990. MDE oversaw the removal of three USTs at the Gamber Store/Sandy's Carryout.
 - Two 1,000-gallon bare-steel gasoline and one 550-gallon bare-steel kerosene.
 - Tanks in good condition. No perforations observed.
 - Strong odors identified in the excavation but no soils were removed.
 - The installation of one monitoring well was required.
- January 29, 1991. MDE observed an attempt to install one monitoring well. Hole drilled and no contamination was identified down to 50 feet. The hole was backfilled. *Case No. 90-2240CL* was closed.
- June 25, 1996. MDE conducted a site visit in response to a new UST system installation by High's Store. Petroleum impacted soils in the old tank field area were required to be removed and properly disposed.
- July 7 and 25, 1996 and August 1, 1996. MDE conducted several site inspections to observe installation of new UST system by High's.
- September 13, 1996. MDE verified that new UST system installation had been completed.
 - MDE-OCPC contacted CCHD to request an off-site drinking water sample be collected at 3998 Gamber Road.
 - High's installed two compartmentalized 10,000-gallon (gasoline/kerosene and diesel/gasoline) fiberglass-reinforced plastic tanks with double walled piping.
- April 11, 1997. MDE visited the High's Store and required the following items be completed:
 - Install one monitoring well;
 - Submit soil disposal receipts; and
 - Sample domestic well.
- April 17, 1997. MDE received disposal receipt for petroleum-impacted soil removed from the vicinity of the former tank field. Approximately 586.31 tons of soil was removed.
- August 22, 1996. MDE conducted a site inspection of the two UST systems and the vapor recovery systems. No violations identified.
- August 24, 1996. High's of Baltimore registered three new USTs, commercially insured.
- June 5, 2000. MDE conducted an inspection of the Stage I and II vapor recovery systems. Both systems were checked as operational.
- On March 30, 2005. *Case No. 05-1013-CL* opened by MDE in response to compliance issues and impacts to drinking wells in the Gamber/Sykesville community; several violations cited.
 - Properly seal the two tank field monitoring pipes;
 - Caps needed on Stage I vapor recovery system;
 - Vents to be protected from weather elements;
 - Spill catchment basins must be cleaned out;
 - Provide copy of precision test results;
 - Diesel tank does not have drop tube, therefore, no delivery can occur until properly corrected
- April 22, 2005. MDE received faxed copy of drinking water sample collected by CCHD on 3/25/05 from the nearest drinking water well to the High's Store
 - 3998 Gamber Road - non-detect for petroleum constituents
- June 14, 2005. MDE conducted a follow-up routine site inspection. Several items corrected, but outstanding issues remaining to be addressed: bollard at vent pipe loose; vent pipes bent; and provide copies of precision test results.

- June 20, 2005. High's contractor faxed MDE verification that all outstanding compliance issues had been corrected.
- June 29, 2005. High's contractor faxed a copy of proposed monitoring well installation to MDE.
- June 30, 2005. MDE letter to High's approving the compliance schedule:
 - Testing of containment sumps to be conducted by 01/26/2006 and every 5 years thereafter;
 - Testing records for UST facility to be maintained for 1 and 5 years at a location designated by the owner.
- July 1, 2005. MDE conducted a compliance assistance inspection. The Department required the following be completed within 30 days:
 - Remove product from all spill buckets;
 - Test all spill buckets and sumps; and
 - Perform a helium test on the UST system.
- July 6, 2005. MDE received drinking water sampling results collected by High's. Sampling event on 06/21/2005 from the non-community supply well - non-detect for petroleum constituents
- July 7, 2005. MDE in a telephone conversation required High's Store to complete a helium test of the UST system and to perform hydrostatic testing of all catch basins and sumps.
- July 12, 2005. MDE conducted site visit to observe the installation of three monitoring wells.
- July 18, 2005. High's Store conducted a helium test of the UST system. The tanks tested tight. Hydrostatic testing of the catch basins tested tight.
- August 8, 2005. MDE received report from consultant regarding helium testing of USTs and the 06/21/05 drinking water sample collected at the High's Store.
 - UST system passed the helium test.
- September 26, 2005. MDE received a copy of the water test results (8/11/05) for the High's Store.
- November 14, 2005. MDE received the *Monitoring Well Installation and Sampling Report - November 3, 2005*
 - No free product found in the monitoring wells
 - Groundwater between 30 and 33 feet bgs.
 - Groundwater samples collected on 8/1/05
 - MW-1 ND
 - MW-2 ND
 - MW-3 Benzene - 12 ppb; MTBE - 18 ppb
 - DW (untreated) non-detect for petroleum constituents
- January 4, 2006. MDE letter to High's of Baltimore, Inc. in response to the *Monitoring Well Installation and Sampling Report*. The following activities to be completed:
 - Conduct a self-audit of the UST system and submit the results to MDE;
 - Identify all drinking water wells within a half-mile radius of the facility;
 - Collect samples every six months from site monitoring wells and drinking water supply well; and
 - Correct specified errors noted in the designation of the monitoring well locations.
- January 24, 2006. MDE received information in response to the MDE letter dated 1/4/06 and a copy of the *Monitoring Well Sampling Report – January 16, 2006*
 - Groundwater at 32 to 34 feet bgs with flow trending west-southwest.
 - Self audit completed with satisfactory results
 - Well logs provided for all existing wells.
 - Well survey completed for ½ mile radius identified numerous private drinking water wells in the area.
 - Six months of inventory records submitted – acceptable

- Monitoring well locations correctly designated on site map
- UST system annual test records submitted – all passed
- Groundwater samples collected on 1/4/06:
 - MW-1 (50ft) TPH/DRO – 310 ppb
 - MW-2 (51ft) MTBE - 3 ppb, TPH/DRO – 290 ppb
 - MW-3 (50ft) TPH/DRO – 330 ppb
 - DW (untreated) (225 ft.) Non-detect for petroleum constituents

- August 3, 2006. MDE received the *Semi-Annual Monitoring & Domestic Well Sampling Event –July 14, 2006*.
 - Sample event on 06/13/06
 - MW1 – MTBE at 1 ppb depth to water 32.87 ft.
 - MW2 – MTBE at 3 ppb depth to water 31.74 ft.
 - MW3 – MTBE at 3 ppb depth to water 34.13 ft.
 - Drinking water sample – ND

Future Activities:

- Next round of samples slated to be collected in January 2007.

Arnold Residence, 4118 Sykesville Road Case No. 1997-1178CL (open):

This property currently has an active case - *Case No. 97-1178-CL*. At this time, the Department has not been able to identify a viable responsible party for this case since the property owner is deceased.

Site Chronology:

- December 20, 1996. MDE oversaw the removal of two bare-steel gasoline USTs (a 110-gallon - no holes observed; a 290-gallon with a large hole on the bottom of tank). A monitoring well was required to be installed.
- February 25, 1997. MDE notified owner that the removed USTs must be registered.
- February 28, 1997. Owner’s representative in a letter to MDE indicated that there were no tanks on-site.
- March 10, 1997. MDE conducted a site visit to observe monitoring well installation.
- April 3, 1997. *Results of Monitoring Report – April 1, 1997* submitted to MDE for review.
 - MW1 - 4inch well, depth 54 feet, screened 45 feet. Liquid phase hydrocarbons (LPH) 0.02 ft. thick.
 - Impacted soils at shallow depth (0-9 ft.) identified during drilling (PID reading 2500 units)
 - Sorbent pads installed inside wells to remove LPH.
 - Consultant recommended that the well be properly abandoned and impacted soils removed.
- April 11, 1997. MDE conducted a site visit to check the status of monitoring well. Mr. Arnold indicated that previously removed tank had been in ground at another location prior to installation at this property.
 - MW1 - Strong petroleum odors detected but no LPH in the bailer.
 - Sorbent pads were saturated with product and changed.
- May 12, 1997. MDE conducted a site visit to gauge the monitoring well. No LPH identified.
- June 16, 2005. MDE sampled monitoring well. Clean sorbents were installed.
- September 15, 1997. MDE conducted a site visit to gauge the monitoring well. No LPH identified. Light odor, no product on wick.
- October 20, 1997. MDE collected groundwater samples from on-site drinking water well and monitoring well.
- November 20, 1997. MDE conducted site visit to gauge monitoring well and to hand deliver sampling results to the owner. 10/20/1997 - Groundwater samples collected by MDE

- DW (untreated) ND
 - MW1 benzene - 810.3 ppb; toluene - 1517.6 ppb; MTBE - 27,292 ppb
- April 20, 1998. Lab analysis received from the State Lab.
03/25/1998 - Groundwater samples collected by MDE-OCF
 - DW (untreated) ND
 - MW1 benzene - 3272.5 ppb; ethylbenzene - 4247.4 ppb; toluene - 4157.7 ppb; MTBE - 338,209.5 ppb
- April 19, 2000. Lab analysis received from the State Lab.
04/06/2000 - Groundwater samples collected by MDE.
 - MW1 benzene - 823 ppb; MTBE - 65,582.4 ppb
- November 27, 2000. MDE conducted a site visit to gauge monitoring well. Odors present; wick placed in well.
- June 11, 2001. Lab analysis received from the State Lab.
05/25/2001 - Groundwater samples collected by MDE.
 - MW1 benzene - 818.1 ppb; MTBE - 85248.2 ppb; TAME - 17717.8 ppb
- December 10, 2001. MDE conducted a site visit to gauge monitoring well. Strong odors present; no LPH.
- June 16, 2005. MDE conducted a site visit to gauge monitoring well. Strong odors present; no LPH. Wick showed evidence of some contamination; wick replaced. Sample collected.
- July 14, 2005. MDE received the results of sample collected on 6/16/05 from monitoring well.
 - MW-1 benzene - 8,893 ppb; ethylbenzene - 2,261 ppb; toluene - 15,413 ppb; xylene - 19,654 ppb; naphthalene - 1,063 ppb; 2-hexanone (MBK) - 22,688 ppb (est); 4-methyl-2-pentanone (MIBK)- 4,128 ppb (est); MTBE - 1,435,066 ppb (est); TAME - 330,000 ppb (est)
- March 22, 2006. MDE conducted a site visit to gauge the monitoring well and to collect a sample. .
 - Moderate odors present; no LPH present.
 - A sample was collected following the removal of approximately 36 gallons of well water.
 - MW-1 benzene - 103 ppb; ethylbenzene - 57.1 ppb; toluene - 208 ppb; xylene - 383 ppb; naphthalene - 25.6 ppb; MTBE - 14595 ppb (est); TAME - 2927 ppb (est)
- June 22, 2006. MDE received *Proposed Work Plan – June 21, 2006* from the developer's consultant.
 - EFR event on the single monitoring well
 - Proper abandonment of the monitoring well
 - Removal and disposal of impacted soils excavated from the former tank field area.
- July 10, 2006. MDE letter to developer (Highland Development Corporation) approving the *Work Plan – June 21, 2006*. Provided guidance on future site investigation activities (e.g. geoprobe study on-site, sampling of all future test wells).
- July 19, 2006. MDE on-site to observe excavation activities of the shallow monitoring well and the former UST tank field.
- August 10, 2006. MDE received the Work Plan Activities Summary Report-August 9, 2006.
 - High volume extraction event conducted from the on-site monitoring well resulting in the removal of 665 gallons of gasoline-contaminated water
 - Monitoring well abandoned (7/10/06) by a Maryland licensed well driller
 - Approximately 29 tons of petroleum contaminated soil removed from vicinity of former tank field for proper disposal

Contacts:

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

Future Updates

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

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.

Drinking Water Sampling results in the Gamber Study Area

Sample location	Sample dates	Petroleum constituents of Concern		
		MTBE (20 ppb – action level)	Benzene (5ppb –MCL)	Other petroleum constituents
3994 Gamber Rd.	CCCHD- 03/25/05	ND	ND	ND
3998 Gamber Rd.	CCCHD- 03/25/05	ND	ND	ND
	CCCHD- 03/07/06	ND	ND	ND
	CCCHD- 04/19/06	ND	ND	ND
1701 Georgia Ave	CCCHD- 07/18/05	0.8	ND	ND
	CCCHD- 03/07/06	ND	ND	ND
	CCCHD- 04/19/06	0.53	ND	ND
1702 Georgia Ave	CCCHD- 7/18/2005	0.91	ND	ND
	CCCHD- 03/07/06	ND	ND	ND
	CCCHD- 04/19/06	0.54	ND	ND
1703 Georgia Ave Carbon treatment system in place being maintained by MDE	CCCHD- 08/10/05	20.8	ND	TAME -0.61
	CCCHD- 08/30/05	13.8	ND	TAME 0.52
	MDE- 09/21/05	25	ND	ND
		23j (pre-filter)	ND	ND
		ND (mid-filter)	ND	ND
	MDE- 12/20/05	ND (post-filter)	ND	ND
		1j (pre-filter)	ND	ND
		ND (mid-filter)	ND	ND
	MDE- 2/09/06	ND (post-filter)	ND	ND
		J1 (pre-filter)	ND	ND
		ND (mid-filter)	ND	ND
	CCCHD- 03/07/06	ND (post-filter)	ND	ND
		0.69	ND	ND
		MDE- 05/18/06	ND (pre-filter)	ND
	MDE-09/08/06	ND (mid-filter)	ND	ND
ND (pre-filter)		ND	ND	
ND (post-filter)		ND	ND	
1704 Georgia Ave Carbon treatment system in place being maintained by MDE	CCCHD- 07/18/05	41.2	ND	TAME 1.42
	ME- 08/11/05	45	---	TBA - 22
	MDE- 08/25/05	42	ND	ND
		ND (mid-filter)	ND	ND
		ND (post-filter)	ND	ND
	MDE- 09/21/05	37	ND	ND
		ND (mid-filter)	ND	ND
		ND (post-filter)	ND	ND
	MDE- 12/20/05	ND (pre-filter)	ND	ND
		ND (mid-filter)	ND	ND
		ND (post-filter)	ND	ND
	MDE-2/09/06	ND (pre-filter)	ND	ND
		ND (mid-filter)	ND	ND
		ND (post-filter)	ND	ND
	CCHD-2/14/06	ND (pre-filter)	ND	ND
MDE- 05/18/06	ND (pre-filter)	ND	ND	
	ND (mid-filter)	ND	ND	
	ND (post-filter)	ND	ND	
09/08/06	ND (pre-filter)	ND	ND	
	ND (mid-filter)	ND	ND	
	ND (post-filter)	ND	ND	

Drinking Water Sampling results in the Gamber Study Area

Sample location	Sample dates	Petroleum constituents of Concern		
		MTBE (20 ppb – action level)	Benzene (5ppb –MCL)	Other petroleum constituents
1801 Grassmere Rd.	CCCHD- 04/11/05	ND	ND	ND
1811 Grassmere Rd.	CCCHD- 04/05/05	ND	ND	ND
1820 Grassmere Rd.	CCCHD- 04/05/05	ND	ND	ND
*				
4014 Howard Place Carbon treatment system in place being maintained by MDE.	MDE- 08/21/03	2.22	81.5	Naphthalene – 18
	CCCHD- 04/18/05	2.63	128	1,2DCA 15.6
	MDE- 05/27/05	2j (pre-filter)	110	TBA – 120 ; Naphthalene – 12
		ND (mid-filter)	ND	TBA – 12
		ND (post-filter)	ND	ND
	MDE- 06/17/05	2j (pre-filter)	91	TBA – 110 ; Naphthalene – 9
		ND (mid-filter)	ND	TBA – 22
		ND (post-filter)	ND	ND
	MDE- 07/25/05	3j (pre-filter)	76	TBA – 100 ; Naphthalene – 8;
		ND (mid-filter)	ND	TBA – 130
		ND (post-filter)	ND	TBA – 29
	MDE- 08/25/05	2j (pre-filter)	74	TBA – 120 ; Naphthalene - 8
		ND (mid-filter)	ND	TBA – 110e
		ND (post-filter)	ND	TBA – 83
	MDE- 09/21/05	2 (pre-filter)	77	TBA – 120 ; Naphthalene - 11
		ND (mid-filter)	ND	TBA – 120
		ND (post-filter)	ND	TBA – 94
	MDE- 12/20/05	2 (pre-filter)	96	TBA – 150 ; Naphthalene – 10
		ND (mid-filter)	ND	TBA – 26
		ND (post-filter)	ND	ND
	MDE- 2/09/06	J2 (pre-filter)	70	1,2 DCA-8, Naphthalene – 17, TBA - 160
		ND (mid-filter)	ND	TBA - 43
		ND (post-filter)	ND	TBA - 52
	MDE- 05/18/06	1 (pre-filter)	ND	1,2DCA – 7; Naphthalene – 4J; TBA - 150
		ND (mid-filter)	ND	TBA - 49
		ND (post-filter)	ND	TBA - 49
	MDE- 08/18/06	2 (pre-filter)	76	Naphthalene-8, 1,2DCA-9, TBA-210
ND (mid-filter)		ND		
ND (post-filter)		ND		
1701 Sandra Lane Carbon treatment system in place being maintained by MDE.	MDE/CCCHD-07/21/03	ND	58.2	Naphthalene – 6.07
	CCCHD- 03/25/05	0.81	61.2	Naphthalene – 8.84
	CCCHD- 04/18/05	1.01 (pre-filter)	54.2	Naphthalene – 9.9
		0.72 (post-filter)	ND	ND
	MDE- 05/31/05	ND (pre-filter)	34	TBA – 42; Naphthalene – 7
		ND (mid-filter)	ND	TBA – 5
		ND (post-filter)	ND	ND
	MDE- 06/20/05	ND (pre-filter)	47	TBA – 58; Naphthalene – 7;
		ND (mid-filter)	ND	TBA – 27
		ND (post-filter)	ND	ND
	MDE- 07/25/05	ND (pre-filter)	44	TBA – 60; Naphthalene – 8;
		ND (mid-filter)	ND	TBA – 61
		ND (post-filter)	ND	TBA – 32
	MDE- 08/26/05	ND (pre-filter)	37	TBA – 51; Naphthalene – 6
		ND (mid-filter)	ND	TBA – 59
		ND (post-filter)	ND	TBA – 47
	MDE- 09/21/05	ND (pre-filter)	37	TBA – 61; Naphthalene – 8
		ND (mid-filter)	ND	TBA – 71
		ND (post-filter)	ND	TBA – 63
	MDE- 12/12/05	1 j (pre-filter)	44	TBA – 110; Naphthalene – 8;
		ND (mid-filter)	ND	TBA – 18
		ND (post-filter)	ND	TBA – 11
	MDE- 2/09/06	J1 (pre-filter)	50	1,2 DCA-9: Naphthalene - 10 TBA - 110,
		ND (mid-filter)	ND	TBA-27
		ND (post-filter)	ND	TBA-26
	MDE- 05/18/06	J1 (pre-filter)	43	1,2 DCA-10: Naphthalene – 4j TBA - 100,
		ND (mid-filter)	ND	TBA-11
ND (post-filter)		ND	TBA-ND	
MDE- 06/14/06 (resample of only post-filter)	0.5 (post-filter)	ND	TBA - 7	

Sample location	Sample dates	Petroleum constituents of Concern		
		MTBE (20 ppb – action level)	Benzene (5ppb –MCL)	Other petroleum constituents
1701 Sandra Lane GAC in place	08/18/06	1 (pre-filter)	52	Xylene-19, Naphthalene-8, 1,2DCA-10, TBA -92
		ND (mid-filter)	ND	TBA-7
		ND (post-filter)	ND	

Drinking Water Sampling results in the Gamber Study Area

Sample location	Sample dates	Petroleum constituents of Concern			
		MTBE (20 ppb – action level)	Benzene (5ppb –MCL)	Other petroleum constituents	
3942 Sykesville Rd.	CCCHD- 03/25/05	ND	ND	ND	
3943 Sykesville Rd.	CCCHD- 03/25/05	0.6	ND	ND	
Double Take Salon					
3944 Sykesville Rd.	CCCHD- 03/25/05	ND	ND	ND	
	CCCHD- 04/19/06	ND	ND	ND	
Highs					
3949 Sykesville Rd.	CCCHD- 03/25/05	ND	ND	ND	
	High's- 06/21/05	ND	ND	ND	
	High's- 01/04/06	ND	ND	ND	
Superior/Discover Carpet					
3950 Sykesville Rd Carbon treatment system in place and being maintained by property owner. MDE began quarterly sampling in August 2006	MDE- 08/11/03	ND (before tank)	63.4	Naphthalene – 8.34	
		ND (sink))	ND		
	CCCHD- 03/25/05	ND	ND	1,2DCA – 6.5	
	CCCHD- 04/22/05	ND	76.3	Naphthalene – 11.4; 1,2DCA – 26.7	
	CCCHD- 08/01/05	ND (post-filter)	ND	ND	
	MDE-08/30/06		3.1 (pre-filter)	16.5	Naphthalene – 8.4; 1,2DCA-10.5, TBA-930, ethylbenzene- 1.1, xylene-13.5, DIPE-1.5, EDB-1.5
			ND (mid-filter)	ND	TBA-3190
		ND (post-filter)	ND	TBA-1610	
Former Fire Hall					
4000 Sykesville Rd	CCCHD- 03/25/05	ND	ND	ND	
	CCCHD- 04/19/05	0.94	1.71	BDL	
	CCCHD- 03/07/06	0.73	ND	ND	
	CCCHD- 04/20/06	1.11	ND	ND	
Wantz Construction					
4004 Sykesville Rd.	CCCHD- 08/11/03	ND	ND	ND	
	CCCHD- 03/30/05	ND	ND	ND	
	CCCHD- 04/22/05	ND	ND	ND	
	CCCHD- 03/07/06	ND	ND	ND	
Royal Farms					
4007 Sykesville Rd. Carbon treatment system in place and being maintained by Royal Farm	CCCHD- 02/15/05	37.8	ND	TAME – 1.15	
	Royal Farm 03/22/05	37.8 (pre-filter)	ND	ND	
		ND (mid-filter)	ND	ND	
		ND (post-filter)	ND	ND	
	Royal Farm 07/12/05	ND (post-filter)	ND	ND	
	Royal Farm 2/01/06	ND (pre-filter)	ND	ND	
		ND (mid-filter)	ND	ND	
		ND (post-filter)	ND	ND	
	Royal Farm 06/30/06	ND (pre-filter)	ND	ND	
		ND (mid-filter)	ND	ND	
ND (post-filter)		ND	ND		
Raver Property					
4015 Sykesville Rd. (1000-gal heating oil tank removed 06/2006)	CCCHD- 03/25/05	0.87	ND	ND	
	Private - 01/09/06	10.8			
	CCCHD- 04/20/06	14.3	ND	ND	

4016 Sykesville Rd. Carbon treatment system in place and being maintained by MDE.	CCCHD- 03/25/05	21.1	ND	TAME – 0.58	
	CCCHD- 04/18/05	26.8	ND	TAME – 1.15	
	MDE- 08/11/05	21 (pre-filter)	ND	ND	ND
		ND (mid-filter)	ND	ND	ND
		7 (post-filter)	ND	ND	TBA – 250e
	MDE- 08/26/05	ND (post-filter)	ND	ND	TBA – 380e
	MDE- 09/23/05	23 (pre-filter)	ND	ND	ND
		ND (mid-filter)	ND	ND	TBA – 270
		0.9 (post-filter)	ND	ND	TBA – 3700e
	MDE- 12/30/05	36 (pre-filter)	ND	ND	TBA – 30
		ND (mid-filter)	ND	ND	ND
		ND (post-filter)	ND	ND	TBA – 39
	MDE- 1/24/06	34 (pre-filter)	ND	ND	ND
		ND (mid-filter)	ND	ND	ND
		ND (post-filter)	ND	ND	TBA - 640
	MDE- 02/22/06	22 (pre-filter)	ND	ND	ND
		ND (mid-filter)	ND	ND	ND
		ND (post-filter)	ND	ND	ND
	MDE- 05/18/06	11 (pre-filter)	ND	ND	ND
ND (mid-filter)		ND	ND	ND	
ND (post-filter)		ND	ND	ND	
	MDE-09/08/06	6 (pre-filter)	ND	ND	
		ND (mid-filter)	ND	ND	
		ND (post-filter)	ND	ND	

Drinking Water Sampling results in the Gamber Study Area

Sample location	Sample dates	Petroleum constituents of Concern		
		MTBE (20 ppb – action level)	Benzene (5ppb –MCL)	Other petroleum constituents
4019 Sykesville Rd.	CCCHD- 03/25/05	1.35	ND	ND
	CCCHD- 03/07/06	1.95	ND	ND
	CCCHD- 04/20/06	2.6	ND	ND
4022 Sykesville Rd.	CCCHD- 08/09/05	2.47	ND	---
	CCCHD- 03/07/06	1.56	ND	ND
4023 Sykesville Rd.	CCCHD- 08/09/05	ND	ND	ND
	CCCHD- 03/07/06	ND	ND	ND
	CCCHD- 04/20/06	0.66	ND	ND
4027 Sykesville Rd.	CCCHD- 08/09/05	2.65	ND	ND
	CCCHD- 03/07/06	0.64	ND	ND
	CCCHD- 04/19/06	0.63	ND	ND
4028 Sykesville Rd.	CCCHD- 08/09/05	1.13	ND	ND
	CCCHD- 03/07/06	1.02	ND	ND
	CCCHD- 04/19/06	1.21	ND	ND
4032 Sykesville Rd.	CCCHD- 08/10/05	ND	ND	ND
	CCCHD- 04/20/06	0.55	ND	ND
4035 Sykesville Rd.	CCCHD- 04/20/06	ND	ND	ND
4036 Sykesville Rd.	CCCHD- 08/10/05	ND	ND	ND
	CCCHD- 04/20/06	ND	ND	ND
4039 Sykesville Rd.	CCCHD- 05/11/06	ND	ND	ND
4043 Sykesville Rd.	CCCHD- 05/11/06	ND	ND	ND
4044 Sykesville Rd.	CCCHD- 08/10/05	ND	ND	ND
	CCCHD- 04/20/06	ND	ND	ND
	CCCHD- 06/07/06	ND	ND	ND
4102 Sykesville Rd.	CCCHD- 05/11/06	ND	ND	ND
4106 Sykesville Rd.	CCCHD- 06/30/05	ND	ND	ND
4109 Sykesville Rd.	CCCHD- 06/30/05	ND	ND	ND

4115 Sykesville Rd.	CCCHD- 06/30/05	ND	ND	ND
Arnold property				
4118 Sykesville Rd.	MDE- 10/20/97	ND	ND	ND
	MDE- 03/25/98	ND	ND	ND
Contaminated soils removed in July 2006	CCCHD- 06/30/05	ND	ND	ND
4122 Sykesville Rd.	CCCHD- 06/30/05	ND	ND	ND
4125 Sykesville Rd.	CCCHD- 06/30/05	ND	ND	ND
4132 Sykesville Rd.	CCCHD- 05/11/06	ND	ND	ND
4144 Sykesville Rd.	CCCHD- 05/11/06	ND	ND	ND