

DRINKING WATER SAMPLING AND ENVIRONMENTAL INVESTIGATION
The Eagles Nest (former Chesapeake Texaco Shore Stop/Rice's Mini Mart)
2754 Augustine Herman Highway
Chesapeake City, Maryland
1999-2964CE

The Maryland Department of the Environment (MDE), Oil Control Program (OCP), continues to evaluate petroleum impacts at the Eagles Nest, formerly known as Shore Stop and Rice's Mini Mart, located in Cecil County. In May 1999, the Department was alerted to a release of an unknown quantity of gasoline, when liquid phase hydrocarbon (LPH or free product) was identified in a tank field observation pipe following a fuel delivery event at the facility. Subsequent sampling of the monitoring well network in 2003 revealed benzene at 93.3 parts per billion (ppb) and MTBE at 21 ppb. In 2004, LPH reoccurred on-site in one of the monitoring wells.

Benzene is a constituent of gasoline. The U.S. Environmental Protection Agency (EPA) has set a drinking water standard referred to as an MCL for benzene at 5 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, USEPA issued an advisory for MTBE of 20 to 40 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.

This property has been a gasoline retail facility since the 1960s. In early-1986, Calotex Delaware Inc., registered five underground storage tanks (USTs). These tanks were made of steel and included three (3) 20,000-gallon gasoline, a 1,000-gallon diesel and a 550-gallon kerosene tank. The UST systems were subsequently removed and replaced with new tanks in late-1986. Since that time registration of the UST systems have included several owners and operators (1993 - Carl King Inc.; 1997 - joint registration by Shore Stop and Carl King Inc.; 1999 - Shore Stop Co. LLC; 2003 - GPM9, LLC; 2004 - Geracimos LLC).

Currently, Geramicos, LLC is the owner and operator of the four (4) UST systems; an 8,000-gallon and a 4,000-gallon gasoline; an 8,000-gallon diesel; and a 1,000-gallon gasohol tank. The UST system are made of fiberglass-coated steel with steel piping are equipped with Stage I and II vapor recovery systems. Three (3) groundwater-monitoring wells and a drinking water supply well are currently located on-site. The station's supply well was last sampled in July 2004 and no petroleum constituents were detected. This facility is located in an area served by private wells.

Chronology:

- June 6, 1999. MDE-OCP opened and closed *Case No. 2000-1988CE* in response to compliance assistance inspection.
- June 10, 1999. Shore Stop/Rice's 213 Mini Mart notified MDE-OCP of a gasoline overfill during a fuel delivery and approximately 2 inches of liquid phase hydrocarbons (LPH) in a tank field observation pipe.
- June 11, 1999. MDE-OCP conducted a site inspection in response to the 06/10/99 *Initial Report of Incident*.
 - A surface stain was noted in the area of the tank top pad.

- 2.5 inches of product discovered in a tank field observation pipe. No evidence of fuel or odors was detected in the second tank field pipe or an adjacent monitoring well.
 - LPH was observed in the spill catchment basins and strong odors noted in super submersible sump.
 - Examination of leak detection equipment indicated that there might be incomplete leak detection.
 - Inventory records for the Super gasoline tank indicated all pass for January-May 1999.
 - June 1999 records for the regular gasoline tank indicated 10 days of losses.
 - May 1, 1999 tank test report indicated all tanks passed.
 - S. Coraluzzo Petroleum Transport (fuel delivery company) identified as the party responsible for the surface release.
- June 14, 1999. MDE-OCP conducted a follow-up site inspection and required the following items to be completed by Shore Stop Corp.:
 - Provide a written account of the petroleum release
 - Remove all product from the super unleaded gasoline sump;
 - Perform a volumetric line test on the super unleaded gasoline supply line.
 - June 15, 1999. MDE-OCP conducted a follow-up site visit to witness the required volumetric line test on the super unleaded gasoline product lines.
 - June 17, 1999. MDE-OCP received a formal *Report of Spill- June 14, 1999*, from S. Coraluzzo Petroleum Transport (fuel delivery company) providing details on the petroleum release on May 28, 1999.
 - Driver reported that less than one (1) gallon of gasoline had been released.
 - Driver noted gasoline had overflowed to a ‘well’, but cleaned up using spill kit.
 - Fuel delivery company to internally modify its oil spill notification policy.
 - July 2, 1999. MDE-OCP conducted a follow-up site inspection. LPH had been removed from the super unleaded gasoline submersible sump, however LPH was identified in the spill catchment basins for the gasoline and diesel USTs.
 - August 11, 1999. MDE-OCP issued *Notice of Violation NV-2000-010* to S. Coraluzzo Co., Inc. requiring proper reporting of all spills in accordance with Maryland’s regulation.
 - August 19, 1999. S. Coraluzzo Co., Inc. responded to *NV-2000-010* with details on the petroleum release and the Department’s reporting requirements for releases.
 - June 4, 2002. MDE-OCP conducted a routine site inspection. MDE required the on-site drinking water supply well to be sampled for petroleum constituents of concern.
 - July 7, 2003. MDE-OCP conducted a routine compliance assistance inspection and the following were required:
 - Provide proof of Pollution Liability Insurance;
 - Perform proper monthly reconciliation of UST systems;
 - Sample the station’s drinking water supply well per requirements of 06/04/02 inspection;
 - Tank field pipes must be accessible for inspection;
 - Provide a copy of the most recent cathodic protection (CP) test results;
 - Maintain spill catchment basins clean/dry; and
 - Properly color coding the UST system.

- July 21, 2002. MDE-OCP received a faxed report of passing statistical inventory records for the four (4) UST systems for the period June 2002 through June 2003.
- October 10, 2003. MDE-OCP received *Quarterly Groundwater Monitoring Report Third Quarter 2003 – October 7, 2003*.
 - Sample event on 09/03/03. Tank field observation pipes were not sampled
 - MW1 MTBE - 21 ppb, benzene – 93.3 ppb;
 - MW2 MTBE at 61 ppb
 - MW3 non-detect for petroleum constituents (ND)
 - PW (untreated) supply well ND
- January 13, 2004. MDE-OCP conducted a follow-up to the 07/07/30 routine compliance assistance inspection. Several outstanding violations were identified:
 - Absorbent wick removed from the tank field observation well;
 - Spill catchment basins and regular unleaded submersible sump contain fuel and water;
 - Diesel and kerosene dispenser sumps filled with water and ice;
 - No method of overfill protection observed;
 - Required color coding has not been performed; and
 - Required cathodic protection testing, release detection records, monthly reconciliation records and proof of pollution liability have not been provided.
- February 13, 2004. MDE-OCP letter to GPM Investments LLC defining outstanding compliance issues and requiring further site investigation.
- April 15, 2004. MDE-OCP received *Work Plan for Monitoring Well Installation – April 9, 2004*.
 - Three additional monitoring wells to be installed.
- June 22, 2004. MDE-OCP letter approving the *Work Plan for Monitoring Well Installation – April 9, 2004*, contingent upon several modifications:
 - Continuous cores must be advanced to at least 10 feet below the water table.
 - Representative soil samples must be collected and for analysis.
 - Groundwater samples must be collected from both new and existing monitoring wells.
 - All monitoring wells must be installed and developed by a Maryland-licensed well driller.
- June 24, 2004. MDE-OCP received *Quarterly Groundwater Monitoring Report First Quarter 2004 – June 22, 2004* (see table).
 - Groundwater flow toward the west.
- August 18, 2004. MDE-OCP received *Quarterly Groundwater Monitoring Report Second Quarter 2004 – August 12, 2004* (see table).
- December 18, 2006. MDE-OCP conducted a routine site visit. MDE notified of a change in ownership as of February 2006. Two (2) of the three (3) monitoring wells were gauged.
 - MW-2: Depth to water 4’7”, well cap damaged.
 - MW-3: Depth to water 4’2”, well cap loose.
- March 15, 2007. MDE-OCP conducted a routine site visit to gauge MW-2 .
 - MW-2: Depth to water 4’.

- March 28, 2007. MDE-OCP issued a directive letter to Geracimos, LLC. requiring the following:
 - Perform a helium test to check vapor leaks in the gasoline UST system;
 - Test all spill catchment basins and containment sumps;
 - Conduct a self-audit of UST system;
 - Continued quarterly (every 3 months) sampling of all monitoring wells and tank field monitoring pipes;
 - Conduct quarterly sampling of the transient non-community drinking water supply well; and
 - Initiate sampling of five (5) select off-site drinking water supply wells.

- August 6, 2007. MDE-OCP site visit to gauge monitoring wells and a site map.
 - MW-1: Not assessable.
 - MW-2: Depth to water 5.05’.
 - MW-3: Depth to water 5.1’.

- August 17, 2007. MDE-OCP site visit to collect photograph of an offset monitoring well.

- November 14, 2007. MDE-OCP site visit to observe UST system upgrades.
 - MW-2: Bailed, no visible LPH.

- January 29, 2008. MDE-OCP compliance site visit, follow-up to third party inspection 3/28/07.

- March 25, 2008. MDE-OCP compliance site visit, the following deficiencies were recorded:
 - Submit testing results for super/regular STP sump test.
 - Post sign by kerosene dispenser showing location of emergency shut-off.
 - Verify overfill device on kerosene UST.
 - Perform cathodic protection testing, and verify metal portions of lines are protected.
 - Helium testing required.
 - Monitoring well closest to gas dispenser is slotted to grade.
 - Lock the monitoring well.

- April 3, 2008. MDE-OCP letter to Geracimos, LLC requiring the following.
 - Sample the on-site monitoring wells and tank field monitoring pipes.
 - Sample the on-site drinking water supply well quarterly.
 - Conduct a ½ mile sensitive well receptor survey.
 - Sample select off-site drinking water wells.

- June 9, 2008. MDE-OCP received *Monitoring Well Sampling Report – June 4, 2008*.
 - On-site monitoring wells and drinking water supply well sampled April 15, 2008 (see table).

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].

Contacts:

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- Cecil County Health Department (CCHD): 410-996-5160

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.

Groundwater Sampling Data from the Rice's Mini Mart Property located in Chesapeake City

	Sampling Date	Product detected	Petroleum Constituents of Concern				
			Benzene MCL – 5 ppb	Toluene MCL - 1000 ppb	Ethylbenzene MCL – 700 ppb	MTBE Action Level – 20 ppb	Other Constituents of Concern – ppb
Monitoring Wells							
MW1	09/03/03	----	93.3	708	195	21	----
	04/01/04	----	14.4	364	156	4.9	----
	06/12/04	----	17.5	186	145	4.1	----
	04/15/08	----	ND	ND	ND	ND	----
MW2	09/03/03	----	ND	ND	ND	61	----
	04/01/04	----	ND	ND	ND	326	----
	06/12/04	LPH detected	Not sampled (NS)	NS	NS	NS	NS
	04/15/08	----	39	ND	28	ND	Naphthalene at 15
MW3	09/03/03	----	ND	ND	ND	ND	----
	04/01/04	----	ND	ND	ND	ND	----
	06/12/04	----	ND	ND	ND	ND	----
	04/15/08	----	118	1920	520	20	Naphthalene at 93
Transient Non-community supply Well							
Rice's Mini Mart at 2754 Augustine Herman Highway	09/03/03	----	ND	ND	ND	ND	----
	04/01/04	----	ND	ND	0.30	ND	----
	06/10/04	----	ND	ND	ND	ND	----
	04/15/08	----	ND	ND	ND	ND	----