

Land Management Administration • Oil Control Program

Environmental Investigation
North East Mobil/Howard's Market
2351 Pulaski Highway, North East
Cecil County, Maryland
Case No. 2002-1431CE

The Maryland Department of the Environment (MDE), Oil Control Program (OCP), is currently evaluating petroleum impacts at the North East Mobil, located in Cecil County. This facility has been an active gasoline retail establishment since the 1980s.

On May 10, 2002, the MDE-OCP conducted a Routine Site Inspection and observed gasoline in the vapor recovery sump. The vapor recovery sump was repaired, and a subsurface investigation conducted in July 2002 indicated petroleum impacts on-site. In November 2004, February 2006, and November 2008, the Department required the submission of a *Subsurface Investigation Work Plan* to assess the vertical and horizontal extent of petroleum contamination in soils and groundwater on-site. A *Subsurface Investigation* was received in June 2009. Groundwater samples collected from three temporary and three permanent monitoring wells in June 2009, detected petroleum constituents [benzene up to 22,400 parts per billion (ppb); toluene up to 51,600 ppb; ethylbenzene up to 4,990 ppb; xylenes up to 23,420 ppb; MTBE up to 187,000 ppb, and naphthalene up to 869 ppb]. Three monitoring wells were installed on-site in April 2009 as part of the subsurface investigation. Groundwater flow at the site is determined to be in a southeasterly direction with the depth to groundwater at 1 to 3 feet.

Benzene is a component of petroleum products. The Maximum Contaminant Level (MCL) for benzene is 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, the U.S. Environmental Protection Agency (EPA) issued an advisory for MTBE of 20 to 40 ppb, based on taste and odor. Although the EPA has not established a regulated MCL for MTBE, the MDE has adopted an action level of 20 ppb.

Gasoline retail activities have been located at 2351 Pulaski Highway since the 1980s. Between 1990 and 1998, the underground storage tanks (USTs) were owned by Walker Oil. From 1999 to the present, the USTs were registered to Howard's Market as the owner and Walker Oil as the operator. There are currently five STI-P3 USTs on-site (an 8,000-gallon gasoline, an 8,000-gallon diesel, two 6,000-gallon gasoline, and a 4,000-gallon kerosene). Two tank field monitoring pipes and three monitoring wells are located on the property. The facility is served by municipal water.

Chronology:

- May 10, 2002. MDE-OCP Routine Site Inspection.
 - MDE opened *Case No. 2002-1431CE*
 - Copies of inventory records for January – April 2002 obtained
 - Several violations noted
 - 13 inches of gasoline observed in the vapor recovery sump/trap, required to be removed

- May 22, 2002. MDE-OCP issued *Notice of Violation NV-2002-117* to Howard's Market, Inc., property and registered UST owner, due to the gasoline in the vapor recovery sump. The Department required:
 - That the vapor recovery sump be removed from service;
 - That an investigation be completed to determine the extent of petroleum contamination; and
 - That the UST registration for North East Mobil be amended.

- July 2, 2002. MDE-OCP site visit as a follow-up to the 5/10/02 Site Inspection. None of the requirements of *NV-2002-117* had been met.
- July 11, 2002. MDE-OCP issued *Notice of Violation NV-2003-205P* to Howard's Market, Inc., property and registered UST owner, for failure to comply with the directives issued in *NV-2002-117*. The Department issued a civil penalty of \$5,000 and required the following:
 - Immediate cessation of gasoline sales until the vapor recovery sump was removed from service;
 - A subsurface investigation to delineate the extent of petroleum contamination; and
 - Amendment of the UST registration.
- July 19, 2002. MDE-OCP site visit to observe upgrades and repairs to the vapor recovery sump.
- July 26, 2002. MDE-OCP received a letter from attorneys representing Howard's Market, Inc., property and registered UST owner, regarding responsible party designation for completion of the subsurface investigation and amendment of the UST registration.
- October 4, 2002. MDE-OCP site visit to determine if corrective actions required in the *Notices of Violation* had been met. The subsurface investigation had not been performed.
- March 25, 2003. MDE-OCP site visit to observe soil borings as part of the subsurface investigation required in *Notices of Violation*. Water observed in the vapor recovery sump.
- June 3, 2003. MDE-OCP received *Report of Soil Sampling and Analysis – April 21, 2003*.
 - Three (3) soil borings were pushed on 3/25/03
 - No analyzed soil samples were above regulatory levels
- November 18, 2004. MDE-OCP issued *Notice of Violation NV-2003-205P* to Howard's Market, Inc. and Mauger Sons, Inc./Walker Oil (Leasee/Operator), requiring the submission of a *Subsurface Investigation Work Plan* by 12/20/04 to assess the vertical and horizontal extent of contamination in soils and groundwater.
- November 29, 2004. MDE-OCP received a letter from the attorney for Howard's Market, Inc. regarding determination of a responsible party.
- November 16, 2005. MDE-OCP site visit to determine if corrective actions required in the 11/18/04 directive letter had been completed.
 - No subsurface investigation had been completed
 - No monitoring wells had been installed for compliance with the emergency regulations
 - A drinking water supply well was noted on-site
- February 3, 2006. MDE-OCP directive letter to Howard's Market, Inc. and Mauger Sons, Inc./Walker Oil (Leasee/Operator) regarding the unmet requirements of *NV-2003-205P* and requirements for the emergency regulations. The Department required the following:
 - Documentation as to the status of gasoline retail activities at the property;
 - 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 the UST system;
 - Conduct semi-annual sampling of all monitoring wells and tank field monitoring pipes;
 - Conduct semi-annual sampling of the transient non-community drinking water supply well on-site;
 - Locate the drinking water supply well on a site map; and
 - Submission of a Work Plan to assess the vertical and horizontal extent of petroleum contamination in soils and groundwater.
- February 2, 2007. MDE-OCP site visit regarding the on-site drinking water supply well. The drinking water supply well had been abandoned, and the property connected to public water.
- April 25, 2007. MDE-OCP issued a *Notice to Inspect* requiring an inspection of the UST systems by a MDE Certified Underground Storage System Inspector.

- August 3, 2007. MDE-OCP issued a *Final Notice to Inspect*, requiring an inspection of the UST systems by a MDE Certified Underground Storage System Inspector.
- August 8, 2007. MDE-OCP issued *Notice of Violation NV-OCP-2008-005* due to the failure to complete an Inspection Report by a certified inspection, and required completion of the inspection of the UST systems.
- August 29, 2007. MDE-OCP site inspection.
 - UST system registration certificate provided
 - Verification of pollution liability insurance provided
 - Violations required to be corrected
 - Registration of USTs to current owner
 - Installation of sump sensors, double wall piping boots, host retractors, stage II shear sections, and premium drop tubes
 - Submittal of catch basin test results
 - Documentation of overflow protection for diesel UST system
 - Liquid blockage test results
 - Documentation of corrosion protection for UST system
 - Installation of monitoring wells for a High Risk Groundwater Use Area
 - Inventory records
 - Cathodic protection assessment for impressed current system and testing records
 - Half-mile well survey
 - Investigation to determine source of petroleum vapors in premium tank sump
 - Discontinued use of heating oil container
 - Investigation of five (5) additional vent risers on west side of building
- December 4, 2007. MDE-OCP site inspection to follow-up on the 08/29/08 inspection. Several violations noted.
 - Dispenser 9/10 sump contained product
 - Dispenser hoses not proper length or protected from traffic
 - Kerosene fill not properly marked
 - Liquid present in catch basins
 - Previous violations not corrected
- February 20-26, 2008. MDE-OCP verified with the Town of North East the public water service to various addresses.
 - 2351 Pulaski Highway (North East Mobil): connected
 - 2361 Pulaski Highway (First National Bank): not connected
 - 2305 Pulaski Highway (Pat's Pizzeria): connected
 - 1-5 Rodgers Road (Apartment complex): not connected
 - 15 Rodgers Road (Psychic): connected
 - 16 Rodgers Road (Residence): not connected
 - 101-104 Rodgers Road; 201-211 Rodgers Road (Commercial): connected
- July 10, 2008. MDE-OCP site inspection.
 - Product fills properly color coded to include tank size and product type
 - Trash can being utilized for AST removed
 - No additional vent risers noted along building
 - Gasoline dispensing hoses replaced and no longer in contact with ground
 - Dispenser sumps dry
 - 07/10/08 CSLD report indicated passing results for all USTs
 - Violations required to be corrected
 - Remove all liquid from vapor sump, regular #1, regular #2, and diesel catch basins
 - All catch basins contained a 1.5-inch diameter hole, product noted in hole in each catch basin
 - Vapor recovery dry break catch basin contained 1.5-inch diameter hole and weathered product
 - Tank field monitoring pipes not properly grouted
 - The monitoring pipe adjacent to the diesel tank contained yellow water with a petroleum odor
 - No shear valves installed on any of the vapor recovery lines

- Diesel dispenser 10 contained a sump sensor approximately 10 inches from the bottom, rather than 0.5 inches from bottom
 - Product line boots not loosened in the dispenser or STP sumps
 - Cathodic protection rectifier in “off” position
 - Submittal of helium testing, catch basin, and product line testing results
 - Submittal of last three (3) months of inventory reconciliation
 - Installation of three (3) monitoring wells for a High Risk Groundwater Use Area

- November 3, 2008. MDE-OCP issued *Complaint and Administrative Penalty COV-2009-002* to Howard’s Market, Incorporated. Select aspects of this Complaint, Order and Administrative Penalty are summarized below.
 - Notification that the Waste Management Administration was seeking an administrative penalty for violations.
 - Written Complaint describing violations.
 - Failure to properly grout the tank field monitoring pipes.
 - Failure to amend the operator registration.
 - Failure to properly maintain catch basins and vapor sump.
 - Failure to upgrade UST system.
 - Failed to provide current UST testing results.
 - Failed tightness testing.
 - Discharge of Oil.
 - Failure to follow National Fire Prevention Association (NFPA) Code.
 - Written Order describing activities required to be completed.
 - Properly abandon the UST system.
 - Upon removal, perform an assessment of the tank and piping excavation.
 - Submit a UST closure report.
 - File an amended registration.
 - Submit a Subsurface Investigation Work Plan.
 - Administrative Penalty.

- November 3, 2008. MDE-OCP issued *Complaint and Administrative Penalty COV-2009-007* to Zaidi Petro, Incorporated. Select aspects of this Complaint, Order and Administrative Penalty are summarized below:
 - Notification that the Waste Management Administration was seeking an administrative penalty for violations.
 - Written Complaint describing violations.
 - Failure to properly grout the tank field monitoring pipes.
 - Failure to amend the operator registration.
 - Failure to properly maintain catch basins and vapor sump.
 - Failure to upgrade UST system.
 - Failed to provide current UST testing results.
 - Failed tightness testing.
 - Discharge of Oil.
 - Failure to follow NFPA Code
 - Written Order describing activities required to be completed.
 - Properly abandon the UST system.
 - Upon removal, perform an assessment of the tank and piping excavation.
 - Submit a UST closure report.
 - File an amended registration.
 - Submit a Subsurface Investigation Work Plan.
 - Administrative Penalty.

- November 13, 2008. MDE-OCP remediation site visit..
 - UST compliance testing ongoing.
 - Discussed requirement to submit a Subsurface Investigation Work Plan with environmental consultant on-site.

- February 18, 2009. MDE-OCP received *Groundwater Monitoring Well Installation Work Plan – February 6, 2009*. Work Plan proposed the following:

- Installation of three (3) groundwater monitoring wells;
 - Soil and groundwater sampling; and
 - Groundwater flow calculation.
- March 13, 2009. MDE-OCP received *Subsurface Investigation & Groundwater Monitoring Well Installation Work Plan – March 11, 2009*. Work Plan proposed the following:
 - Advancement of ten (10) soil borings;
 - Soil sampling;
 - Installation of three (3) groundwater monitoring wells;
 - Groundwater sampling; and
 - Groundwater flow calculation.
 - March 24, 2009. MDE-OCP issued *Work Plan Approval for Monitoring Well Installation – March 24, 2009*. Letter described the following:
 - Approval of the submitted March 11, 2008 Work Plan;
 - Collection of quarterly groundwater sampling; and
 - Submission of a ½ mile well survey.
 - March 25, 2009. MDE-OCP received correspondence from the Cecil County Health Department confirming the following:
 - VOC sampling collected from 2361 Pulaski Highway (supplied by a drilled well); and
 - Property located north of the site on Rodgers Road is currently supplied by the Town of North East public water supply.
 - April 16, 2009. MDE-OCP received *Notice for Work Plan Approval – April 15, 2009*. Letter updates field activities completed and request an extension for groundwater sampling.
 - Six soil borings were advanced in April 2009.
 - Temporary and permanent monitoring wells placed in boring locations.
 - April 17, 2009. MDE-OCP received *Potable supply well sampling results – April 15, 2009*.
 - Supply well located at 2361 Pulaski Highway sampled on March 23, 2009 (see table).
 - May 19, 2009. MDE-OCP received *Potable Well Survey Report – May 15, 2009*.
 - The survey indicated that eight wells were potentially located within a one-half mile radius of the site.
 - Five domestic wells and three industrial wells within a one-half mile radius of the site.
 - Two of the five domestic wells are located within 500 feet of the site.
 - 2361 Pulaski Highway sampled by the Cecil County Health Department.
 - 2380 Pulaski Highway confirmed to be connected to public water supplied by the Town of North East (potable well visually identified on-site).
 - June 2, 2009. MDE-OCP received *Subsurface Investigation Report – May 29, 2009*.
 - Advancement of six soil borings and the analysis of six soil samples (SB-1 through SB-6).
 - TPH-GRO concentrations above MDE standards in soil borings SB-3, SB-4, and SB-5.
 - Three permanent 2-inch diameter monitoring wells were installed.
 - Three temporary monitoring wells were installed.
 - Groundwater sampling event April 23, 2009 (see table).

Future Activities:

- 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:

- Maryland Department of the Environment (MDE) Oil Control Program: 410-537-3443
- Cecil County Health Department (CCHD) 410-996-5160

Other Related Cases:

- Squire’s Pantry – 2351 Pulaski Highway, MDE *Case No. 1998-0628CE* (closed)

- Squire's Pantry – 2351 Pulaski Highway, MDE *Case No. 2000-1202CE* (closed)

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 liability, involvement in a wrongful act or contribution to environmental damage.

Groundwater Sampling Results at the North East BP (Howards Market) located in North East, MD

Groundwater samples collected from temporary monitoring wells	Sample Date	Benzene MCL at 5 ppb	Toluene MCL at 1,000 ppb	Ethyl-benzene MCL at 700 ppb	Xylene MCL at 10,000 ppb	MTBE State's Action Level at 20 ppb
SB-1 1 in. diameter well Screen depth 6 to 16 ft.	04/23/09	ND	ND	ND	ND	1.14
SB-4 1 in. diameter well Screen depth 2 to 12 ft.	04/23/09	22,400	51,600	2,520	14,010	187,000
SB-6 1 in. diameter well Screen depth 2 to 12 ft.	04/23/09	319	7.24	40.7	29.26	114

Groundwater Sampling Results at the North East BP (Howards Market) located in North East, MD

Groundwater samples collected from Monitoring Wells	Sample Date	Benzene MCL at 5 ppb	Toluene MCL at 1,000 ppb	Ethylbenzene MCL at 700 ppb	Xylene MCL at 10,000 ppb	MTBE State's Action Level at 20 ppb
MW1 Installed 04/09/09 Well # CE-95- 2 in. diameter well Borehole depth 14 ft. Screen depth 2 to 12 ft. Casing depth 0-2 ft.	04/23/09	4.97	8.98	34.4	50.79	39.5
MW2 Installed 04/09/09 Well # CE-95- 2 in. diameter well Borehole depth 12 ft. Screen depth 2 to 12 ft. Casing depth 0-2 ft.	04/23/09	9,880	42,000	4,990	23,420	12,300
MW3 Installed 04/08/09 Well # CE-95- 2 in. diameter well Borehole depth 12 ft. Screen depth 2 to 12 ft. Casing depth 0-2 ft.	04/23/09	11,000	30,900	4,060	18,650	153,000
TF-1	04/23/09	NS	NS	NS	NS	NS
TF-2	04/23/09	NS	NS	NS	NS	NS

Drinking Water Sampling Results in the vicinity of North East BP (Howards Market) located in North East, MD

Supply well sampling	Sample Date	Benzene MCL at 5 ppb	Toluene MCL at 1,000 ppb	Ethylbenzene MCL at 700 ppb	Xylene MCL at 10,000 ppb	MTBE State's Action Level at 20 ppb
2361 Pulaski Highway	03/23/09	ND	ND	ND	ND	ND