



Maryland
Department of
the Environment

FACTS ABOUT: CLOVERLY SHELL ENVIRONMENTAL INVESTIGATION

CLOVERLY SHELL
15541 NEW HAMPSHIRE AVENUE, SILVER SPRING
MONTGOMERY COUNTY, MARYLAND
OCP CASE NO. 2003-0695-MO (OPEN)

SITE LOCATION

The Maryland Department of the Environment (MDE), Oil Control Program (OCP) is overseeing remedial activities associated with dissolved phase petroleum impacts to groundwater in the vicinity of Cloverly Shell, located at 15541 New Hampshire Avenue in Silver Spring. Administrative records indicate the site has been an active gasoline station since April 1985 when three 10,000-gallon single-wall, fiberglass-reinforced plastic underground storage tank (UST) systems were installed. The three first-generation UST systems, including several hydraulic lifts and two 1,000-gallon USTs (heating oil and used oil) were removed in November 2002. The currently active second-generation UST system includes two double-wall, fiberglass-reinforced plastic tanks: one 12,000-gallon gasoline and one 10,000-gallon gasoline with associated double-wall, flexible plastic piping. The station is in a mixed use commercial and residential area. The station and the immediately surrounding properties are connected to a municipal water supply. Multiple residential properties on nearby Bryants Nursery Road remain connected to private drinking water supply wells.

SITE HISTORY

This case was initially opened following the discovery of petroleum impacts to subsurface soils during removal of the first-generation USTs in November 2002. An initial site investigation, including the installation of four groundwater monitoring wells, was completed in March 2003. In September and October 2003, elevated concentrations of methyl tertiary-butyl ether (MTBE) were detected in several off-site private drinking water supply well samples. Point-of-entry treatment (POET) filtration systems were installed on three private drinking water supply wells impacted by MTBE.

In July 2004, an on-site groundwater pump-and-treat system began operation. The on-site system was retrofitted with soil vapor extraction (SVE) in March 2005. In fall of 2005, the Washington Suburban Sanitary Commission (WSSC) extended a water main along Bryants Nursery Road to supply municipal water to homes with wells impacted by MTBE. All POET systems were removed at that time. In August 2007, the SVE portion of the on-site remediation system was deactivated. A preliminary *Corrective Action Plan (CAP)* with a design for an off-site remediation system was submitted to MDE in May 2008.



In May 2008, due to the detection of elevated concentrations of MTBE in three newly installed off-site deep monitoring wells, MDE required additional off-site delineation and revision of the CAP to address the contamination on both sides of Bryants Nursery Road. After additional well installation, the completion of a short-term weathered rock zone pumping test, and a longer-term overburden pumping testing, an off-site groundwater remediation system became operational in December 2010. Based on decreasing recovery rates of dissolved petroleum contaminants, the entire on-site groundwater extraction system was deactivated in February 2012.

ENVIRONMENTAL INVESTIGATIONS AND ACTIONS

MTBE has been identified as the contaminant of concern. The inferred groundwater flow direction is primarily towards the northwest. Within the area of investigation, there are 41 monitoring wells, 9 recovery wells, and 7 former drinking water supply wells that are currently sampled on a regular basis for the purpose of evaluating the horizontal and vertical extent of the dissolved phase contaminant plume. Additionally, groundwater samples are collected from select private drinking water supply wells along Bryants Nursery Road on a periodic basis. The off-site groundwater extraction system remains in operation and is monitored on a regular basis to evaluation for changes in groundwater conditions.

CURRENT STATUS

The time series sampling data continue to demonstrate a decreasing trend in the concentration of dissolved phase petroleum contaminants in groundwater. The MDE currently requires sampling of the on-site and off-site monitoring well network, continued operation of the off-site groundwater extraction system, and submittal of site status reports documenting groundwater sampling data and treatment system operation and maintenance activities. The MDE is not aware of any impacts to private drinking water supply wells that would require expanding the off-site residential sampling effort beyond that which is needed to monitor site conditions and ensure protection of the groundwater resource.

FUTURE UPDATES

- Postings on www.mde.maryland.gov
- File available at the MDE Headquarters
- File documents available at the Marilyn J. Praisner Library

CONTACTS

- Maryland Department of the Environment, Oil Control Program: 410-537-3442
- Marilyn J. Praisner Library: 240-773-9460

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.