Maryland Department of the Environment

FACTS ABOUT:

SALISBURY – MORRIS MILL AREA TRICHLOROETHYLENE (TCE) CONTAMINATION

Site Description

The affected project area (the Site) consists of approximately 350 acres of residential and agricultural land use mostly bounded by Morris Mill Pond and a portion of South Division Street to the west, Tony Tank Creek and a portion of Coulbourn Mill Road to the north, a portion of Route 13 and associated easements to the east, and Morris Prong to the south. The area of concern is exclusively serviced by privately-owned potable wells. Municipal water and sewer service is not currently available to the Site. The Site contains both the Morris Mill and Coulbourne Woods residential subdivisions.

Site History And Environmental Concerns

Prior to construction of significant residential development in the form of the Coulbourne Woods and Morris Mill subdivisions in the 1980s and 1990s, the Site consisted primarily of agricultural land interspersed with individual single-family homes and areas of unimproved land. From the early 1950s through the late 1970s, septage was disposed of on agricultural land on the southeastern portion of the Site, which is currently occupied by portions of the Coulbourne Woods and Morris Mill subdivisions. The septage was placed both in temporary linear trenches and spread across the surface of the farm fields for fertilization purposes. This activity ceased by the late 1970s, due to changes in state and local regulations governing the disposal of septage.

It is believed that trichloroethylene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE) were introduced to the subsurface beneath the Site primarily via the spreading of septage. Septic system cleaners and common degreasers used during this time were known to contain measurable amounts of TCE and cis-1,2-DCE, which is a known breakdown product of TCE. Additionally, TCE is a commonly used compound in routine light industrial and commercial applications, such as automotive repair and metalworking facilities, which may have contracted local septic haulers to clean out their septic tanks. TCE and cis-1,2-DCE are believed to have migrated down-gradient from their point of deposition via natural topographic gradient and captured in cones of depression from local potable wells.

Environmental Investigations

The Site was first brought to the attention of regulators in July 2012, when a local resident had their well tested for volatile organic compounds (VOCs) by a private

laboratory. The sample analysis detected elevated concentrations of TCE in the well. These results were subsequently reported to the Wicomico County Health Department (WiCoHD). From August through September 2012, WiCoHD sampled additional wells in the area in an attempt to determine if the contamination was isolated at the point of discovery or more widespread. Additional elevated concentrations of TCE and cis-1,2-DCE were detected. In September 2012, WiCoHD reported the detected TCE contamination to Maryland Department of the Environment (MDE). MDE and WiCoHD sampled additional residential wells in the area in an attempt to better define the area of contamination. As it became apparent that the TCE contamination in the area was a more significant issue than what was originally anticipated, MDE petitioned the Environmental Protection Agency (EPA) to assist in the investigation.

Throughout late 2012 and 2013, WiCoHD, MDE, and EPA performed additional sampling of residential wells, installed and tested stand-alone groundwater monitoring wells, and performed indoor air sampling. Bottled water or granular activated carbon (GAC) treatment systems were provided to residents based on the severity of contamination in their individual wells. Concentrations of TCE detected in Site area wells has ranged from non-detectable concentrations up to approximately 632 parts per billion (ppb).

Current Status

As of March 2014, 251 individual wells have been tested for TCE and cis-1,2-DCE as part of the Salisbury – Morris Mill Area investigation. 158 of those wells are routinely checked on a semi-annual basis as part of the recurring sampling plan for the area. 40 wells are currently serviced by a GAC treatment system due to elevated concentrations of contamination and/or high-risk property occupants. 18 residences currently receive bottled water deliveries due to the lower, but still elevated groundwater contamination concentrations. 32 residences have had measurable contamination concentrations detected in their well water below the 2.18 ppb action level for TCE.

Preliminary steps have been taken in pursuit of providing municipal water service to the affected residences in the Site via the Fruitland municipal supply. The extension of municipal water service has a tentative completion date of 2016. Responsibility for GAC system update is scheduled to transfer from EPA to MDE in November 2014. The next semi-annual sampling event is scheduled to be completed in early April 2014.