MARYLAND
Department of the Environment

Facts About...

Western Regional Lab, SHA (Non-Master List Site)

Site Location

The State Highway Administration's Western Regional Laboratory Site ("the Site") is located on Maryland Route 144, just east of Hancock, Washington County, Maryland and approximately 800 feet north of the Potomac River.

Site History

Trichloroethylene (TCE) has been used for testing asphalt samples at the Site since 1962. The asphalt samples are dissolved in the TCE leaving a black waste product (called TCE syrup) containing polynuclear aromatics (PNA) and other hydrocarbons. Though some of this waste product was distilled and recycled for other use, considerable quantities were dumped in an unpaved parking lot on the Site. The surface of the parking lot was also covered with the residual aggregate left over from the asphalt testing. TCE was also mixed with other solvents such as kerosene and used for cleaning laboratory equipment. TCE waste was also reported to have been carried in buckets and dumped into a waste tank, which was pumped out by an unidentified waste hauler and disposed off site. Some TCE, TCE/asphalt syrup, and test material is also reported to have been dumped in a fill area located across Route 144 from the Site.

In 1967, a new laboratory was constructed on the Site. The existing laboratory was demolished and converted into a parking lot. The new laboratory was built with an oil/water separator system designed to separate oil and TCE from the waste stream. However, most of the TCE that entered the oil/water separator system, laboratory sinks, and floor drains were discharged as surface drainage to a ditch on the southwest side of the Site.

The Site's TCE waste disposal practices were significantly upgraded in 1982.

Environmental Investigations

In September 1989, Kamber Engineering carried out a Phase I investigation consisting of a soil gas survey, surface water sampling and sampling of a production well at the laboratory site. The sampling results indicated high concentrations of volatiles, particularly TCE, a dense non-aqueous phase liquid (DNAPL), in the soil and groundwater near the former laboratory building. In 1995, Engineering Technologies Inc (ETA) carried out a Phase II investigation consisting of an off-site and on-site groundwater, soil and surface water sampling. A soil sample collected from the boring for monitoring well MW-4 contained TCE at a concentration of 60,000 parts per billion (ppb). A groundwater sample collected from the same well contained TCE at a concentration of 3,060 ppb. The other soil samples collected during the investigation, particularly those in the area of the former laboratory building, had low to moderate contaminant levels. Subsequent investigations by ETA and KCI Technologies further confirmed the presence of soil contamination in the area of the Site's old laboratory.

A soil removal action was performed in the area of the old laboratory by Total Environmental Concepts, Inc. (TEC) between October 2006 and April 2007. Soil in the area was removed down to the bedrock and properly disposed of off Site. Approximately 1,200 tons of contaminated soil was removed. Confirmatory soil samples taken from the walls and floor of the excavation indicated contaminant levels below Maryland's Non-Residential Use Soil Clean Up Standards (March 2008). As an added measure, TEC installed a four-inch-diameter air-stripping well in the backfilled excavation to passively collect and vent residual contaminant vapors.

Current Status

The State Highway Administration has completed two semi-annual groundwater and surface water monitoring events at the Site since removing the impacted soil. Ten monitoring wells, four surface water/sediment sampling locations and the passive venting system were sampled during each event. The Maryland Department of the Environment is currently reviewing the data to determine the need for further action at the Site.

Contact

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