Maryland Department of the Environment

Central Chemical NPL Site

What You Need to Know

Site Location

The Central Chemical site occupies 19 acres in Hagerstown, Washington County, Maryland. The site is located on Mitchell Avenue, approximately 0.8 mile north of U.S. Highway 11.

Site History

From 1937 through 1984, the facility blended of agricultural pesticides, herbicides, and fertilizers. Concentrated pesticides manufactured at other locations, were blended with inert materials to produce and package consumer grade products. In 1965, a fire destroyed the pesticide manufacturing building and operations ceased. From 1968 to 1984, the plant processed fertilizers and herbicides. The facility was later leased to various small businesses until 2003. The site is currently unoccupied.

Over the years, wind-blown powders from blending operations and product spills contaminated shallow soils throughout the property. In addition, bulk wastes and liquid wastes were disposed onsite. Soil contaminants of concern ("COC") include the metals arsenic, manganese and thallium, numerous pesticides including DDT, DDD, DDE, chlordane, dieldrin, endrin, lindane, and alpha- and beta-BHC; and the semi-volatile organic compound benzo(a)pyrene. Groundwater COCs include soil contaminants plus additional volatile organic compounds.

Elevated levels of DDT were first detected in the sediments of Antietem Creek in 1976 by the United States Geological Survey and were traced back through sediment sampling via surface water pathways to the Central Chemical site. Consequently, the Maryland Water Resources Administration issued a Complaint and Order to Central Chemical, requiring placement of soil cover for the disposal lagoon and a hydrologic investigation and cleanup to prevent future release of DDT to surface water. Central Chemical came to the attention of State regulators again in 1987, when a portion of the former disposal lagoon was accidentally unearthed during a trenching operation for a sewer line. Soil sampling revealed high concentrations of noted COCs and the Maryland Department of the Environment ("MDE") ordered Central Chemical to perform an investigation to characterize potential hazardous waste sources.

In August 1997, the potentially responsible parties ("PRPs") entered into an Administrative Order of Consent with the Environmental Protection Agency ("EPA") to conduct a Remedial Investigation ("RI") and Feasibility Study ("FS"). On September 25, 1997 this site was listed on the National Priorities List ("NPL").

Environmental Investigations and Actions

Various consultants, the MDE, and the EPA performed hydrogeologic investigations at the property between 1977 and 1997. Results from these investigations indicated that surface and subsurface soil were impacted with pesticides and metals. Groundwater and surface water had also been impacted.

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In October 1995, an Expanded Site Investigation was performed and off-site soil samples were collected in an open field north and behind the subject property. In August 1996, additional off-site characterization was completed along the northwest fence line. Elevated concentrations of COCs were identified in surface soil up to 13 feet from the original fence. In February 1997, confirmatory samples were collected 30 feet beyond the fence line and an Administrative Order by Consent ("AOC") was implemented in August 1997. The AOC required installation of a 10-foot tall chain link fence along the northern site boundary, which was relocated from the original location 20 feet in order to contain impacted soils, provide additional site security, restrict access and protect potential trespassers. Pesticide concentrations exceeding EPA removal levels for residential soils were not detected in the confirmatory samples beyond the new fence line. A Human Health Risk Assessment was finalized in the revised RI report, which evaluated the residential off-site soil exposure risk. Results identified that the cancer risk was within the acceptable EPA risk range while the non-cancer risk was slightly elevated due to quantitation complications in the analytical detection limits for Heptachlor Epoxide. Additional residential soil sampling was required in the Record of Decision and will be completed during the Remedial Action.

In April 2003, the Central Chemical Community Liaison Panel ("CLP") consisting of Hagerstown community members, the PRP Group and their consultant along with EPA, and MDE held their initial meeting. The CLP meetings were held on an approximate quarterly basis during the proposed plan stage.

RI fieldwork began in 2003, which characterized buildings, evaluated surface and subsurface soil, groundwater, storm water, and offsite surface water, sediment and groundwater. A draft RI report was received in December 2004. Based on EPA and MDE comments, it was determined that a Supplemental Investigation of groundwater was necessary to delineate contamination offsite and to obtain a better understanding of aquifer characteristics. At this point, EPA separated the site delineation of the groundwater from the on-site soils into two separate parallel Operable Units ("OU-1 and OU-2"). Fieldwork to delineate offsite groundwater was initiated in 2005 and has continued to date.

Operable Unit 1

Between February and May 2005, the PRPs demolished all Central Chemical building structures and the demolition debris was recycled or disposed off-site. Initial work on the FS started in 2005 and a revised study was received in March 2009 that included a solidification and stabilization alternative plan for the former lagoon landfill. In September 2009, EPA issued a ROD which outlined the proposed remedy for addressing contaminated soils and waste at the site. The ROD included on-site solidification and stabilization of the former waste lagoon, excavation, consolidation and capping of the impacted soils from across the site and installation of a groundwater extraction and treatment system to capture shallow impacted groundwater beneath the property. In 2010, a Pre-Remedial Design Investigation ("PDI") work plan was performed to support the remedial design. The final PDI was completed in February 2015. Previously in August 2013 an Administrative Settlement Agreement Order on Consent was agreed for the remedial design ("RD") and remedial action ("RA"). Refinements to the Treatability and background studies were performed and work on the remedial design began in 2015.

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Operable Unit 2

In April 2008, a Supplemental Groundwater Investigation report was received and results identified that off-site migration of pesticides extend approximately ½ mile northeast and 1 mile southwest. The groundwater investigation continued in March 2015 with receipt of a Groundwater Interim Report. Between March 2014 and July 2016, EPA performed a tracer study to help identify migration pathways for COCs. In 2014, a vapor intrusion investigation was performed the residential community located immediately north of the property. In June 2014, domestic well sampling was performed at the residential community located north of the property at Fountain Head Country Club. The RI for OU-2 continues to date.

Current Status

Final review of the 100% Remedial Design for OU-1 is currently underway and the RA is anticipated to begin in the late spring of 2017 and be complete by winter of 2019. Groundwater RI/FS for OU-2 is currently ongoing and will continue until adequate characterization and a remedial strategy has been completed.

Site Repository

Site related documents can be found near the property at:
Washington County Free Library, Reference Department, 100 S. Potomac Street, Hagerstown, MD 21740

In addition to the site repository, EPA maintains online reports and documents that are available online at:
https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0303260