



Maryland Department of the
Environment

FACTS ABOUT: ORDNANCE PRODUCTS, INC.

Site Location

The Ordnance Products, Inc. (OPI) site occupies 94.6 acres in Cecil County, Maryland. The site is located at 1079 Mechanics Valley Road, approximately 3 miles north of the town of North East. The approximate coordinates for the center of the site are 39.6404° north latitude and 76.0996° west longitude.

Site History

The OPI site was operated as an ordnance components manufacturing plant from 1957 to 1979. The types of components manufactured included grenade fuses, detonators, ignition components and pyrotechnic signals.

Kraus Design, Inc. (KDI) acquired the OPI site in 1969. KDI continued ordnance production until 1979, when operations were moved out-of-state and the OPI site was abandoned. The property remained vacant until 1986, when the property was sold to Mechanics Valley Trade Center, Inc. (MVTC). Mr. Peter Wood was the majority stockholder of MVTC. In January 1990, MVTC was sold, under full environmental disclosure, to Mr. William Fredericks, the current and majority stockholder of the corporation.

Environmental Investigations

The Maryland Department of the Environment, Waste Management Administration (MDE) collected samples from the site in June 1987. Contamination sources identified included burn pits, buried ordnance components, landfills, a waste solvent disposal pit, abandoned bulk chemicals, an abandoned metal plating shop with six waste discharge ponds, contaminated soils and groundwater. Contaminants identified were vinyl chloride, 1,2-dichloroethene (1,2-DCE), trichloroethene (TCE), tetrachloroethene (PCE), toluene, lead, chromium, and arsenic. Contaminants were detected in on-site soils, groundwater, surface water and sediments. Contaminants were also found to have migrated off-site and impacted nearby residential wells downgradient of the facility. Additionally, munitions of explosive concern (MEC) remaining after site closure were identified.



Maryland Department of the Environment
1800 Washington Boulevard | Baltimore, MD 21230-1718 | www.maryland.gov
410-537-3000 | 800-633-6101 | TTY Users: 800-735-2258

In November 1987, MDE issued a Consent Order to KDI and the MVTC requiring installation and maintenance of filters on contaminated residential wells. In June 1988, the U.S. Environmental Protection Agency (EPA) issued a Unilateral Administrative Order (UAO) mandating KDI to pursue the investigation and cleanup of the site. In December 1988, EPA issued a UAO requiring MVTC to prevent unauthorized entry to the site, and to install and maintain an air stripper on the contaminated on-site potable water supply well. By 1991, KDI had installed and was maintaining carbon filtration systems on the five contaminated residential wells. In August 1994, EPA issued a UAO requiring MVTC to join with KDI to pursue the investigation and cleanup of the site.

During the investigation, it was determined that a groundwater extraction and treatment system should be installed to contain contaminated groundwater migrating off-site toward Little Northeast Creek (Plume 1). Construction of the on-site groundwater extraction and treatment system was completed in January 1997. However, in February 1997, KDI informed EPA that KDI could not operate and maintain the system due to the financial condition of the company.

In February 1997, EPA assumed responsibility for sampling nearby residential wells on a quarterly basis and maintenance of the carbon/UV light filtration systems on the five contaminated residential wells. In September 1997, EPA initiated a fund-lead Removal Action at the site that addressed contaminated surface water and sediments associated with the five on-site impoundments. The water pumped from these impoundments was treated through a sediment filter and carbon filter system that discharged to an on-site stream. The contaminated sediments were excavated and disposed of offsite. All but one of the impoundments was completely backfilled. A retention basin was constructed out of the other impoundment. This Removal Action was completed in December 1997.

On September 25, 1997, the site was added to the National Priorities List as a fund-lead site since no financially viable Potentially Responsible Parties were identified. The Remedial Investigation was finalized in February 2005. The Feasibility Study (FS) was completed in May 2005 and an FS Addendum in May 2006. The Proposed Remedial Action Plan was released to the public in August 2006 and the Record of Decision (ROD) signed in September 2006.

Remedial Design, including a Pre-Design Investigation was conducted from 2008 to 2013 to determine how the Selected Remedy in the 2006 ROD for the cleanup of the contaminated groundwater would be implemented. From December 2010 through June 2011, EPA completed the Soil Remedial Action to address contaminated soil and MEC onsite in eight historic disposal areas. Additionally, EPA installed vapor intrusion mitigation systems at two residences near the Site in August and September 2012.

Following the completion of the Soil Remedial Action, EPA conducted a treatability



Maryland Department of the Environment
1800 Washington Boulevard | Baltimore, MD 21230-1718 | www.maryland.gov
410-537-3000 | 800-633-6101 | TTY Users: 800-735-2258

study to evaluate the use of in-situ bioremediation in contaminated groundwater in the southern portion of the site identified as Plume 2. Based on the findings of the treatability study, EPA issued a ROD Amendment in September 2013 to modify the Selected Remedy from the 2006 ROD to groundwater extraction and treatment within Plume 1 and in-situ bioremediation within Plume 2. EPA completed the Remedial Design for the Groundwater Restoration Remedial Action in September 2013.

In October 2014, construction began on a new groundwater extraction and treatment system for Plume 1. On October 3, 2014, the first bioremediation injection event occurred in Plume 2.

On November 17, 2014, EPA and MDE conducted a joint Operations and Functional Inspection of the bioremediation injection system for Plume 1.

Current Status

The second bioremediation injection event in Plume 1 is tentatively scheduled in March 2015. Construction of the Plume 2 groundwater extraction and treatment system has been delayed due to subcontractor financial problems. Completion of the Plume 2 groundwater extraction and treatment system is now expected by early February 2015.



Maryland Department of the Environment
1800 Washington Boulevard | Baltimore, MD 21230-1718 | www.maryland.gov
410-537-3000 | 800-633-6101 | TTY Users: 800-735-2258

Anderson/LRP/November 2014