Department of the Environment

Facts About...

Galaxy/Spectron Site (National Priorities List Site)

Site Location

The Galaxy/Spectron site (MD-45) is located in the northeast portion of Cecil County on Providence Road, one mile west of Route 213 in Fair Hill, Maryland. The site is adjacent to Little Elk Creek, 1.2 miles southeast of Fair Hill.

Site History

Galaxy Chemicals, Inc. (1961-1975) and Spectron, Inc. (1975-1988) were both owned and operated by Paul Mraz. These companies conducted chemical product recycling and reclamation operations that included processing a wide range of industrial solvent on-site in an open lagoon. In late 1968, Galaxy Chemicals, Inc. began transporting these wastes to private landfills for disposal. In 1969, still bottoms from the open lagoon were excavated and also disposed off-site at private landfills.

Spectron filed for bankruptcy in April 1989, abandoning approximately 1,100 drums and 67 large storage tanks containing hazardous chemicals and waste.

Environmental Investigations and Actions

In 1975, the State's Department of Water Resources ordered Spectron to stop its existing off-site disposal practices and to remove and treat the wastes previously disposed at the private landfills. The State further required that all future wastes generated from recycling and reclamation operations be disposed off-site at approved hazardous waste disposal facilities.

In 1982, Spectron was required under a Settlement Decree with the U.S. Environmental Protection Agency (EPA) to install and operate a shallow groundwater recovery/treatment system. The purpose of this system was to prevent shallow contaminated groundwater from entering Little Elk Creek. Spectron was also required to excavate and remove contaminated surface soils, install perimeter dikes around process and storage areas, and pave exposed soil areas with asphalt.

Following the Spectron bankruptcy declaration, EPA initiated an Emergency Removal Action in June 1989 at the request of the Maryland Department of the Environment. Approximately 425,000 gallons of bulk waste, 1,100 drums containing waste, 3,100 gallons of still bottoms, and 660 cubic yards of contaminated soil and debris were removed from the site and transported to licensed waste disposal facilities. All contaminated media at or above the ground surface was either decontaminated or removed from the site and properly disposed. Emergency Removal activities were completed in March 1990.

In September 1991, a Consent Agreement was signed between the Spectron Waste Generator and Transporter Group (Potentially Responsible Parties or "PRPs") and EPA to implement remedial measures necessary to abate surface water contamination in Little Elk Creek. While implementing those measures,

dense nonaqueous phase liquid (DNAPL) contaminants were detected in the subsurface of the creek bed. This discovery complicated and delayed remedial measures. In October 1992, the site was proposed to the National Priorities List (NPL). In March 1993, EPA approved the PRPs' proposal to conduct a Focused Remedial Investigation (FRI) to address DNAPL contamination. The EPA approved the final FRI report in February 1994. In May 1994, the site was placed on the NPL. In September 1995, the PRPs initiated a residential well and creek surface water monitoring program.

In August 1998, the Removal Action to construct a groundwater collection/treatment system for the cleanup of the Little Elk Creek began. The first phase of the Removal Action was the construction of the groundwater collection system. The collection system consists of a series of French drains, piping, collection sumps, and groundwater cutoff walls installed in the creek bed. A watertight synthetic liner was installed above the collection system to separate the clean surface water of the creek from highly contaminated groundwater and chemical seeps that were entering the creek. Construction of the treatment plant was phase two of the Removal Action, and was completed in March 2000. The treatment plant is designed to treat 50 gallons of water per minute (gpm). After an extended rainfall event in late March 2000, it was discovered that the treatment plant could not handle episodic high groundwater flows into the collection system. This rainfall event resulted in the creek bed liner becoming buoyant until the pressure on the liner could be relieved. As a result, carbon units capable of treating an additional 100 gpm were installed at the site in June 2001 to help handle high episodic groundwater flows.

In June 2001, EPA decided to split the site into two operable units to expedite the cleanup of contaminated soils. Operable Unit 1 (OU-1) addresses contaminated site soils and overburden groundwater. Operable Unit 2 (OU-2) addresses bedrock groundwater contamination.

In March 2003, EPA approved the final Remedial Investigation/Feasibility Study reports for OU-1. In June 2003 the Proposed Plan was issued and a public meeting was held. In September 2004 the Record of Decision (ROD) for OU-1 was issued. The selected remedy includes the existing groundwater containment/treatment system and adds a low-permeability modified Resource Conservation and Recovery Act (RCRA) cap, enhanced in-situ reductive dechlorination of soils and institutional controls.

Current Status

EPA and the PRPs are negotiating the Consent Agreement to perform remedial design and implement the remedy for OU-1.

Remedial Investigation fieldwork activities for OU-2 are ongoing. Several additional monitoring wells were installed and sampling is underway. In addition, passive diffusion bag samplers will be placed in Little Elk Creek to further delineate where the groundwater discharges to the creek.

Planned or Potential Future Action

The OU-1 Remedial Design is dependent upon Consent Agreement negotiations. Bench scale and field scale pilot treatability studies were specified in the ROD. It is unknown at this time whether the PRPs will conduct these studies prior to signing the Consent Agreement.

Facility Contacts

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Site Repositories

Cecil County Public Library
Elkton Branch
301 Newark Avenue
Elkton MD 21921

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