

Kansas Department of Health and Environment

Bureau of Environmental Remediation, Remedial Section

Voluntary Cleanup and Property Redevelopment Program



Bayer Construction Company, Inc.



Stained soil and distressed vegetation in the former lagoon area.

Bayer Construction Company, Inc., applied to the Kansas Department of Health and Environment (KDHE) Voluntary Cleanup and Property Redevelopment Program (VCPRP) to clean up refined petroleum hydrocarbon and related volatile organic compound (VOC) contamination found in soils at their site.

Background

The Bayer Construction Company, Inc. (BCCI), property is located at 120 Deep Creek Road, southeast of Manhattan, Kansas. The property serves as a base for BCCI operations and heavy construction equipment and materials storage. An office, maintenance shop, and other smaller structures are located on the property, which once was the site of an active quarry. A detention pit/lagoon comprises 0.12 acres of the total property.

In the fall of 1994 concerns were raised about quantities of oil and anti-freeze being disposed of in the lagoon. KDHE took various steps between 1994 and 2000 to resolve contamination issues for the facility. On June 19, 2001, BCCI was accepted into the VCPRP.

Investigation

In late 2002 BCCI's consultant collected several soil samples for RCRA metals, total petroleum hydrocarbons (TPH), VOC, and semi-volatile organic compound (SVOC) analysis. Bedrock consisting of shale and thin-bedded limestone was reached at approximately zero to two feet in depth. Ground water was not encountered at the site.

Laboratory results of soil samples obtained from within the lagoon area indicated various levels of contamination. RCRA

metals and SVOCs were either not detected or exist below Risk-Based Standards for Kansas (RSK) levels. TPH gasoline range organic (GRO) and diesel range organic (DRO) levels exceeded their residential soil pathway RSKs. Three VOCs (1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and methylene chloride) collected from the southeast portion of the lagoon exceeded their soil to ground water pathway RSKs.

Solution

A cleanup action was warranted to prevent exposures to TPH-DRO, TPH-GRO, and VOC contamination found during the investigation. In 2004 a Voluntary Cleanup Plan proposed excavating soil and landfarming it at another BCCI property several miles away. Excavation was begun in 2005. Approximately 32 cubic yards of soil were removed from the bottom and sides of the former lagoon. KDHE collected verification samples indicating that contamination in the remaining soil or bedrock was below residential soil pathway RSK standards. In 2006 soil samples were collected from the Bayer landfarm and analyzed. BTEX and TPH-GRO were not detected; TPH-DRO and total lead were detected at levels below cleanup standards. In 2007 the Bureau of Waste Management approved landfarm closure. After reviewing the Voluntary Cleanup Report for the site, KDHE issued a "No Further Action" letter to BCCI for the former lagoon area.

Benefits:

- **32 cubic yards of impacted soil and waste were removed and remediated.**
- **An engineered, self-contained water catchment facility was placed at the former lagoon location.**



A trackhoe removes contaminated soil from the lagoon area.