

Remediation at Historical MGP Site



AECOM remediation work reduced risks of exposure to support the site's mixed use redevelopment, which includes a hotel, office tower, residential apartments, retail, and boardwalk

Client

Private Developer

Location

Ohio, USA

Contract Value

USD 2.1MM

Years

2006—present

More Information

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Project Overview

AECOM was hired by a private developer to complete environmental assessment and remedial activities for a 20-acre parcel in a new, vibrant neighborhood adjacent to a river. Our team provided remediation of the former MGP site as part of this urban redevelopment project. Key remedial actions included stabilizing and removing coal tar residuals, chemically treating chlorinated solvents, installing vapor barriers and vent systems, placing clean soil covers beneath buildings and pavements, and installing a groundwater filtration system. Ohio VAP No Further Action Letters were completed in 2010 and 2011 to facilitate redevelopment. Additional remedies are being implemented as the redevelopment continues.

Client Benefits

- AECOM's phased approach to meeting the Ohio VAP obligations for No Further Action allowed the property owner to receive \$6 million in eligible reimbursements through the Clean Ohio Revitalization Fund.
- AECOM's constant collaboration with the developer and contractors facilitated uninterrupted redevelopment activities during the remediation process.
- Integration of the remedy into the future use plans ensured protection of current and future on-site receptors, while controlling remediation costs for the client.



Work Performed

Remediation planning took into account future land uses and site layout, and site-specific characteristics such as a high groundwater table and immediate proximity to the river. Remedial design and construction management services were provided for stabilization, excavation, and disposal of coal tar and removal of remnant MGP components, including the gas holders and tar vaults. Remedial activities also involved subsurface chemical injection to create a Fenton's reaction and oxidize the remaining NAPL delineated through a post-excitation laser-induced fluorescence (LIF) Targost® investigation. These activities were designed to facilitate redevelopment of the property, and to reduce O&M requirements through the removal or treatment of source areas.

Prior to the excavation activities, a dewatering system was used to remove water from the planned excavation area. The system used a 20,000-gallon weir tank, sediment bag filters, and two vessels containing 14,000 pounds of liquid phase carbon. The carbon filtration system was approved for use by the Ohio EPA Division of Drinking and Groundwater, and permitted for discharge to the sanitary sewer by the Northeast Ohio Regional Sewer District Department of Water Quality and Industrial Surveillance. Approximately 500,000 gallons were filtered and discharged.

The coal tar residuals were mixed with a stabilizing agent (bed ash) to make them suitable for transportation to the disposal facility. Stabilization activities occurred in advance of the excavation activities to allow solidification to occur, and for the stabilized coal tar to cool. Approximately 1,400 tons of coal tar residuals were as transported off site for disposal. After stabilized coal tar residuals had been excavated, the remaining brick structures and foundations that contained the coal tar residuals was demolished in place. Approximately 1,500 tons of foundation material and 3,500 tons of impacted soils related to the former MGP were loaded and transported off site. Once the coal tar residuals and foundation materials were removed, the excavations were backfilled using soil that met Ohio VAP residential use standards.

Additional activities completed from 2005 through 2014 included grant writing; 10 Phase I Assessments to facilitate property transfers; four Phase II Property Assessments; obtaining a groundwater Urban Setting Designation; human health risk assessment for residential and recreational land uses; ecological risk assessments; asbestos surveys and abatement oversight; demolition and remediation planning, design specifications, drawings, cost estimating, and oversight; public meeting support; and redevelopment planning. Operation & Maintenance (O&M) obligations are being addressed and modified as the property redevelopment continues.