



A grout blanket was installed in a stormwater ditch to enhance the drainage along the existing drainage channel.

Client: Honeywell International

Services Provided:

- ☑ RCRA Facility Investigations
- ☑ TarGost delineation of subsurface coal tar DNAPL
- ☑ Corrective Measures Study/Implementation Plan
- ☑ Development of site exit strategy
- ☑ Sediment Containment/Capping

Project Objective

Honeywell owned and operated a coal tar refining and distribution center that was closed in 2003. The facility (11.6 acres) was in operation from the early 1910s until its recent closure. Historically, the company manufactured coal tar pitches, and refined coal tars and creosote oils by a distillation process at the site. The facility operated a permitted hazardous waste incinerator from 1988 to 1998, and received clean closure certification for the unit in 1999. The facility currently has a Solid Waste Management Unit (SWMU) Corrective Action Permit with approximately 16 SWMUs and two Areas of Concern requiring investigation and potential corrective action. The client retained Geosyntec to implement RCRA Corrective Action Activities in accordance with the facility's SWMU Corrective Action Permit.

Geosyntec's Scope of Services

Due to the relatively small size of the plant, the multi-use of areas over time, and the potential for commingling of releases from the SWMUs, Geosyntec implemented a holistic approach to the investigation rather than defining individual releases from specific SWMUs. We performed multiple RCRA facility investigations (RFI) and corrective actions at the site. The RFI focused on delineating the extent of the releases. We used non-invasive techniques, such as surface geophysics, remote sensing analysis, and methods to reduce investigation derived waste (direct push technology) to reduce overall costs of the investigation. We also used TarGost investigation techniques to cost-effectively delineate subsurface coal tar DNAPL, and developed a site exit strategy addressing shallow DNAPL (driving force for the downward migration into fractured rock) and a passive technology to address dissolved phase contaminations in groundwater. We developed a Corrective Measures Study/Implementation Plan to evaluate multiple technologies to address affected media both onsite and off-site. Ultimately, the CMI recommended a monitored natural attenuation (MNA) remedy for groundwater, an in situ stabilization (ISS) remedy for mobile coal tar DNAPL in the subsurface soils, and capping for surface soils. The MNA and ISS technologies received the Alabama Department of Environmental Management (ADEM) approval based on lab-scale testing results and limited groundwater monitoring. Multiple interim measure corrective actions were performed at the site including installing a 150-foot-long, steam-enhanced coal tar DNAPL recovery trench and excavating impacted sediment from a 1000 ft long drainage channel located offsite and lining the with a concrete fabricform to preclude future exposures.

Notable Accomplishment

Geosyntec performed interim measures to address tar residues that were encountered in an off-site creek that provides drainage for a portion of the plant. The creek watershed included over 400 acres of industrial, commercial and residential development and was predominantly located on City of Fairfield property. Geosyntec assisted Honeywell in performing a cleanup of the creek in two phases. The first phase involved cleanup of the smaller upstream portion adjacent to the plant. The second phase involved cleanup of the downstream portion located on City of Fairfield property. The work was performed in cooperation with ADEM, the City of Fairfield, and local property owners. The creek channel was improved after excavation by reconstructing it into a trapezoidal channel with a concrete liner and fence as a community service to the City of Fairfield. The constructed design removed over 10,000 tons of sediment and improved flow along the creek. Geosyntec prepared the design, assisted in stakeholder meetings and negotiations, assisted with contractor negotiations, and performed construction management.