



A Successful HSCA Funded Cleanup:

General Alloy Site

Rochester Township, Beaver County, PA

The General Alloy Site (Site) in Rochester Township, Beaver County, contained numerous wastes which polluted the soil, groundwater, and McKinley Run immediately below the Site. Prior to the HSCA cleanup efforts, the waste was piled up on the side of a steep ravine, which resulted in waste and related leachate spilling into and impacting the Run with nickel, lead, and arsenic. A landslide occurred in 2016 and material from the Site dammed up McKinley Run. The cleanup included relocation and demolition of an active business, waste removal, slope stabilization and vegetation, and storm water management to divert storm water from the Site. The project was completed in 2019, which concluded 11 years of effort among municipal officials, DEP, and its contractors.

General Alloy Site

The General Alloy Site is a 3.5-acre industrial area located in Rochester Township, Beaver County. The Site consisted of an industrial waste disposal area on the side of a steep ravine above McKinley Run, a tributary of the Beaver River. The waste was generated by a foundry operated by General Alloy Casting Company from 1947 to 1982 and by Frye Glass located directly adjacent to the property, which operated in the first half of the 20th Century. DEP discovered the following foundry sand wastes down the ravine: approximately 375 tons of tool foundry grinding and cut-off dusts; approximately 300 tons of bronze foundry shot blast collector dusts; and approximately 60 tons of electric furnace emission control dusts. DEP also discovered various glass wastes at the Frye Glass property.

Historical information indicates that various wastes were generated and disposed of into the ravine, which were identified as characteristically hazardous for lead and chromium. Sample results showed that the waste on the ravine exceeded the nonresidential Statewide health standards for nickel and lead. Samples taken of glass waste mixed with the foundry waste found values above the Land Recycling and Environmental Remediation Standards Act (Act 2) for lead and arsenic. There were areas of exposed waste along the hillside and there was a concern that runoff down the slope could be impacting the stability of the disposal area. Seeps at the toe of the disposal area have been impacted by constituents found in the waste. As a result of the contamination, DEP determined that there was a direct contact threat to individuals entering the Site and there was a potential threat to the surface water from waste or waste constituents that may enter McKinley Run.

DEP's contractor conducted a site investigation in early 2008 to determine the extent of the disposal area, the nature and extent of the contamination, and evaluate possible remediation alternatives. Based on the investigation, it was determined that the Site was unstable due to the nature of the waste, steep slopes and storm water infiltration. As part of the investigation, DEP directed its contractor to include an evaluation of remedial alternatives to address the Site stability.

Project at a Glance

Location:

Rochester Township,
Beaver County, PA

Project Size:

Approximately 3.5 acres

Principal Use:

Industrial Area

Total Project Cost:

\$2.5 M

Consultant:

Michael Baker Jr, Inc.
URS(AECOM) Energy and
Construction, Inc.

Project Period:

2008-2019(11 years)

Partners:

Rochester Township
The US Army Corps of Engineers



DEP approved the investigation and remedial alternative reports. A public meeting was held in May of 2015 to discuss the proposed cleanup of the site.

Work began at the Site in July of 2016. However, in December of 2016, a landslide occurred at the Site and compromised a building on the property that was occupied by an active business, American Machining and Fabrication. The building was deemed unsafe by Rochester Township officials and the owner of the business was forced to move to an alternate location with assistance from DEP. The material from the Site dammed up McKinley Run and caused a mixing of the foundry sand and the glass. The landslide altered DEP's original remediation plans at the Site. DEP determined that a prompt response was necessary to be protective of public health and the environment, and part of that response was to raze the compromised building and properly stabilize the slope. Due to its proximity to the General Alloy Site, the Frye Glass Dump Site was cleaned up concurrently.

Remediation was completed in 2019. A three-to-one slope was constructed in the area of the landslide. All new storm drains were installed at locations where the old, corroded drains existed. New storm drains and outfalls were installed on two streets to divert water away from the Site. Waste was removed from McKinley Run in the area of the landslide. The stream bank at the toe of the Site was lined with rip-rap to prevent further erosion from taking place.

Highlights:

- Approximately 400 tons of Waste Removed
- Pollution prevented from impacting McKinley Run
- Stream Banks: Repaired, Stable, and Vegetated

The Hazardous Sites Cleanup Fund (HSCF), a special fund established under the Hazardous Sites Cleanup Act (HSCA) (35 P.S. §6020.101 *et seq.*), provides the funding for the Department of Environmental Protection (DEP) to carry out a number of activities to address releases and threatened releases of hazardous substances to the environment.



Project Photos



Foundry waste sand before the landslide and cleanup



Frye Glass waste before the landslide and cleanup

Project Photos



The slope after the landslide



After the landslide (view from above)



Blocked McKinley Run after the landslide and before the cleanup



Storm water management during the cleanup



Slope stabilization during the cleanup



Vegetated slope after the cleanup