

A Successful HSCA Funded Cleanup:

Mt. Laurel Road Battery Casing Site

Alsace Township, Berks County, PA

The Mt. Laurel Road Battery Casing Site (Site) in Alsace Township, Berks County contained lead battery casing material which polluted the soil, groundwater, and an un-named tributary to Laurel Run which ran through one of the residential properties. Prior to the HSCA cleanup efforts, the waste remained buried under a shallow covering of soil and grass. Leaching of the waste material contributed to lead contamination of water in one residential well and surface water in the un-named tributary. The cleanup included excavation of soil from a depth of two to five feet, off-site disposal of soils and the backfilling of the excavations with clean soils. Remediation and restoration were completed in 2015, the project was concluded after six years of effort among municipal officials, DEP, and its contractors in 2017.

Mt. Laurel Road Battery Casing Site

The Mt. Laurel Road Battery Casing Site, approximately 2-acres, is a rural residential site located in Alsace Township, Berks County. The Site consisted of residential properties with an un-named tributary to Laurel Run passing through one property. The waste was generated by unknown battery companies and deposited as fill prior to 1990. Discovery of the battery waste was reported to DEP in 2011 after being observed in the soil of one residence following a period of surface soil erosion. During the initial investigation, other local residents reported to DEP that they too suspected their properties contained lead battery casing material.

Seven sample results showed that the waste material ranged from 700 to 3,677 milligrams per kilogram (mg/kg) of lead. DEP's residential direct contact medium specific concentration (MSC) for lead under the PA Land Recycling Program regulations is 500 mg/kg and the soil-to-groundwater MSC is 450 mg/kg. As a result of the contamination, DEP determined that there was a direct contact threat to individuals entering the Site or drinking groundwater from one residential well, and a potential threat to the surface water from waste or waste constituents that may enter the un-named tributary.

DEP conducted a site investigation in February 2012 to determine the extent of the disposal area, the nature and extent of the contamination, and evaluate possible remediation alternatives. A public meeting was held in October to discuss the proposed cleanup of the Site.

Work began at the Site in February 2013. Excavations were conducted to achieve the DEP soil-to-groundwater MSC for lead of 450 mg/kg, to a depth of approximately five-feet. In some areas, the bottom of the excavation remained above the cleanup standard. In other areas, the presence of shallow groundwater prevented field testing of the excavation bottom.

Project at a Glance

Name:

Mt. Laurel Road Battery Casing Site

Location:

Alsace Township, Berks County, PA

Project Size:

Approximately 2 acres

Principal Use:

Residential area

Total Project cost:

\$ 1.16M

Consultant:

Weston Solutions

Project Period:

2011 – 2017

Partners:

Alsace Township



In July 2014, an additional Site characterization was performed to investigate and delineate the immediate human health, safety and environmental risks potentially posed by the hazardous waste(s) and substance(s) remaining on the Site in excess of the DEP's residential direct contact MSC for lead of 500 mg/kg. Field screening using a direct-reading X-ray fluorescence (XRF) instrument was conducted at 45 locations to determine the extent of soil excavation by taking readings from excavation sidewalls and floors until cleanup standards were achieved or the excavation depth reached two-feet below ground-surface. Orange netting was placed on the floor of each excavation prior to backfilling to create a visual marker indicating the depth of the excavation to alert future tenants of the potential hazard that exists below the two-foot excavation depth.

Excavation of contaminated soil and Site restoration were completed in June 2015. Restoration activities included backfilling, repairing of cracked concrete, replanting of trees/shrubs, seeding, stabilization, replanting of flowers and trees, adding and compacting gravel to a driveway, and replacing pavers. The Site clean-up effort concluded in 2017 with the approval of the final report. Institutional controls consisted of environmental covenants and these were signed and presented to Alsace Township in December 2018.

Highlights:

- Approximately 3,100 tons of waste and soil was removed.
- Pollution was prevented from impacting un-named tributary to Laurel Run.

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



Battery casing material intermingled with soil, cobbles and other fill material that was used pre-1990 to raise and level residential yards at the Mt. Laurel Battery Casing Site, Alsace Township, Berks County, Pennsylvania.

Project Photos



Personal protective outerwear was required to remediate battery casing material intermingled with soil, cobbles and other fill material at the Mt. Laurel Battery Casing Site, Alsace Township, Berks County, Pennsylvania.



Restoration is almost complete in 2015 at the Mt. Laurel Road Battery Casing Site, Alsace Township, Berks County, Pennsylvania.