

Remediation of the Former American Spelter Site in Pittsburg

June 15, 2012



Excavating lead-contaminated soil from a residential yard.

The KDHE State Water Plan Program completed the remediation of a former smelter site, American Spelter, located in a residential part of eastern Pittsburg. The site is located in a residential area close to homes, rental houses and an elementary school. The smelter operated from the early 1890s until 1900, and then intermittently from 1905 to 1917. Previous investigations confirmed former smelting operations had impacted the surface soils, subsurface soils, sediments in two onsite ponds and a nearby stream, and groundwater with arsenic, cadmium, lead, and zinc. Soils at the elementary school were not impacted by smelter operations.

Clean-up activities occurred from March through April. A total of 3,397 cubic yards of waste materials were excavated. The material was placed in a partially above-grade encapsulation cell that was founded on low permeability clay and capped with an 18-inch thick infiltration reduction/prevention layer, covered by a 6-inch thick vegetative layer. The excavated areas were then backfilled with clean clay and soil. Re-vegetation was performed for the containment cell cover and other portions of the site that were affected by the remediation activities. An Environmental Use Control will be used to protect the encapsulation cell and another area of smelter waste identified during the excavation.



Consolidation cell with engineered cap.



Clean soil brought in and yard re-vegetated.

Significant efforts were taken to minimize damage to the property, trees, and wildlife habitats – especially for the endangered gray bat whose territory fell within the site boundaries; limit the groundwater exposure pathway by consolidating the waste in the encapsulation cell underlain and overlain by low permeability clay; and prevent further and future exposure to smelter waste.