NPL Site Narrative for Ryeland Road Arsenic

RYELAND ROAD ARSENIC
Heidelberg Township, Pennsylvania

Conditions at Proposal (March 8, 2004): The Ryeland Road Arsenic site is located in Heidelberg Township, Berks County, Pennsylvania. The former facility, which encompasses approximately 7.33 acres, currently comprises several residential properties. Arsenic, copper, and lead contamination was detected in surface soils on these properties, with arsenic levels exceeding health-based benchmarks, and in nearby surface waters. Copper and lead were also found in residential drinking water wells at levels exceeding health-based benchmarks.

From 1920 to 1940, Standard Chemical Works Corporation (SCWC), and subsequently Allegheny Chemical Corporation (ACC), manufactured pesticides, paints, varnishes, and sulfuric acid. The pesticide manufacturing facility was located on the north side of Ryeland Road. After the shutdown and demolition of the pesticide facility, the property was subdivided into four parcels, each containing a residence. The pesticide facility also owned the parcel of land on the south side of Ryeland Road, which has remained undeveloped. As part of the pesticide manufacturing process, arsenic was converted to arsenic acid; by-products included lead arsenate, calcium arsenate, and copper acetoarsenate. Wastes generated during the manufacturing process were reportedly disposed of on both the north and south sides of Ryeland Road.

In December 1983, a resident near the former pesticide facility notified the Pennsylvania Department of Environmental Resources (PADER) of the presence of two piles of a grayish-white material that were found to contain arsenic and lead concentrations of 5,666 and 2,900 milligrams per kilogram (mg/kg), respectively. One pile was located on the residential properties on the north side of Ryeland Road, the location of the former pesticide facility. The second pile was located on the south side of Ryeland Road on the undeveloped parcel previously owned by the pesticide facility. PADER conducted a preliminary assessment and site inspection at the site in 1984 and 1985, respectively. [PADER is now the Pennsylvania Department of Environmental Protection (PADEP).]

The U.S. Environmental Protection Agency (EPA) conducted several removal actions at the site, beginning in 1985, consisting of the removal of arsenic- and lead-contaminated soil from residential properties to a depth of two feet. Arsenic- and lead-contaminated soil was not removed in areas of heavy vegetation, along the railroad right-of-way that borders the residential properties to the north, or below two feet below ground surface. Test trenching at the site has documented that arsenic- and lead-contaminated soil is present to a depth of nine feet below ground surface.

In June 2002, EPA conducted an expanded site inspection of the Ryeland Road Arsenic site. Activities included the collection of ground water, surface water, sediment, and surface soil samples. Samples collected from domestic drinking water wells revealed the presence of copper at concentrations ranging from 40 to 1,300 micrograms per liter (µg/L). Concentrations of lead detected in the domestic drinking well samples ranged from 33 to 190 µg/L, which were greater than three times the background concentration of 4 µg/L. Analytical results for all downstream sediment samples indicated the presence of arsenic at

concentrations ranging from 26.3 to 407 mg/kg, exceeding three times the background concentration. One downstream sediment sample contained concentrations of copper and lead exceeding three times the background concentrations.

A drainage ditch that runs through or receives drainage from the areas of contaminated soil empties into a spring-fed creek. The spring-fed creek joins an unnamed tributary to the Tulpehocken Creek, which then joins the Tulpehocken Creek, a State designated scenic river. Both the unnamed tributary and the Tuplehocken Creek are fisheries. Wetlands and several State and Federal threatened or endangered species were identified along these surface waters within 15 miles of the facility.

Status (July 2004): EPA is considering various alternatives for this site.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at ATSDR - ToxFAQs (http://www.atsdr.cdc.gov/toxfaqs/index.asp) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.