

NL Industries, Inc

New Jersey

EPA ID#: NJD061843249

EPA REGION 2 Congressional District(s): 02

Salem
Pedricktown

NPL LISTING HISTORY
Proposed Date: 12/1/1982
Final Date: 9/1/1983

Site Description

The 44-acre NL Industries site is a former secondary lead smelting facility that operated from 1972 to 1982. The site is located on Penns Grove-Pedricktown Road. In 1983, the site was sold to National Smelting of New Jersey, Inc., which operated it until 1984. During its years of operation, the company recycled lead from spent automotive batteries. The batteries were drained of sulfuric acid, crushed and then processed for lead recovery at the smelting facility. The plastic and rubber waste materials resulting from the battery-crushing operation were placed in an on-site landfill. The landfill also contains slag and contaminated soils.

The site is located in a rural area with two streams and a marshy area near the site. The Delaware River is approximately 1 1/2 miles from the site. Railroad tracks run through the center of the site. There are approximately 2,500 people living within 3 miles of the site boundary. The Cape May aquifer underlies the site and serves as a source of drinking water, crop irrigation water, and process water. Most of the area residents are served by municipal water wells, although some nearby homes rely solely on private wells. Testing in 1987, 1991, 1994, and 2006 indicated that the water quality of these private wells was within drinking water standards.

Site Responsibility: This site is being addressed through Federal and Potentially Responsible Party (PRP) actions.

Threat and Contaminants

Groundwater is contaminated with heavy metals, especially lead and cadmium. Contaminated soil has been fully remediated at the site. Sampling of on-site and off-site areas, along with the two nearby streams had identified elevated levels of lead in soils, groundwater, surface water and stream sediments. Stream sediments have been remediated and are currently being monitored. Recent sampling indicates that lead remains above cleanup standards in the stream and will require additional remediation. The site is fenced and drinking water in the nearby residences are monitored by the PRPs and EPA. The 2006 residential sampling event confirmed that levels of lead in residential wells is within drinking water standards.

Cleanup Approach

The site is being addressed in three stages: initial actions; a long-term remedial phase focusing on cleanup of surface water, groundwater, soils, and sediments; and an expedited remedial action focusing on ponded water, slag piles, building structures and debris.

Response Action Status

Initial Actions: In 1989, 1990 and 1991, the EPA restricted access to the site by installing a fence, temporarily capped the on-site slag piles, removed the most hazardous materials at the site for recycling or proper disposal, removed steel drums for recycling, emptied on-site containers holding materials that potentially could be released and stored the materials in covered areas, and removed copper wire and other items of value to discourage trespassing.

Entire Site: Operable Unit 2 was the first phase of work completed and included: ponded water, slag piles, building structures, and debris. In July 1991, EPA completed a focused investigation to identify and evaluate cleanup alternatives for these media. In September 1991, EPA issued a Record of Decision (ROD) which selected the following remedy for these media: solidification/stabilization and on-site placement of the slag materials; decontamination and off-site treatment and disposal of debris and contaminated surfaces; off-site treatment and disposal of the ponded water and sediments; and appropriate environmental monitoring to ensure the effectiveness of the remedy. In addition, any material

which could be recycled in a protective and cost-effective manner, would be recycled. In March 1992, EPA issued an Explanation of Significant Differences which modified the remedy to allow the slag to be treated and disposed of off-site. At the same time, EPA issued a Unilateral Order to thirty-one PRPs to implement the selected remedy. The remediation of the slag and decontamination and demolition of the site buildings was completed in September, 1995.

Operable Unit 1 was the second phase of work to be performed and included: surface water, groundwater, soils, and Sediments : Surface Water, Groundwater, Soils, and Sediments: NL Industries, Inc., under EPA oversight and monitoring, investigated the nature and extent of contamination at the site and evaluated various cleanup alternatives. The Remedial Investigation and Feasibility Study (RI/FS) were completed and released to the public in July 1993. Based on the results of the RI/FS, EPA selected a remedy for the contaminated soil, groundwater, and sediment in a July 1994 ROD for Operable Unit 1. The selected remedy included the excavation, stabilization, and placement of contaminated soil and sediment in an on-site landfill, as well as extraction and treatment of contaminated groundwater before discharge of the treated groundwater to the Delaware River. In June 1999, EPA issued an Explanation of Significant Difference (ESD) which modified the remedy selected in the July 1994 ROD to provide for off-site disposal of contaminated soil and sediment. PRPs have completed the soil and sediment component of this remedy and are currently conducting the design for the groundwater component of this remedy.

During 1993 and 1994, EPA removed lead-contaminated sediment and soil from sections of a contaminated stream adjacent to the Site. Additional samples were collected from within the stream's floodplain to characterize remaining contamination in and adjacent to the stream. Furthermore, EPA installed silt fencing adjacent to the stream to mitigate the spread of contaminated sediment and soil until the remedy selected in the July 1994 ROD is implemented. The soil and sediment component of the OU1 remedy was initiated during June 2000 and completed in July 2003. Recent sampling indicates that there are lead levels above cleanup standards in the western portion of the stream and EPA will oversee the PRPs'additional remediation of the stream in 2008.

Site Facts: In 1982, the New Jersey Department of Environmental Protection (NJDEP) issued an Administrative Order on Consent requiring NL Industries to clean up the site, conduct groundwater monitoring, and install a groundwater abatement system. The Order was amended in 1983 to reflect the purchase of the site by National Smelting of New Jersey. National Smelting and its parent corporation filed for bankruptcy in 1984. In 1985, the responsibility for cleanup of the site was transferred from NJDEP to the EPA.

In 1986, NL Industries signed a Consent Order with the EPA under which the company agreed to investigate the site. In June 1996, a group of PRPs signed a Consent Order with EPA, requiring them to design the remedy selected in the 1994 ROD. This Consent Order was modified in January 1997 to further require that the PRPs maintain silt fencing along a contaminated stream adjacent to the Site to control migration of contaminated soil and sediment until the remedy for contaminated soil, sediment, and groundwater is completed.

In April 1999, a judicial Consent Decree was entered by the Court which requires that six of the PRPs implement the remedy selected in the 1994 ROD, as modified by the 1999 ESD. In addition, the Consent Decree requires that these PRPs clean up the remaining contaminated sediment and soil in the stream adjacent to the site. In August 2002, two judicial Consent Decrees were entered which resolved the liability of 59 PRPs who contributed a small volume of waste to the site.

Cleanup Progress

Access restrictions, removal activities, and implementation of the Operable Unit 2 remedy have significantly reduced the threat of exposure to hazardous materials at the NL Industries site while the long-term remedy for contaminated soils, sediment and groundwater is being designed and implemented.

In 1989, 1990 and 1991, the EPA restricted access to the site by installing a fence around the site, temporarily capping the on-site slag piles to prevent the migration of contaminants, removing over 40,000 pounds of the most hazardous materials at the site for recycling or proper disposal, removing 2,200 empty steel drums for recycling, and by emptying on-site containers holding materials that potentially could be released and storing the materials in covered areas to minimize migration of these materials. During 1993 and 1994, EPA removed approximately 7,000 cubic yards of lead-contaminated sediment and soil from sections of a contaminated stream adjacent to the Site. The PRPs disposed of over 150,000 tons of contaminated soil and sediment and completed the work in July 2003.

The Operable Unit 2 remedy (slag piles, debris and contaminated surfaces, and contaminated standing water) was completed in September 1995. As part of this cleanup effort, 13,150 tons of lead-bearing slag were treated and disposed of off-site as non-hazardous waste. In addition, buildings and other structures were decontaminated and demolished. In all, 1,915 tons of scrap metal were recycled, 52 tons of asbestos-containing material from the buildings were disposed of off site, 1,993 tons of hazardous materials were disposed of at a hazardous landfill and over 764,000 gallons of contaminated standing water and wash water were sent off site for treatment.

The Operable Unit 1 remedy is for surface water, ground water, soil and sediment. In June 1996, EPA entered into a Consent Order to implement the OU1 remedy including the excavation, stabilization, and placement of contaminated soil and sediments in an on-site landfill. In January 1997, the Consent Order was modified to include construction and maintenance of silt fencing along the West Stream and on the north and west sides of the former plant area. In June 1999, EPA modified the ROD to allow the PRPs to dispose of some of the contaminated soil and sediment off-site. For the groundwater, the PRPs were required to construct an extraction and treatment system.

The excavation of contamination soil and sediment began in June 2000 and was completed in May 2003. During that time, over 150,000 tons of contaminated soil and sediment was excavated, treated, and disposed of at appropriate off-site landfills. In addition over 10,000 tons of concrete and 182 tons of scrap metal and steel were sent off-site for recycling.

Design of the OU-1 remedy for groundwater is on going.

Recent sampling indicates that there are lead levels above cleanup standards in a portion of the West Stream which will require additional remediation. Plans are underway for this work.

Five-Year Review

Pursuant to Section 121(c) of the Comprehensive Environmental Response, Compensation and Liability Act, in April 1998 EPA conducted a five-year review of the selected remedies for this site to ensure that these remedies remain protective of public health and the environment. The five-year review concluded that the selected remedies, once implemented, will be protective of public health and the environment. Furthermore, the five-year review specified interim actions that should be conducted to limit exposure to site contaminants until the final remedies are implemented. These interim actions (restricting access to the site, maintaining silt fencing along the stream) have been conducted at the site.

A second five-year review was conducted in September 2003. Since the April 1998 five-year review, the PRPs maintained the silt fencing until all soil and sediment contamination was removed and resampled residential wells (July 1998 and January 1999) in the vicinity of the site. The remedies continue to function as intended by the decision documents.

Site Repositories

Penns Grove Public Library, South Broad Street, Penns Grove, New Jersey 08069

and

US Environmental Protection Agency Region 2, 18th Floor, Superfund File Room, 290 Broadway, NY, NY 10007-1866