

Zschiegner Refining

New Jersey

EPA ID#: NJD986643153

EPA REGION 2 Congressional District(s): 04

Monmouth
Howell Township

NPL LISTING HISTORY
Proposed Date: 9/25/1997
Final Date: 3/6/1998

Site Description

The Zschiegner Refining Company operated from 1964 to 1992 as a precious metals recovery facility. On-site operations included the chemical stripping of precious metals from watch bands, film, and electrical components. In October 1992, the Federal Drug Enforcement Administration raided the facility based on suspicions of illegal drug manufacturing. Approximately 3,000 different chemicals (including peroxide, cyanide, caustics, and acids) were found improperly stored throughout the site. The 6.1-acre site is located in a rural residential area. The Haystack Brook and its associated wetlands run southward on the eastern portion of the property and a tributary to the brook runs along the southern portion of the property. A single-story building was present on the southwestern portion of the property and a collapsed cesspool is between the building and Haystack Brook. Two homes border the site; the closest house is within 50 yards of the on-site building. During initial removal actions, approximately 2,000 gallons of acidic solutions, 1,600 gallons of basic solutions, and 1,400 small containers of hazardous substances were transferred to acceptable containers and disposed of off site. The presence of inorganic contamination in soil, sediments, ground water, and the building was found during the remedial investigation.

Site Responsibility: This site is being addressed through federal actions.

Threat and Contaminants

Soil, sediments, and, to a limited extent, the shallow ground water are contaminated with metals. Ingestion or contact with these media may pose a threat to human health and the environment.

Cleanup Approach

On September 30, 1998, EPA initiated a remedial investigation to determine the nature and extent of contamination. Field work for the remedial investigation began late in the summer of 2000, and additional ecological investigations were conducted in 2003. A feasibility study, which evaluated different remedial alternatives for the site, was completed in 2004, and final remedy for the entire site was selected in a Record of Decision signed in September 2004.

Response Action Status

Initial Actions: A removal action was initiated by EPA on November 2, 1992. Materials were segregated and transferred to acceptable containers, potentially explosive/reactive items were detonated, hazardous materials were removed offsite for disposal, liquids in vats and drums were sampled, and on-site soil and sediment samples were taken. Phase II of the removal action was initiated in March 1993 and involved the disposal of hazardous waste secured during Phase I. Further sampling was conducted in 1995; analysis of these samples revealed the presence of inorganic contaminants in soil, surface water, and sediment. In July 1998, EPA tested the private well water of nine residents living downstream of the site for organic and inorganic compounds. No contaminants were found at concentrations above relevant state or federal health-based standards.

Entire Site: A remedy for the site was selected in a September 2004 Record of Decision. The major components of the Selected Remedy, with estimated volumes of contaminated material updated based on the pre-design investigation, include:

- excavation of an estimated 6,900 cubic yards of contaminated surface and subsurface soil, backfill with clean fill, and restoration;

- excavation of an estimated 11,700 cubic yards of contaminated sediment from the wetland and a small portion of the brook adjacent to the site, backfill, and restoration with monitoring for at least 5 years to assure the wetland is re-established;
- transportation of the contaminated soil and sediment off-site for disposal, with treatment if necessary;
- demolition without replacement of the on-site building to allow for the excavation of the contaminated soil beneath it; and
- monitoring of contaminated ground water for a period of 3 years after removal of the contaminated subsurface soil to determine if contaminant levels are being sufficiently reduced by the source removal. If so, monitoring of ground and surface water would then continue for a period to be determined.

While EPA believes that source removal will effectively reduce the marginally elevated levels of contamination in the shallow ground water at the site, an active ground water remedy, such as a permeable reactive barrier, and/or institutional controls will be implemented after the initial monitoring period if necessary.

Cleanup Progress

The remedial action is substantially complete. The remedial design was finalized in January 2007 and the on-site building was demolished and disposed of off-site in February 2007. Field work for the remedial action was initiated in June 2007 and completed in October 2008. A total of 10,425 cubic yards of contaminated upland soil and 15,351 cubic yards of contaminated wetland soil was excavated and disposed of during the remedial action. Ground water and wetland restoration monitoring are ongoing.

Site Repositories

USEPA Records Center 290 Broadway, 18th floor New York, NY 10007 (212) 637-4308

Howell Township Library Old Tavern Road Howell, New Jersey