

# JIS Landfill

## New Jersey

EPA ID#: NJD097400998

### EPA REGION 2 Congressional District(s): 12

Middlesex  
South Brunswick

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

## Site Description

The Jones Industrial Services (JIS) Landfill site is located in South Brunswick Township, near the border of Monroe Township. The JIS Landfill site covers approximately 24 acres, which includes a 7.8 acre landfill and a waste transfer operation. Landfilling operations began in 1956 within a former borrow pit. Excavated material from the borrow pit provided fill needed for the construction of the New Jersey Turnpike. From 1960 through the early 1970's, the JIS Landfill accepted chemical, municipal and industrial wastes, including broken battery casings, paint sludges, solvents and pesticides. Approximately 50,000 cubic yards of waste were disposed of annually until landfilling operations ceased in 1980. JIS placed a cap over the northern half of the landfill in 1983. The southern half of the landfill was capped in 1985. Ground-water sampling revealed that private wells on nine properties downgradient of the site were contaminated.

Site Responsibility: This site is being addressed through Federal, State and private party actions.

## Threat and Contaminants

Ground water is contaminated with metals and volatile organic compounds (VOCs), including vinyl chloride, methylene chloride, acetone, tetrachloroethene, trichloroethane, chlorobenzene and benzene. Aldrin, a pesticide, was also detected in the ground water. The concentrations of contaminants are above Federal and State drinking water standards. Contaminants have been detected in the groundwater from the site to Manalapan Brook, which is roughly a mile and a half downgradient of the site. Close to the landfill property, contamination is present from the water table to the base of the aquifer, a thickness of roughly 60 feet. Downgradient, contamination is largely limited to the bottom 15 feet of the unit. Ingestion of the contaminated ground water would present a risk, although all businesses and residents whose wells could potentially be impacted have been connected to the municipal water supply.

## Cleanup Approach

### Response Action Status

Immediate Actions: In February 1989, the New Jersey Department of Environmental Protection (NJDEP) requested that EPA conduct an assessment of the ground-water contamination at the site. Potable wells were sampled; wells at eight residences and one business were found to be contaminated with VOCs. EPA provided bottled water to the business and residents of the affected homes. The Monroe Utilities Authority installed water mains to supply potable water, and EPA provided water main hookups at five properties with contaminated wells. A water main extension providing municipal water to the four remaining homes was completed in mid-1992. The business and residents were connected to this alternate supply. In 2003, additional homes to the east of Manalapan Brook were connected to the municipal water as a precautionary measure.

Entire Site: The NJDEP began an investigation of the site in 1986 to determine the nature and extent of contamination. Activities included sampling of the air, soil, and ground water, as well as an evaluation of the landfill cap. Sediment and surface water samples were taken from Manalapan Brook, located approximately a mile and a half downgradient from the site. A feasibility study was conducted to identify alternatives for cleanup. The remedial investigation and feasibility study (RI/FS) were completed in summer 1993. NJDEP collected data on drinking water wells in the area to supplement the RI/FS, from fall 1993 through spring 1994.

A Remedial Investigation of the Secondary Plume was conducted in December 2007. It was completed in June 2008, and a Remedial Investigation addendum was submitted in July 2009.

Record of Decision: EPA selected a remedy for the site on August 15, 1995. The selected remedy includes: extraction and on-site treatment of contaminated ground water, installation of a modified NJDEP hazardous waste cap, and provision of alternative water supply to residents with contaminated drinking water wells. Potentially responsible parties (PRPs) for the site contamination signed an Administrative Consent Order with the NJDEP in July 1997 to implement the selected remedy.

In accordance with a 2004 Administrative Consent Order, a full scale in-situ biosparge pilot study was implemented in 2005 to test the feasibility of replacing the pump and treat groundwater remedy. In September 2009, EPA issued a Record of Decision Amendment for the site selecting biosparging with Monitored Natural Attenuation and Institutional Controls as the remedy.

Remedial Design: The PRPs completed the design for the landfill cap in June of 2000. The design for the ground water pump and treat system was completed, but not implemented. A full scale in-situ biosparge pilot study was implemented on site in March 2005.

Remedial Action: Immediate risks were alleviated through the provision of alternative potable water supply to all impacted or potentially impacted residents. The landfill cap was installed in 2001. NJDEP certified its completion in January 2005, after various refinements were completed. A full scale biosparge pilot system was constructed on site in 2005. Results of the pilot study showed decreasing concentrations in the plume, therefore biosparging was selected as the remedy, along with Monitored Natural Attenuation and Institutional Controls in the 2009 Record of Decision Amendment.

A Remedial Investigation of the secondary plume area and a Remedial Investigation addendum confirmed Monitored Natural Attenuation as the appropriate remedy for the downgradient portion of the plume.

In September 2010, the PRP's entered into a Unilateral Administrative Order with EPA to perform the remaining Remedial Action at the Site.

A Remedial Action Work Plan describing the biosparging, Monitored Natural Attenuation, and Institutional Controls has been submitted in July 2010, updated in September 2010 and approved by EPA and NJDEP also in September 2010. A Vapor Intrusion Sampling Plan was submitted in October 2010, with an Assessment for Vapor Intrusion Potential in December 2010. EPA has commented on these documents in December 2010.

Additionally, vapor intrusion monitoring has been ongoing at one residence adjacent to the landfill since 2008. Subslab results contain elevated levels of TCE and PCE, and annual monitoring has been recommended. The most recent sampling occurred in January 2010 in which EPA is awaiting the results.

Site Facts: NJDEP has identified 36 PRPs, most of whom have funded the work described above.

## Cleanup Progress

Pursuant to a removal action, EPA provided bottled water to eight residents and one business with contaminated wells until they were connected to municipal water supply.

A group of PRPs has undertaken the remedial design and remedial action under an administrative consent order with the State. The landfill cap remedial action was constructed in 2001 and was certified as complete in January 2005.

A Groundwater Biosparge Treatment system has been operating at the Site since March 2005. The system has significantly reduced migration of volatile organic compounds in groundwater from the landfill Site. Monitored Natural Attenuation has been reducing concentrations downgradient.

In September 2009 a Preliminary Close Out Report was submitted for the site which documented construction completion in accordance with the 1995 Record of Decision and the 2009 Record of Decision Amendment. The remaining remedial activities include long-term operation and maintenance of the biosparge system, Monitored Natural Attenuation, and implementation of Institutional Controls.

## Site Repositories

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