Jackson Steel
New York
EPA ID#: NYD001344456

EPA REGION 2
Congressional District(s): 04
Nassau
Mineola/North Hempstead

NPL LISTING HISTORY
Proposed Date: 10/22/1999
Final Date: 2/4/2000

Site Description

The Jackson Steel site is an inactive "roll form metal shapes" manufacturing facility located in Mineola/North Hempstead. Jackson Steel operated at the site as early as 1970 and ceased operations in 1991. Degreasers, including tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (TCA), were used at the facility until March 1985. Sludges from degreasing equipment were stored in drums. During a 1981 inspection of the facility by the Nassau County Department of Health, improper spill control at the waste storage area was noted. The site is located in a mixed-use area, with commercial and industrial properties located to the south and west and residential properties located to the north and east. Within 4 miles of the site, over 300,000 people obtain drinking water from wells screened in the aquifers that are or could be potentially affected by contamination emanating from the site. The nearest well is located approximately 1,670 feet east-southeast and side-gradient to the site.

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

Threat and Contaminants

The analytical results from samples collected in the early 1990s, during privately sponsored investigations, from within, around, and below three on-site the dry wells indicated the presence of PCE, TCE, 1,1,1-TCA, 1,2-dichloroethylene (DCE), and 1,1-dichloroethane (DCA) at depths down to 40 feet below the ground surface. PCE, TCE, 1,1,1-TCA, 1,2-DCE, and 1,1-DCA were also detected in groundwater samples collected from monitoring wells located downgradient of the dry wells. Direct contact with or ingestion of contaminated ground water may pose a health threat. There is minimal potential for exposure to contaminated on-site surface soils (if they exist). Except for a thin strip of land (only a few feet wide) situated between the building and a fence which borders the grounds of an apartment building, the site is either covered by the building or by an asphalt parking lot.

Cleanup Approach

The site is being addressed in two stages: immediate actions and long-term remedial phases focusing on identification and remediation of the source of contamination.

Response Action Status

Immediate Actions: Following commencement of field work in October 2001, because of concerns about the proximity of the site to a daycare center, at the request of a parent, the Nassau County Health Department performed air sampling inside the building. The air samples detected PCE at levels below the Health Department’s guideline for indoor PCE exposure. The levels were also within EPA’s acceptable cancer and non-cancer risk ranges. Given the sensitivity of the population exposed (preschool children), the Health Department collected additional samples in mid-December 2001. At that time, indoor testing was also conducted inside the Jackson Steel building and a restaurant located adjacent to the site. The results, which were received in mid-January 2002, indicated that PCE levels in the indoor air of several rooms in the daycare facility were above the Health Department’s guideline for indoor PCE exposure. In addition, the maximum level exceeded EPA’s acceptable non-cancer risk level. Low levels of PCE were detected in the air samples from the Jackson Steel building and the restaurant. After receiving the daycare center’s results, EPA’s emergency response team installed a vacuum extraction system under the concrete slab of the building to prevent any contaminants from entering the building in case the soil and ground water under the building are the source. In addition, in order to provide fresh air circulation in the building, a ventilation system was installed by the daycare center’s contractor. Samples taken to assess the effectiveness of the above measures showed that the PCE levels in the air were significantly below the New York State Health Department guideline and below EPA’s acceptable non-cancer risk levels. The daycare center closed in

April 2002.Because elevated PCE levels were detected in a billiards club which shares common walls with the Jackson Steel site building and the former daycare facility, EPA installed a vacuum extraction system under the concrete slab. Also, a ventilation system was installed. EPA conducted an investigation in an attempt to determine the source of the PCE in the former daycare center. The investigation included the collection of deep soil samples from the parking lot located between the Jackson Steel site and the former daycare center, soil gas samples at numerous locations outside and inside the former daycare building, and several rounds of indoor air sampling at the former daycare center and nearby business and residential buildings. The investigation was completed in May 2003. The data indicate that the PCE and TCE detected in the indoor air of the former daycare center could be, at least partly, attributed to vapor intrusion from the soil underneath the building.

Entire Site: A remedial investigation/feasibility study (RI/FS) to determine the nature and extent of contamination at and emanating from the site and to identify and evaluate remedial alternatives is presently underway. The RI commenced in October 2001and was completed in June 2003. The FS was completed in March 2004. On September 24, 2004, EPA selected a remedy to clean up the contaminated soil and ground water at the site. The remedy includes in-situ vapor extraction (ISVE) to remove volatile organic compounds (VOCs) from subsurface soils and in-situ chemical (ISCO) treatment of the contaminated ground water in the upper aquifer. In addition, contaminated surface soils and materials in dry wells and sumps inside and outside the Jackson Steel building will be excavated and disposed of off-site and the floor of the Jackson Steel building will be decontaminated. If a ground water investigation determines that the site is the source of the contamination in the lower aquifer, the remedy will also include extraction and treatment of the contaminated lower aquifer.The building was decontaminated in January 2006. Broom sweeping and pressure washing was used to remove residual waste. Once the initial removal was completed, the building floor was decontaminated using a floor scrubber.The excavation of the contaminated surface soil and the contaminated material in the building sumps and trench and the dry wells and their disposal were performed at the site from October 2005 to February 2006. In March 2005, EPA commenced treatment of the VOC-contaminated soils using ISVE and began ISCO injections in the upper aquifer.

A supplemental groundwater investigation was conducted from March 2005 to September 2006 to determine the source of the Magothy Aquifer contamination underneath the Jackson Steel site and to establish whether there is a relationship between the contamination at the site and the VOC contamination detected in nearby municipal water supply well (before treatment). Since the results of the groundwater investigation indicated that the site is not a current, significant source of the contamination in the lower aquifer, EPA determined that the extraction and treatment of the contaminated groundwater in the lower aquifer would not be appropriate. These findings were documented in an Explanation of Significant Differences, which was issued in August 2007.

In December 2007, the cleanup goals were met in the upper aquifer. Although the soil clean up objectives were met in September 2008, the ISVE system is still operating (since vapors are still being recovered). A Preliminary Close-Out Report, documenting the completion of construction at the site, was approved on August 30, 2007.

Five-year reviews are undertaken at sites to ensure that implemented remedies protect public health and the environment and that they function as intended by site decision documents. The first five-year review for the site will be performed before July 2012.

Site Facts: EPA initiated a search for Potentially Responsible Parties in January 2000; viable parties were not found.

Cleanup Progress

The vacuum extraction systems under the concrete slab of the former daycare and billiards club buildings and the ISVE system installed over the entire site area affected by soil gas contamination continue to treat the subsurface volatile organic compounds. It is estimated that over 63 pounds of VOCs had been removed from the soil subsurface through December 2008. As a result of the decontaminated of the Jackson Steel building, 10 drums of rinse water waste and 18 drums of solid waste were transported to a non-hazardous waste facility. One hundred seventy cubic yards of contaminated surface soil and contaminated material in the building sumps and trench, and in the dry wells have been excavated and disposed of at an EPA-approved off-site facility. In addition, as a result of the ISCO treatment, as of December 2007, the groundwater standards had been met in all monitoring wells in the upper aquifer .

Site Repositories

Town of North Hempstead, 200 Plandome Road, Manhasset, NY 11030.

Garden City Public Library, 60 Seventh Street, Garden City, NY 10550.

Mineola Village Clerk’s Office, 155 Washington Avenue, Mineola, NY 11501