Claremont Polychemical NPL Site Cooperative Agreement
NYS Registry Site No. 130015
USEPA Agreement No. V992800-00
Final Technical Report
June 2009

History

The Claremont Polychemical site (Site) is located in the industrial section of Old Bethpage Village at 501 Winding Road in Nassau County, New York. The Site property consists of a 1-story building, covering 40,000 square feet, situated on approximately 9.5 acres of land. About 47,000 people within three (3) miles of the Site depend on groundwater as their water supply. The nearest public supply well is 3,500 feet northwest of the Site.

Claremont Polychemical produced pigment for the coloring of plastics and inks, coated metallic flakes, and vinyl stabilizers from August 1966 through October 1980. The principal wastes generated were organic solvents, resins and wash wastes (mineral spirits). Concern for contamination was linked to a discovery in 1979 by the Nassau County Health Department (NCHD) of approximately 3,000 drums scattered about the property. By September 1980 most of the drums were sorted and either removed from the property or reused in the Claremont manufacturing process. NCHD detected a spill area, contaminated by organic solvents, east of the building. A subsequent removal action excavated the upper ten (10) feet of this area and staged it on a plastic liner. A groundwater monitoring well installed on the property during this time detected organic contamination directly beneath the property.

The Site was proposed for inclusion on the National Priorities List in October 1984 and was listed in June 1986. In September 1988, the United State Environmental Protection Agency (USEPA), Region II, Response and Prevention Branch performed work consisting of the over packing and/or stabilization of deteriorated containers, treatment basins, and aboveground tanks. A Remedial Investigation and Feasibility Study (RI/FS), dealing with the ultimate disposal of the above mentioned hazardous wastes, was completed in July 1989 and a Record of Decision (ROD) was signed on September 22, 1989. The remedy called for compatibility testing, bulking/consolidation, and treatment/disposal of the wastes at off site Resource Conservation and Recovery Act (RCRA)-permitted facilities. Remedial funds totaling $1,500,000 were provided to the USEPA, Region II, Removal Action Branch, which utilized its contractor to complete the implementation of the remedial action, referred to as Operable Unit 2 (OU2), in 1990.

A second, comprehensive RI/FS was initiated in March 1988. Under this RI/FS, USEPA sampled the surface and subsurface soil, the groundwater, underground storage tanks, and the building. The RI/FS findings indicated that soils contaminated with tetrachloroethene (PCE), located in the former spill area, constituted a potential threat to groundwater resources. Fifteen (15) underground tanks holding liquid and sludge wastes containing several organic compounds were also present on the property. Contents of the tanks were predominately volatile organic compounds (VOCs), namely, 2-butanone, toluene and xylenes. Heavy metals (e.g., copper, zinc, etc.) were present in dust accumulated throughout the process building. In addition, the shallow groundwater was found to be contaminated in excess of Federal and/or New York State

Maximum Contaminant Levels (MCLs) with PCE, trans-1,2-dichloroethene, trichloroethene, 1,1,1-trichloroethane, ethylbenzene, acetone, benzene, 1,1-dichloroethane, methylene chloride, xylenes and vinyl chloride; heavy metals detected in excess of Federal and State Standards included arsenic, chromium, lead and manganese.

A comprehensive remedy for the Site was documented in a September 1990 ROD and included: treatment of the underground storage tanks (OU1) (implemented by the USEPA, Region II, Removal Action Branch in August 1991); treatment of PCE-contaminated soils via low-temperature enhanced volatilization (LTEV) (OU3); treatment of the on-property VOC-contaminated groundwater via air stripping/carbon absorption (OU4); treatment of the off-property VOC-contaminated groundwater via air stripping/carbon absorption (OU5), and decontamination of the metals-contaminated building structure (OU6). The groundwater remediation strategy consists of two (2) separate and sequenced events, OU4 and OU5.

In September 1990, USEPA entered into an interagency agreement (IAG) with the USACE to perform the design of the above described OU3 LTEV soils treatment system, OU4 on-property groundwater treatment system, and the OU6 building decontamination. The design work for these remedial components was completed in February 1995. In September 1993, USEPA entered into a second IAG with the USACE for oversight of the construction activities at the Site. The USACE awarded a contract to Dow/Radian International/Dames and Moore Group in September 1995 for the implementation of these remedies.

The full-scale operation of the OU3 LTEV System began in November of 1996 and ended in December of 1996 with approximately 5,200 cubic yards of soils treated and backfilled on the property. Construction of the groundwater treatment facility to treat the VOC plume beneath the property began in May 1997. The treatment facility was fully operational as of February 2000, treating 400 gallons per minute, followed by reinjection back onto the property. The OU6 building decontamination work began in July 1998 and consisted of power washing walls and interior building structures to remove heavy metal contamination. During the OU6 building decontamination effort, a hole was discovered in the floor slab. Subsequent sampling detected an additional source of PCE soil contamination beneath the slab. Subsequent sampling detected an additional source of soil contaminated with VOCs and cadmium beneath the slab.

The off-property groundwater VOC plume (OU5) was addressed under the terms of the Financial Assistance Agreement between USEPA and the New York State Department of Environmental Conservation (NYSDEC) and the Municipal Response Action Reimbursement Agreement between NYSDEC and the Town executed on January 28, 2003. The off-property groundwater VOC plume (OU5) leaving the Claremont has been captured by the groundwater extraction wells and treatment system at the Old Bethpage Landfill since before January 1997. The September 1990 ROD for the Claremont site required treatment of the Claremont off-property VOC contaminated groundwater via air stripping/carbon absorption under OU5 which the USEPA was to build and maintain for ten (10) years for an estimated $15,620,400 (in 1990 dollars, approximately $22,270,995 in the year 2000 when the first Agreement was formed). The USEPA, NYSDEC and Town of Oyster Bay agreed that the Old Bethpage Landfill groundwater extraction well and treatment system was already performing the task of the proposed treatment system and that an agreement among the parties could be reached to operate the existing treatment plant to perform the remedy of OU5. The Municipal Response Action Reimbursement

Agreement which allowed the Old Bethpage landfill system to perform this remedy had an effective term from January 1, 1997 until the termination date of the contract, December 31, 2006, which was a total of ten (10) years.

In May 2002, USEPA began a pilot study to address the VOCs in the soil underneath the Process Building using a soil vapor extraction ("SVE") System. In April 2003, USEPA issued an Explanation of Significant Differences ("ESD") to the 1990 ROD to include additional actions. These actions include treating the VOCs in the soil under the former Process Building by operating an SVE System, maintaining the integrity of the Process Building's floor over time to prevent direct human exposure to cadmium-contaminated soil, as well as establishing institutional controls to ensure that 1) the Process Building's concrete floor remains undisturbed, and 2) future uses of the property are limited to commercial/light industrial uses. Periodic inspections and repairs of the Process Building's floor will be required as necessary. The maintenance, inspection and repair of the floor are considered operation and maintenance, for purposes of Section 104(c)(3) of CERCLA, 42 USC §9604(c)(3), and Section M of the Superfund State Contract for this Site.

In addition, approximately 20,000 yd3 of industrial/commercial demolition and construction debris located on the northern portion of the property was removed, and five (5) concrete-lined pits, which served as former wastewater treatment basins, were decommissioned in September 2003 as required by the ESD.

Assessment of Environmental Problems

Groundwater and soil contamination, by hazardous waste, was evident. Organic solvents, resins and wash wastes (mineral spirits) were the principal wastes generated. Two thousand (2,000) to three thousand (3,000) drums have been removed from the Site. Soil was contaminated to depths of at least ten (10) feet and groundwater contamination is evident. PCE (tetrachloroethylene) is a primary contaminant. PCBs, Toluene, 1,2-dichloroethylene, 1,1,1-trichloroethane, trichloroethylene and metals were detected in soil and groundwater samples in excess of State and Federal SCGs.

A plume of groundwater contamination exists in the area of this facility. An on-site pump and treat system is capturing the source area groundwater contamination and the Old Bethpage Landfill pump and treat system is capturing the off-site groundwater contamination under agreement between NYSDEC and the Town of Oyster Bay. The project is currently in the site management phase.

Assessment of Health Problems

Soil removal and groundwater treatment activities have reduced the potential for exposure to any residual site-related contamination. To reduce the potential for future exposures to contaminated soil vapor via the soil vapor intrusion pathway into the Process Building, a soil vapor extraction/air sparge system has been installed and controls have been developed to maintain the integrity of the building.

Cooperative Agreement Activities

Following are descriptions of activities conducted under the Cooperative Agreement for the Claremont Polychemical NPL Site:

The NYSDEC will be responsible for the following tasks under this LTRA:

Operation of the Existing OBL Groundwater Treatment Facility

The NYSDEC ensured continuous operation of the existing OBL Groundwater Treatment Facility and three (3) existing groundwater recovery wells (RW-3, RW-4 and RW-5) for a period of ten (10) years.

Groundwater Monitoring

The NYSDEC reviewed results of monitoring activities at the groundwater monitoring wells Claremont off-property remedial program, according to the protocols previously approved for the OBL groundwater treatment facility.

The Claremont off-property remedial program monitoring wells were monitored by the NYSDEC quarterly for the first two (2) years. Recovery wells were monitored semi-annually.

Data generated during the monitoring activities was evaluated by the NYSDEC to determine that the OBL Groundwater Treatment Facility and wells were operated as designed.

The NYSDEC transmitted to USEPA quarterly reports required under 40 C.F.R. § 35.6650.

The NYSDEC shall assisted USEPA, if requested, in obtaining access to the OBL Treatment Facility, all above-referenced wells, and any property necessary for the implementation of the LTRA.

Community Relations

The NYSDEC developed and implemented citizen participation plans for each of the subsites in order to provide information to the public and to obtain and respond to public comment at each significant remedial decision point.

Operation and Maintenance

The NYSDEC assumed responsibility for the Operation and Maintenance (O&M) of the off-property groundwater management system upon the completion of the LTRA. NYSDEC transmitted a plan for O&M prior to the completion of the LTRA.

Management of Contractual or Intergovernmental Agreements

The NYSDEC managed contractual and intergovernmental agreements entered into to perform work under the Cooperative Agreement, including: insuring that such agreements comply with all statutory and regulatory requirements; and, reviewing and processing payment requests submitted by contractors or entities performing work under intergovernmental agreements, and insure that all costs to be reimbursed under the Cooperative Agreement were eligible.

Present Conditions

Currently, the groundwater continues to be monitored, and the three (3) extraction wells are being operated to capture the plume. Soil removal and groundwater treatment activities have reduced the potential for exposure to any residual site-related contamination. To reduce the potential for future exposures to contaminated soil vapor via the soil vapor intrusion pathway into the Process Building, a soil vapor extraction/air sparge system has been installed and controls have been developed to maintain the integrity of the building. The Site may be delisted when all the groundwater monitoring wells have consistent sample results achieving the ROD cleanup goals.