

Chemical Insecticide Corporation

New Jersey

EPA ID#: NJD980484653

EPA REGION 2

Congressional District(s): 06

Middlesex
Edison Township

NPL LISTING HISTORY

Proposed Date: 10/26/1989

Final Date: 8/30/1990

Site Description

Site History: The Chemical Insecticide Corporation (CIC) Site is located in Edison Township. CIC owned the property located at 30 Whitman Avenue from 1954 to 1970 and used it for processing various pesticides. In the mid-1960s, the Edison Department of Health became concerned about odors, wastewater discharges and on-site fires. The Department ordered the facility to stop discharging wastewater, oversaw disposal of leaking drums to eliminate an odor problem, and ordered the closing of on-site lagoons. CIC declared bankruptcy in 1970. Subsequently, Piscataway Associates bought the 6-acre CIC property and demolished the production facilities. As part of a State-wide dioxin screening program, the New Jersey Department of Environmental Protection sampled soil from the site and found contamination, triggering more detailed investigations by EPA. Approximately 77,000 people live within 3 miles of the site. There are no permanent surface water bodies on the CIC site. Surface water run-off drains toward the northeast corner of the site where it discharges into an underground conduit, which flows into an unnamed tributary of Mill Brook. The unnamed tributary and Mill Brook runs near the site and may have been used for recreation. The residents near these tributaries and the residents directly surrounding the site obtain potable water from a public water supply system located eight miles from the site. Groundwater underlying the site is considered by New Jersey to be a Class II-A, a source of potable water. No current exposures to contaminated groundwater are known. The nearest domestic potable water well used for drinking water is up-gradient to the southwest and approximately two miles from the site.

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

Threat and Contaminants

Early actions (also known as Operable Unit 1 - OU1) taken to prevent exposure to site contaminants included the installation of the following: a perimeter fence around the site (to limit site access); the installation of an interim cap over a large portion of the site (to limit direct contact with contaminated soil); and a surface water run-off diversion system. The installation of the interim cap not only limited physical exposure, but it also prevented uncontaminated groundwater from leaching through the contaminated soils; however contaminants do exist in the groundwater. Previously collected samples from the surface run-off indicated that it contained arsenic and the herbicide dinoseb. It was noted that this run-off eventually entered an unnamed tributary of Mill Brook, ultimately the contaminants would bind to the creek (tributary) sediments. The contaminated sediments were excavated and disposed of as part of Operable Unit 3 (OU3), resulting in the disposal of approximately 13,500 cubic yards of sediments. Additional comprehensive sampling and analysis of site soils revealed that they were contaminated with: arsenic; organic pesticides (e.g., DDT, chlordane); herbicides (dinoseb); and other hazardous substances. A remedial action (Operable Unit 2 - OU2) was selected to address the contaminated soils, ultimately resulting in the excavation of approximately 207,000 cubic yards of contaminated soil from the CIC site and surrounding impacted areas. Hazardous and non-hazardous soils were transported via railcars to the proper treatment and/or disposal facilities. As previously mentioned above, the groundwater at the site is contaminated with arsenic, organic pesticides and other hazardous substances. The site does not pose a threat to any existing potable water source since the limited mobility of the contaminated groundwater at the site minimizes the potential for off-site migration. Final groundwater actions (Operable Unit 4 - OU4) include a long-term groundwater monitoring program and the implementation of Institutional Controls (ICs) in and around the area of the former CIC site.

Cleanup Approach

Contaminated Surface Water Runoff (OU1) - This interim remedial action included: (1) grading the site to minimize run-off; (2) installing an impermeable cap over the site; (3) installation of a surface-water run-off system to control the

release of uncontaminated run-off; and (4) installation of a fence along the entire site perimeter. This action was completed in September 1995.

Contaminated Off-Site Soil and Sediment (OU3) - A Record of Decision to address contaminated off-site soil and sediment was issued on March 28, 1995. Work, which began in July 1995, included excavation and off-site disposal of 13,800 cubic yards of arsenic-contaminated soil and sediment, followed by full restoration of off-site areas, stream beds, and wetlands. Work was completed in April 1997.

Site Soils and Source Materials (OU2) - A Record of Decision was issued on September 29, 2000 to address the contaminated soils and source materials through the implementation of excavation and off-site disposal. Soil excavation commenced in July 2003 and was completed in May 2005. At the completion of the project, approximately 207,000 cubic yards of contaminated soil were removed.

Groundwater (OU4): EPA issued a Record of Decision on December 22, 2003 which specified that a long-term groundwater monitoring program was necessary to evaluate the contaminated ground-water. Work on this OU began in 2006. A Technical Assistance, Inter-Agency Agreement (IAG) with the United States Army Corps of Engineers (USACE) was initiated in early 2006. "Base-line" (post OU2 remedy) ground-water monitoring operations were conducted on all existing monitoring wells in December 2006. In order to fill observed "data gaps", detected as a result of the 2006 base-line sampling event, a "temporary well-point" ground-water screening program (where ground-water samples are collected from temporary wells and not permanent wells) was implemented in summer 2007. This resulted in the installation of several additional monitoring wells. 2007, two additional rounds of ground-water sampling have been performed on all existing and newly installed wells. 2008 - sampling of the monitoring wells is expected to continue; however, ground-water contaminant concentrations have noticeably decreased, when compared to samples collected before the OU2 remedy.

Cleanup Progress

Completion of the above-described interim remedial action for OU1 included the installation of a high density polyethylene surficial cap, construction of a surface water run-off diversion system to collect uncontaminated surface water run-off from the cap and channeling it to a drainage system, and the installation of a security fence around the CIC site. These measures reduced the threat to the surrounding community and the environment by controlling the off-site migration of contamination by surface water run-off and preventing access and direct contact exposure to contaminated soil on-site.

Implementation of the remedy to address contaminated off-site soil and sediment (OU3), which included the excavation and off-site disposal of 13,800 cubic yards (20,000 tons) of contaminated soil and sediment found in and around Mill Brook has been completed. Restoration of this remediated area included extensive reconstruction of stream beds and stream banks. The restoration involved replacing subsoil and rip-rap for stabilization of stream banks, topsoil, and the planting of over 3,000 wetland and upland trees and shrubs. Post-remediation monitoring has shown that the cleanup goals were achieved and the disturbed creek areas have been restored.

The cleanup for on-site soils and source materials (OU2), which included the excavation and off-site disposal of approximately 207,000 cubic yards of contaminated material, was completed in May 2005. After completion, the remedial action prevented a direct contact pathway for human exposure and removed the source of the groundwater contamination. Excavated soils have been replaced with clean backfill and the site has been returned to grade and seeded. Combined, these actions have helped return the site to future use by an array of interested parties.

The selected remedy for the groundwater (OU4) in the December 2003 Record of Decision specified that institutional controls (ICs) be put in place to prevent any new production wells from being installed in the area of the ground-water contamination, and that a long-term groundwater sampling program be instituted to monitor the groundwater contamination, evaluate the migration of the plume over time, and make sure the community is protected from potential exposures. To date, several rounds of ground-water sampling have been performed. In order to fill "data-gaps", new monitoring wells were installed. All data from the several rounds of ground-water sampling have shown that site-related contaminants (previously detected in the ground-water, prior to the implementation of OU2) have decreased. Several additional rounds of ground-water sampling are anticipated.

Site Repositories

US Environmental Protection Agency 290 Broadway New York, NY 10007

Edison Library 340 Plainfield Avenue Edison, New Jersey 08817

Metuchen Library 480 Middlesex Avenue Metuchen, New Jersey 08840