

Imperial Oil Company, Inc./ Champion Chemicals

New Jersey

EPA ID#: NJD980654099

EPA REGION 2

Congressional District(s): 12

Monmouth
Morganville

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

Site Description

The 15-acre Imperial Oil Co./Champion Chemicals site consisted of six production, storage, and maintenance buildings and 56 above-ground storage tanks. Imperial Oil Co. blended oil on the site, which was leased from Champion Chemicals. Several companies have operated at the site in the past. One, a reprocessor of waste oil, may have discharged wastes to a nearby stream. Another company which operated at the site produced arsenical pesticides. The site formerly contained a waste pile contaminated with polychlorinated biphenyls (PCBs). The process area is protected by a fence that completely encloses it. A fire pond is located in the northeastern corner of the property line. A small stream from the pond eventually flows into Lake Lefferts. Samples collected from Lake Lefferts during the remedial investigation indicated that the lake is not significantly impacted by the contaminants found at the Imperial Oil site. Also located around the site are a wetland and wooded area.

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

Threat and Contaminants

The ground water is contaminated with volatile organic compounds (VOCs), PCBs, metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons, and phthalates, a plastics by-product. The surface soil is contaminated with heavy metals including lead, arsenic, and PCBs. Off-site sediments, now remediated, contained numerous contaminants including arsenic, lead, phthalates, and PCBs. Confirmatory sampling is planned for the sediments to determine if cleanup standards have been met. Surface water contains arsenic. Potential health threats include direct contact, accidental ingestion, or inhalation of airborne contaminated dust, groundwater, or soil. Wetland areas were also affected by site contaminants and were remediated.

Cleanup Approach

This site is being addressed by immediate actions and three long-term remedial phases focusing on cleanup of off-site soil and sediment contamination, on-site soil contamination, and ground water contamination

Response Action Status

Immediate Actions: In 1991, EPA excavated and disposed of an on-site waste filter clay pile pursuant to a removal action. An impermeable tarp was placed over the remaining waste filter clay material to prevent the infiltration of rainwater and human contact. The waste filter clay material was contaminated with VOCs, PCBs, metals, and petroleum hydrocarbons. In 1991, EPA installed and began operation of an oil/water treatment system to remove an oily layer or "floating product" from the surface of the ground water beneath the site. The New Jersey Department of Environmental Protection (NJDEP) has periodically pumped floating product from the surface of the groundwater beneath the process area. To date, nearly 25,000 gallons of PCB-contaminated oil have been recovered from these extraction wells. Also, EPA excavated and removed several buried drums that were discovered during the installation of the floating product recovery and treatment system. In 1997, EPA posted warning signs on foot and bicycle trails near the site and the tarp covering the remaining waste filter clay pile was replaced to prevent any human contact with the contaminants and to limit the migration of the contamination. In April 2002, EPA excavated and disposed of a 25 foot by 25 foot area of soil containing a tar-like material discovered outside of the fenced area. The presence of elevated levels of PCBs and lead in this material may have presented a dermal contact threat to trespassers. In August 2007, EPA arranged for 24-hour security at the site, given that Imperial Oil declared bankruptcy and ceased operations at the site during July 2007.

Off-Site Contamination: In 1990, EPA selected a remedy for operable unit one (OU1) involving off-site contamination.

The remedy called for excavation and off-site disposal of contaminated soils from wetland areas located north of the Imperial facility, restoration of affected wetlands, and installation of a fence to control access to the contaminated soil areas. The design and implementation of the cleanup was managed by NJDEP. In 1991, EPA installed a fence around the off-site contaminated area. Additional sampling of nearby residential properties, wetlands and surface waters including Lake Lefferts was performed as part of the design effort. The additional sampling demonstrated that arsenic and lead were found in high concentrations on nearby residential properties, in the wetlands, and in Birch Swamp Brook. In 1996, the U.S. Geological Survey completed an investigation into the sources of elevated arsenic contamination in soil in the vicinity of the site. The investigation found elevated concentrations of site-related arsenic in the soils on four residential properties. In September 1997, EPA issued an Explanation of Significant Differences (ESD) to explain changes made to the OU1 remedy. In addition to the remediation of the originally identified off-site areas, the ESD provided for the excavation and off-site disposal of contaminated soils found on the residential properties, and the installation of engineering controls in the areas surrounding the fire pond, the wetlands, and Birch Swamp Brook to prevent the recontamination of the off-site areas. In March 1998, EPA initiated the excavation and off-site disposal of the contaminated soils on the residential properties. In August 1998, EPA completed the excavation work and restored the properties. In July 2002, EPA issued a second ESD to explain additional changes made to the OU1 remedy. The second ESD provided for the cleanup of sediment in the Birch Swamp Brook from the Fire Pond to Texas Road, and the cleanup of contaminated soil found on two residential properties located adjacent to the Birch Swamp Brook. The NJDEP implemented the OU1 remedy in 2004.

On-Site Contamination: In September 1992, a Record of Decision was issued for Operable Unit 2 (OU2) to address the remediation of contaminated ground water. The remedy calls for the extraction of the contaminated ground water, treatment of the extracted ground water via precipitation and carbon adsorption, and discharge of the treated water to Birch Swamp Brook. The remedy also includes the continuation of the floating product extraction and treatment system.

NJDEP completed a remedial investigation to determine the nature and extent of the soil contamination located in the vicinity of the Imperial Oil facility, which is referred to as Operable Unit 3 (OU3). In 1998, NJDEP prepared a Feasibility Study Report to evaluate cleanup alternatives for addressing the soil contamination found in the vicinity of the Imperial Oil facility. A Record of Decision for OU3 was issued in September 1999. The OU3 remedy calls for the excavation and off-site disposal of contaminated soil, removal and off-site incineration of floating product, dismantling of site buildings and tank farms, as necessary to complete excavation of contaminated soil and removal of floating product, and restoration of wetlands affected by cleanup activities. Consistent with the OU3 remedy, EPA dismantled an on-site abandoned masonry building which was in danger of collapse during the Fall of 2000. Demolition of the masonry building, and disposal or recycling of the resulting debris was completed in November 2000. From 1999 through 2005, NJDEP conducted design work for OU3, including the performance of pre-design surface and subsurface soil sampling events. In late 2006, EPA became the lead agency for the site. In January 2008, EPA initiated the removal of on-site tanks and tank contents as well as remaining industrial buildings, consistent with the OU3 remedy. Tank removal at the site was completed in August 2008, along with the demolition of six buildings on site. Only a small maintenance building that houses the surface run-off treatment system and the floating product recovery system has been left in place. EPA completed the design of the OU3 remedy in December 2008.

Recovery Act Project Activity

EPA will use the \$10-25 million in Recovery Act funds allocated to this site for remediation of contaminated soils (OU3). Construction of the OU3 remedy began in October 2009. Initial activities included pre-excavation sampling to better define the limits of excavation and placement of the slurry wall. Pre-excavation sampling was followed by construction of the slurry wall which facilitated dewatering the area to be excavated. Excavation of contaminated soils and floating product began in July 2010. Backfill with clean fill, final grading and restoration of wetlands is scheduled to be completed by December 2011.

Cleanup Progress

The immediate actions taken at this site have reduced the risks associated with the contaminated ground water and soil.

In 1991, a fence was installed around Off-site Areas 1 and 2 to prevent any human contact with contaminated soils prior to the planned excavation of this material. In November 1991, EPA excavated and disposed of approximately 660 cubic yards of PCB-contaminated material from a waste filter clay pile located on site. The contaminated soil beneath the former pile is covered with an impermeable material to prevent the infiltration of water and human contact. Also, EPA has installed extraction wells and an oil/water treatment system to remove the floating oil layer from the ground water. To date, over 25,000 gallons of PCB-contaminated oil have been removed and disposed of off-site.

In the spring of 1998, EPA began to excavate and dispose of contaminated soil found on four residential properties. The work was completed in August 1998. A total of 6,488 cubic yards of contaminated soil were excavated and disposed of from the residential properties.

During 2004, NJDEP excavated and disposed of 14,899 cubic yards of contaminated soil and sediment from the Birch Swamp Brook, Off-site Areas 1 and 2, and two residential properties adjacent to the Birch Swamp Brook, as part of the Operable Unit One cleanup. EPA developed and implemented a confirmatory sampling program in 2009-2010 to determine if all cleanup standards had been met. Results are currently under review and will indicate whether additional remedial activity will be required.

In August 2008, EPA completed the removal of tanks and tank contents at the site, and the demolition of six production, storage and maintenance buildings on site. The removal of the tanks and tank contents will mitigate the potential for accidental discharge of oils at the site. The work included in 2008 included the following major actions among others: demolition of six on-site buildings, including the recycling of over 900 tons of concrete and disposal of about 50 tons of demolition debris; transportation and disposal of 1,625 pounds of laboratory chemicals that had been abandoned at the site; recycling of approximately 60,000 gallons of oil; recycling of over 400 tons of scrap metal generated from the demolition of 58 above-ground storage tanks; disposal of approximately 40,000 pounds of PCB Oil/Sludge and 10,000 gallons of hazardous liquid; recycling of 40 yards of empty drums regulated under the Resource Conservation & Recovery Act (RCRA), and over 100 pounds of hazardous solids; and on-site treatment of approximately 1,000,000 gallons of stormwater.

Remedial Action activities for OU3 began in October 2009. Initial activities included pre-excavation sampling to better define the limits of excavation and placement of the slurry wall. Pre-excavation sampling was followed by construction of the slurry wall which facilitated dewatering the area to be excavated. Excavation of contaminated soils and floating product began in July 2010. Backfill with clean fill, final grading and restoration of wetlands is scheduled to be completed by December 2011. The Imperial Oil site received American Resource and Recovery Act (ARRA) funding in fiscal year 2009. The \$25.2 million in ARRA funding for this site is being used to initiate remedial action activities associated with the clean up of on-site soils. Mobilization for the initiation of field activities occurred in October 2009. As reported in recovery.gov, approximately 40 jobs were created at this site for the current reporting period. For additional information regarding jobs created please refer to the recovery.gov website.

Site Repositories

Marlboro Township Municipal Building Mayor's Office 1979 Township Drive Marlboro, New Jersey 07746 (908) 536-0200

New Jersey Department of Environmental Protection Bureau of Community Relations 401 East State Street, 6th floor
Trenton, NJ 08625-0413 (609) 984-3081