

# 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 consists 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. Surrounding the site are many areas that could be critically affected by the contaminants in the soil and water. A fire pond, located in the northeastern corner of the property line, was contaminated. 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. Off-site sediments contained numerous contaminants including arsenic, lead, phthalates, and PCBs. The surface soil is contaminated with heavy metals including chromium, lead, and arsenic, as well as PCBs. Surface water contained arsenic. Potential health threats include direct contact, accidental ingestion, or inhalation of airborne contaminated dust, groundwater, or soil. Wetland areas were also affected.

## 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. 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 OU1 remedy was implemented in 2004.

**On-Site Contamination:** In September 1992, a Record of Decision was signed for Operable Unit 2 (OU 2) 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 has 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 signed 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. EPA is currently completing design of the OU3 remedy. In January 2008, EPA initiated the removal of on-site tanks and tank contents, consistent with the OU3 remedy. Tank removal at the site is scheduled for completion in June 2008.

## 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, NJDEP has removed and disposed of over 20,000 gallons of PCB-contaminated oil.

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 was 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.

In January 2008, EPA began the removal of tanks and tank contents at the site. The removal of these materials will mitigate the potential for accidental discharge of oils at the site.

## 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