

MD-143 Baltimore City
<p>Since 1948, activities at the Chevron Chemical - Baltimore Refinery site have included refinery operations, asphalt production and storage, chemical transport, and research and development.</p> <p>May 1985 PA by WAS found no evidence of buried tank bottoms on the property.</p> <p>In January 1987, 8,500 gallons of unleaded gasoline spilled. In January 1988, 100-150 gallons of benzene spilled. Affected soils were analyzed, deemed clean by the state, and returned to excavation sites.</p> <p>August 1989 SI by NUS revealed benzene, toluene, ethylbenzene, total xylenes, naphthalenes, substituted benzenes, cyclohexane, PAHs, methylnaphthalene, arsenic, chromium, and lead in significant concentrations in soil and/or groundwater samples.</p> <p>EPA assigned NFRAP status to site in October 1990.</p>

Chevron Chemical - Baltimore Refinery
 Baltimore, MD

Site Location

The Chevron Chemical - Baltimore Refinery is a 75-acre active asphalt terminal located at 1955 Chesapeake Avenue in Baltimore City. Chesapeake Avenue borders the facility on the north, and Fairfield Road borders to the west. A small residential area is located northwest of the site. A series of tank farms belonging to Vista Chemicals borders to the south of the facility, and the Patapsco River shoreline defines the borders to the east. A 5-acre wetland area lies within 1/2 mile southwest of the facility.

The refinery site includes several tank farms, each housing two to four storage tanks, a 286,000-gallon capacity "observation" pond, an enclosed separator unit, several monitoring wells, and an outfall pipe, which discharges directly into the Patapsco River. The entire perimeter of the property is defined by an 8-foot cyclone fence topped with barbed wire. Surface and groundwater flow east-northeast and discharge directly into the Patapsco River.

Site History

The current facility property was originally owned by Conoco. In 1948, Chevron USA (known then as American Bitumuls and Asphalt Company) bought the property from Conoco, and from 1948 until 1957, the facility operated primarily as a refinery. From 1957 until 1983, facility operations included asphalt production, chemical transport divisions, and research and development. In 1983, the facility was converted from refinery status to terminal status, limiting the operations to the storage and

production of asphalt products. Current plant operations include the production of paving-grade asphalt, asphalt emulsions, and cut-back asphalt.

Waste oils generated at the plant include the oils that may leak from the spouts of hoses used to fill transport trucks. The oil is collected and placed in a separator unit, where the oils are skimmed from the surface of the water. The reclaimed "slop oil" is stored in a 55,000-barrel storage tank; the majority is maintained for other uses throughout the plant. The wastewater from the separator unit is held in an "observation" pond for an average of 12 hours before it is discharged into the Patapsco River. Chevron currently holds an Industrial National Pollutant Discharge Elimination Systems permit (date of issuance unspecified).

Environmental Investigations

In May 1985, the Maryland Waste Management Administration (WAS) conducted a Preliminary Assessment (PA) of the facility to determine if two leaded tank bottoms were buried

between two above-ground storage tanks. According to plant officials, burial probably occurred before 1948. No evidence of buried tank bottoms was found.

Two spill incidences were reported to the WAS. In January 1987, 8,500 gallons of unleaded gasoline spilled from a leaking Conoco gas line, and in January 1988, 100-150 gallons of benzene spilled from a leaking benzene pipeline. In both instances, the affected soil was removed and placed on plastic to dry. After the soil was tested and declared clean by the state, it was returned to the excavation site.

In August 1989, the NUS Corporation conducted a Site Inspection (SI) of the Chevron Chemical - Baltimore Refinery. Soil and groundwater samples were obtained. The highest overall concentrations of organic contamination were observed in subsurface soil samples collected from the previous spill sites; identified contaminants at these sites included benzene ($\leq 6,600$ ug/kg), toluene ($\leq 180,000$ ug/kg), ethylbenzene (120,000 ug/kg), total xylenes ($\leq 620,000$ ug/kg), naphthalenes ($\leq 135,000$ ug/kg), substituted benzenes ($\leq 1,444,000$ ug/kg), cyclohexane (14,000 ug/kg), polycyclic aromatic hydrocarbons (PAHs; $\leq 99,900$ ug/kg), and methylnaphthalene ($\leq 29,000$ ug/kg). With the exception of lead (elevated level of 460 mg/kg detected at the gasoline spill site only), metal concentrations in on-site soils were below levels typically observed in unpolluted soils in the eastern United States. Several petroleum-related volatile organic compounds were detected in well samples at levels exceeding set or recommended drinking water standards, including benzene (84-4,900 ug/l), ethylbenzene (25-960 ug/l), toluene (100-2,900 ug/l), and total xylenes (170-6,300 ug/l). In addition, arsenic (1.7-19.7 ug/l), chromium (64-4,940 ug/l), and lead (9.1-59.7 ug/l) were detected in levels exceeding recommended drinking water standards.

Current Status

Based on the 1989 SI by NUS Corporation, the U.S. Environmental Protection Agency (EPA) assigned the Chevron Chemical - Baltimore Refinery site No Further Remedial Action Planned (NFRAP) status in October 1990. Remediation of petroleum related contamination has been handled by the WAS Oil Control Program. Future investigations or remediation at the site pursuant to the release of hazardous substances will be addressed by the State Superfund Division.

Reference

Site Inspection of Chevron Chemical - Baltimore Refinery, prepared by the NUS Corporation, Superfund Division, for the Hazardous Site Control Division, U.S. Environmental Protection Agency, July 1990.