

# American Cyanamid

## New Jersey

EPA ID#: NJD002173276

### EPA REGION 2 Congressional District(s): 07

Somerset

Bridgewater Township

#### NPL LISTING HISTORY

Proposed Date: 12/1/1982

Final Date: 9/1/1983

## Site Description

The site is located in the southeastern section of Bridgewater Township, Somerset County, New Jersey. The site, approximately 575 acres in size, is located adjacent to the Raritan River and lies above the Brunswick Aquifer, New Jersey's second largest source for drinking water. On the site are 27 Areas of Concern (AOC), both active and inactive, which have been used for disposal of various chemical sludges and other wastes. Investigations conducted by the New Jersey Department of Environmental Protection (NJDEP) have documented groundwater and soil contamination. The site is fenced and restricted. Approximately 14,000 people live within a three mile radius of the site. The closest home is 2,000 feet away, and 30 private wells lie close to the site. American Home Products Corporation, now known as Wyeth, purchased American Cyanamid Company in 1994 and assumed full responsibility for environmental remediation at the site. NJDEP is the lead agency for the site.

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

## Threat and Contaminants

Out of 27 AOCs identified at the site, 16 were determined to be potentially contributing to ground water contamination and, therefore, deemed necessary to be addressed under CERCLA. These 16 AOCs have since been identified using numbers, which include: AOC #s 1, 2, 3, 4, 5, 11, 13, 14, 15, 16, 17, 18, 19, 20, 24, and 26. The other 11 AOCs were either never used, contain only river silt from the facility's former river water treatment plant, contain emergency fire water, have been closed or are being closed in accordance with approved Resource Conservation and Recovery Act (RCRA) closure plans. AOC #s 6, 7, 8, and 9A are being closed under RCRA since they were classified as Treatment/Storage/Disposal (TSD) facilities. The 16 CERCLA classified AOCs were used for storing by-products of rubber chemical production, dye production, and coal tar distillation, as well as, for disposal of general plant waste and demolition debris. These AOCs were estimated to contain 877,000 tons of waste material, consisting mainly of volatile organic compounds (VOCs), semi-VOCs and metals.

Previous site-investigations have found groundwater underlying the area, not considered a source of drinking water, is highly contaminated with metals and VOCs, such as benzene, chlorobenzene, ethylbenzene, xylene from site production activities. Sludges and soils previously sampled in on-site impoundments contain metals, cyanide, and VOCs. Site soils have been found to contain polychlorinated biphenyls, polyaromatic hydrocarbons, and chromium.

## Cleanup Approach

Due to the size and nature of contamination, this site was divided into seven Operable Units (OUs). The seven OUs are identified as:

- OU1: Area of Concern #s 11, 13, 19, and 24 - OU2: Area of Concern #s 15, 16, 17, and 18 - OU3: Area of Concern #s 1, 2, 3, 4, 5, 14, 20 and 26 - OU4: Site Soils - OU5: Site Groundwater - OU6: Hill Property - OU7: Site-related Wetlands

Records of Decisions (RODs) have been signed for OU1 (9/28/93), OU2 (7/12/96), OU3 (9/28/98) and OU6 (7/12/96). Remedial decisions for OU4 (site-wide soils), OU5 (ground water) and, OU7 (wetlands) were scheduled to be addressed over the next few years.

In March of 2004, Wyeth submitted a proposal to NJDEP and EPA seeking a suspension of all remedial action work for the remedy under OU3, and proposed a reassessment for the entire site through an action labelled "Comprehensive Site-Wide Feasibility Study". More specifically, Wyeth proposed the following: to develop a plan to reassess the entire

OU3 remedy due to a portion of it considered to be infeasible; reassess all other outstanding ROD remedies; complete the remedial investigations and feasibility studies for the remaining OUs (site-wide soils, ground water, and wetlands); and, evaluate potential future-use plans for the entire site. All phases, once combined under a single comprehensive program, would result in a single ROD for the entire site. This approach hopes to complete all site-remediation and ensure that reuse of the site is achieved in a shorter time frame.

## Cleanup Progress

(Actual Construction Underway)

In June of 2004, all remedial activities at the site were suspended pending the results of a "Comprehensive Site-wide Feasibility Study" being performed by WHC. However, the following serves as progress of the OUs to date:

OU1 ROD signed on September 28, 1993 - This ROD addresses Area of Concern #s 11, 13, 19 and 24. The selected remedy includes solidification with consolidation into the on-site RCRA Permitted AOC #8 Facility. The remediation of AOC #s 11 and 19 are complete. Ground water monitoring is currently being performed quarterly to assess influences from AOC #s 19 and 24 on the water quality of the Raritan River.

OU2 ROD signed on July 12, 1996 - This ROD addresses AOC #s 15, 16, 17 and 18. The selected remedy components for AOC #s 15 and 16 are: excavation of the material in AOC #16 and consolidation into AOC #15; construction of a cap (synthetic liner); and, ground water monitoring. For AOC #17: excavation of the material, solidification; and, placement of the material into AOC #8. For AOC# 18: construction of a fence, perform berm improvements where necessary; maintenance of natural vegetation; and, ground water monitoring. The remedy for AOC #s 15 and 16 was modified by NJDEP with an Explanation of Significant Differences (ESD) on November 30, 1998. The ESD selected an alternative remedy consisting of recycling of the material (iron oxide) within both AOC #s 15 and 16. The recycling started in the spring of 2000 and is expected to continue for up to 20 years. The remediation of AOC #17 has not been initiated. The closure of AOC #18 has been completed.

OU6 ROD signed on July 12, 1996 - This ROD addresses the Hill Property portion of the site. The selected remedy is called "No Further Action with Ground Water Monitoring". This entails: recovery of the residual ground water contamination; ground water monitoring; and, maintaining water use restrictions established under a NJDEP Classification Exception Area (CEA) until all of the residual ground water contamination has been recovered. OU6 (the Hill Property portion of the site) was deleted from the NPL on December 29, 1998.

OU3 ROD signed on September 28, 1998 - This ROD addresses AOC #s 1, 2, 3, 4, 5, 14, 20, and 26. These AOCs are the most contaminated at the site. Remediation of the material from the AOCs include: for AOC #s 1 and 2, high BTU tar is treated through Low-Temperature Thermal Treatment (LTTT) and placement of treated material in AOC #8; for AOC #s 4, 5 (wet), 14, and 20, low BTU tar is treated through biotreatment and placement of treated material in AOC #8; for part of AOC #3, material (tar mixed with soil fill) is treated through LTTT and placement of treated material in AOC #8; for AOC #s 5 (dry) and 26, non-hazardous material consolidated in AOC #8; and, for AOC #s 3, 4, 5, 14 and 20, general plant debris of AOCs is consolidation in AOC #8. For the remediation of OU3, EPA designated AOC #8 in the ROD as a Corrective Action Management Unit (CAMU) in accordance with RCRA regulations originally promulgated in 1993. For AOC #s 1 and 2, a Pilot Test was conducted on-site during the Fall-Winter of 2000. Material from AOC #s 14 and 20 was excavated, combined and placed in managed stockpiles. Pilot tests indicate that the aerobic biotreatment may not be implementable for this material. An ESD is being proposed to change the remedy for this material. For AOC #s 5 (dry) and 26, approximately 42,981 cubic yards of material have been excavated, solidified with cement, and placed in the AOC #8. Additionally, some debris excavated from AOC #5 (dry) was subsequently placed in AOC #8. There are no further actions on this OU pending the results of the site-wide study.

OU4 Surface Soils - A 1992 Surface Soils Remedial/Removal Action Program was completed which addressed all areas of surface soil contamination that posed a potential risk to worker health and safety. The program included excavation and off-site disposal of Polychlorinated Biphenyl (PCB)-contaminated soils, excavation and disposal of Polynuclear Aromatic Hydrocarbon (PAH)-contaminated soil, capping of another PAH-contaminated area (near AOC #14), as well as placement of a geotextile, soil and vegetative cover over a chromium-contaminated area.

OU5 Ground Water - To control ground water contamination related to the site, Wyeth operates bedrock production wells with a minimum pumping rate of 650,000 gallons per day. A 1983 study (Lawler, Matuskey, and Skelley) concluded that ground water flow from the site does not have a measurable impact on water quality in the Raritan River upstream of the Calco Dam and above the Cuckolds Brook discharge to the river. In September 2003, the RCRA Corrective Action Program determined that the migration of contaminated groundwater at the site is under control. An additional investigation has been underway with the results expected to be included in the Comprehensive Site-Wide Feasibility Study.

OU7 Site-related Wetlands (Natural Resource Assessment) - Under a Natural Resource Assessment, Wyeth collected

sediment and surface water samples in May and June 2000, and a Data Summary Report was issued to NJDEP and EPA in November 2000. A Human Health Risk Assessment Report (March 28, 2007) and Baseline Ecological Risk Report (July 1, 2005) were approved by NJDEP and EPA.

## **Site Repositories**

EPA Region 2, 290 Broadway - 18 Floor, New York, NY 10007-1866