

# Akzo Nobel Chemicals, Inc.

1835 Schoolhouse Road  
Delaware City, DE 19706  
Congressional District 1  
EPA ID #: DED980551667  
Last Updated: 6/30/2009

## Current Progress at the Site

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The Phase I RCRA Facility Investigation was completed between January and June 1999. The scope of the Phase I RFI included the characterization of the soil quality at several locations throughout the Carbon Disulfide manufacturing plant (includes the areas of the site described below in the Site Description Section), and an evaluation of the site-wide hydrogeologic conditions.

The RFI Phase II field investigation was implemented in May of 2001. The Phase II RFI investigation consisted of confirmatory soil sampling in the Carbon Disulfide manufacturing plant and site wide groundwater quality investigation east of the groundwater divide beneath the agricultural parcel. A second round of groundwater samples were collected the week of November 17, 2001. The RFI Phase II Report was approved on May 5, 2003. Based on the findings of the RFI investigations a determination was made to cap the Barren and Capped Landfill Areas as an interim measure. The interim measure cap design proposal for the Barren and Capped Landfill Areas was finalized and approved on September 11, 2006. In addition, it was determined that further investigation to delineate the tetrachloroethylene (PCE) plume detected in the Carbon Disulfide manufacturing plant area during the site wide groundwater quality investigation was warranted. The PCE plume investigation was conducted in March of 2003. Based on the results of the March 2003 sampling, quarterly monitoring of the PCE Plume commenced on May 22, 2006. The data was collected to identify seasonal trends and to more definitely determine the extent of the off-site PCE contaminant plume. Four quarters of monitoring have taken place to date in May, August, November of 2006, and early of 2007. Submittal of the quarterly groundwater monitoring report is scheduled to be submitted in early 2008.

On May 25, 2001, it was determined that the Human Exposures Environmental Indicator has been met. On September 27, 2007 it was determined that the Groundwater Under Control Environmental Indicator was met.

Construction of the cap for the Barren and Capped Landfill Areas was completed on October 29, 2007.

On June 16, 2009, the revised Corrective Measures Study (CMS) summarizing the remediation alternatives proposed for this site was submitted to EPA for review and approval. The revised CMS is currently under review by EPA.

## Site Description

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The Akzo Nobel Chemicals, Inc. (Akzo) site is located in Delaware City, Delaware, 2.5 miles northwest of Delaware City in New Castle County Delaware. The property is bordered on the

west by Route 14, on the north by the Conrail Railroad tracks, on the east by Schoolhouse Road, and on the south by Formosa Plastics, American Mirrex and Route 72 Wrangle Hill Road. The Akzo site consists of a decommissioned Carbon Disulfide manufacturing plant (including closed-loop process units, wastewater treatment system, storage and loading areas and underground storage tanks for gasoline and an unknown substance, two land disposal areas; Barren Area and Capped Landfill, and two small wetland areas), situated on a 52 acre area; a 123 acre Agricultural Parcel; and a 16 acre undeveloped parcel. The plant generated carbon disulfide and sodium hydrosulfide. Sodium hydrosulfide and waste oil were the only documented hazardous waste constituents stored in the drum storage area. Off-specification sulfur and ceramic brick debris are the known materials disposed of in the Barren Area and the Capped Landfill.

The plant was constructed and began operation in 1960 under the original ownership of the Stauffer Chemical Company (Stauffer). Akzo acquired the site from Stauffer on or about December 21, 1987 and continued to operate it until 1992, when the facility was dismantled and closed under the supervision of the Department of Natural Resources and Environmental Control (DNREC).

## **Site Responsibility**

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RCRA Corrective Action activities at the Akzo facility are being conducted under the direction EPA in partnership with DNREC. The investigation and any necessary clean up activities are being implemented in accordance with the federal Corrective Action Order that was entered on December 30, 1994 and became effective on July 25, 1995.

## **Contaminants**

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The monitoring results of the PVC containment system identify volatile organic compounds (ethylene dichloride, vinyl chloride monomer and trichloroethylene) as the contaminants of concern in groundwater. Under the previous ownership of Stauffer, in 1990, PVC resin material and resin contaminated soil were excavated under the PVC project (ROD 9/30/86) from the adjacent property and on the border of the Barren area of the Akzo Facility. Analytical results from the Phase I RFI investigation identify that a small amount of Resin material was detected in one sample location toward the center of the Barren area. The sample was collected at a depth of 3 to 5 feet. Potential contaminants of concern in the soil within the plant area are 1,2-dichloroethane, trichloroethylene, tetrachloroethene, pentachlorophenol, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene and hexavalent chromium. The findings of the RFI Phase II confirmatory soil sampling of the Carbon Disulfide manufacturing plant area presented in the draft RFI Phase II Report indicated that: benzo(a)pyrene, PCB(Arochlor 1260), barium, chromium, copper, iron, lead, manganese, nickel, and zinc are contaminants of concern in the sediment sample collected. Based on the groundwater quality sample results from the RFI Phase II investigation, metals (arsenic, nickel, beryllium, chromium hexavalent, and manganese) and chlorinated volatile compounds (vinyl chloride, 1,2-dichloroethane, 1,2-dichloropropane, trichloroethylene, and tetrachloroethene) are contaminants of concern in the groundwater for this facility.

## **Community Interaction**

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The facility is located in a predominantly industrial area.

# Government Contact

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For more information about EPA's corrective action web page, including Environmental Indicators, please visit our site at: [www.epa.gov/reg3wcmd/correctiveaction.htm](http://www.epa.gov/reg3wcmd/correctiveaction.htm)