

NPL Site Narrative for Bofors Nobel, Inc.

BOFORS NOBEL, INC. Muskegon, Michigan

Conditions at proposal (June 24, 1988): Bofors Nobel, Inc., manufactured benzidine and 3,3-dichlorobenzidine (DCB) on a 50-acre site in Muskegon, Muskegon County, Michigan, during 1960-76. Process water consisting mostly of calcium sulfate and the two chemicals was disposed of in unlined lagoons. The dikes around the lagoons failed in 1975, releasing an estimated 2 million gallons of waste into nearby Big Black Creek. The lagoon area was fenced in the summer of 1987.

Bofors Nobel (a subsidiary of Nobel Industries, a Swedish Company) manufactured herbicides from 1976 to early 1987, when it sold the plant to Lomac, Inc. Process wastes are transported to a hazardous waste facility regulated under Subtitle C of the Resource Conservation and Recovery Act.

In September 1976, Bofors Nobel and the State of Michigan signed a Consent Judgment requiring the company to conduct a hydrogeological study, investigate Big Black Creek, excavate sludges and contaminated soils, place them in an on-site landfill approved by the Michigan Department of Natural Resources (MDNR), install and operate a ground water purge well and treatment system to intercept flow to Big Black Creek, maintain a ground water monitoring network, define and clean up any off-site contamination, and maintain funds to ensure that proper cleanup is carried out.

The purge well system has been operating since 1976; water is pumped to the surface, treated in an on-site plant with an activated-carbon system and activated sludge system, and discharged to the municipal sewer system.

Data collected in 1982 by Bofors Nobel's monitoring program indicate that wells on-site and downgradient of the site are contaminated with benzidine, DCB, aniline, benzene, tetrachloroethylene, 1,2-dichloroethane, and other compounds. An estimated 6,400 people obtain drinking water from private wells within 3 miles of the site. The monitoring also found benzidine and DCB in sediments in Big Black Creek downstream of the site as far as Mona Lake 3 miles away. The creek is used for recreational activities.

In October 1987, Bofors Nobel filed for bankruptcy under Chapter 11 of the Federal bankruptcy code. As part of the filing, the company agreed to provide EPA and the State with a portion of its assets in exchange for an agreement not to sue for existing contamination at the site.

The facility acquired Interim Status under Subtitle C of the Resource Conservation and Recovery Act (RCRA) when the owner filed a Notification of Hazardous Waste Activity and Part A of a permit application. This site is being proposed for the NPL because it satisfies a component of EPA's NPL/RCRA policy: the owner has demonstrated inability to finance appropriate remedial action by invoking bankruptcy laws.

Status (March 31, 1989): With EPA oversight, the company is conducting a remedial investigation. The first phase was completed in early July 1988. The data collected are under review.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see

the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.