

BOFFANO COLOR 915012

**REDUCTION OF
TOXICS LOADINGS TO
THE NIAGARA RIVER FROM
HAZARDOUS WASTE SITES
IN THE UNITED STATES:**

OCTOBER 1999

*A Report by the United States Environmental Protection Agency
and the New York State Department of Environmental Conservation*

October 1999

BUFFALO COLOR -- AREA D

Site # 120-122

**Site Program: N.Y. Division of Hazardous Waste Remediation
Summary Prepared by: DEC**

Site Description

Area D of the Buffalo Color Plant site occupies about 19 acres adjacent to the Buffalo River in the City of Buffalo. The site is about 4 miles upstream of the confluence of the Buffalo and Niagara Rivers.

Area "D" is an inactive hazardous waste site. It was used from 1905 to 1974 as a chemical manufacturing, handling and disposal site. From 1905 to 1920, acids, chemicals and dye intermediates were produced by Contact Process Company and by National Aniline Chemical Company, which merged into Allied Chemical and Dye Corporation in 1920. Allied Chemical and Dye Corporation manufactured petroleum-based detergents, dye intermediates, picric acid, and other chemicals at Area "D" from 1920 to 1974. During that time, a number of structures, railroad tracks and tank parks were built at the site. All chemical manufacturing operations ceased in 1974, and chemical waste handling ceased in 1976 at Area "D". In 1977, the property was sold to Buffalo Color Corporation and has remained idle since. All structures on the site were demolished to grade by Buffalo Color Corporation in 1984.

The site overburden consists of fill, alluvium, glaciolacustrine deposits and glacial till, and is underlain by the Onondaga Limestone. The shallow overburden water-bearing zone on the site is in direct hydraulic connection with the Buffalo River. The major pathways of contaminant migration from the site to the Buffalo River are shallow ground water and erosion of the shoreline.

Site Investigation and Remedy Selection

The Buffalo Color Area D site is a DEC-lead site. Pursuant to a Consent Order, the PRPs (Buffalo Color and Allied Chemical) conducted a Remedial Investigation (RI), which was first submitted in April 1989 and approved in September 1990. The RI indicated elevated levels of Polynuclear Aromatic Hydrocarbons (PAHs), chlorinated benzenes and heavy metals in the site fill layer. The site groundwater was found to be contaminated by volatile organics, chlorinated benzenes, iron and other heavy metals and non-aqueous phase liquid (NAPL).

A Feasibility Study (FS) was submitted in December 1990, with final revisions submitted and approved in July 1991. The FS evaluated 13 alternatives for the remediation of the site and identified a preferred alternative; all were discussed at a public meeting in October 1991. A Record of Decision (ROD) was signed in November 1991, setting forth a selected remedial plan.

An Order on Consent was signed by Allied Signal and NYSDEC in June 1993 for the remediation of the site. Construction of the selected remedy began in June 1996. The Remedial Action was completed in September 1998.

The following are the elements of the remedy completed in September 1998:

- A slurry wall was constructed around the entire site;
- River sediments adjacent to the site were dredged and deposited on-site. The shoreline was armored with rip rap;
- A high-density polyethylene liner was placed over the entire site and properly capped;
- Non-aqueous phase liquids found at the site are being removed;
- Groundwater is being pumped and treated at an on-site treatment facility.

Remediation Costs

Following are estimated amounts that have been spent to date on remediating this site:

State	\$ 200,000
PRP	\$ 14,000,000

BUFFALO COLOR -- AREA D

Output	Responsible Party	Previous Target Date	Current Schedule
RI/FS	PRPs	Sept 1990	COMPLETED
Record of Decision	DEC	Dec 1990	COMPLETED
Remedial Design	PRPs	Dec 1992	COMPLETED
Begin Remedial Construction	PRPs	June 1996	COMPLETED
Remedial Action Completion	PRPs	Nov 1997	COMPLETED