

NOAA Hazardous Waste Site Report

N.L. Industries (II-84)
Oldmans Township, New Jersey
April 13, 1984

Location and Nature of Site:

The NL Industries landfill is located on a 14-acre parcel of land in a rural area (landfill itself is approximately six acres) (Figure 1). The plant is a secondary lead smelting facility, designed to recover lead from spent automotive batteries. The process involves the crushing of the batteries followed by the physical separation of the crushed plastic and hard rubber casing materials from the desired lead plates. The separated lead plates were then smelted (initially in a blast furnace, later in a kiln) to form lead ingots. The two by-products generated from this process (slag and chopped rubber and plastic battery casings) were deposited in the landfill. This facility ceased production in 1981. The landfill is a double lined site which is partially capped.

As a result of poor maintenance of the landfill, improper storage of spent batteries on the site, and other factors relating to their processing, the surrounding ground, surface water and soil have been contaminated. The contaminants detected were various heavy metals, primarily lead. Analyses of ground water was conducted through sampling of monitoring wells in the vicinity of the landfill. The underlying Cape May Aquifer is a source of irrigation and process water and the sole source of potable water in the area.

Proximity of Chemical Hazard to Marine Resources:

The site is five miles from the Delaware River on Oldmans Creek. Part of the area is marshland. Soil and surface waters have been contaminated with heavy metals, primarily lead. Soils heavily contaminated with lead have been removed from the marsh area, replaced with clean soil and disposed of at the landfill on site.

Marine Resources at Risk:

The Delaware River and its tributaries provide significant habitat for a variety of finfish resources (See Table 1).

Anadromous fish migrate through the Delaware Bay estuarine system during the early spring on their way to freshwater spawning grounds. For most of the anadromous fish of the Delaware Bay this occurs upstream of Burlington, New Jersey, although some spawning does occur in freshwater tributaries (4). The adults return to the lower parts of Delaware Bay. Juvenile fish, hatched in the spring, remain in the upper

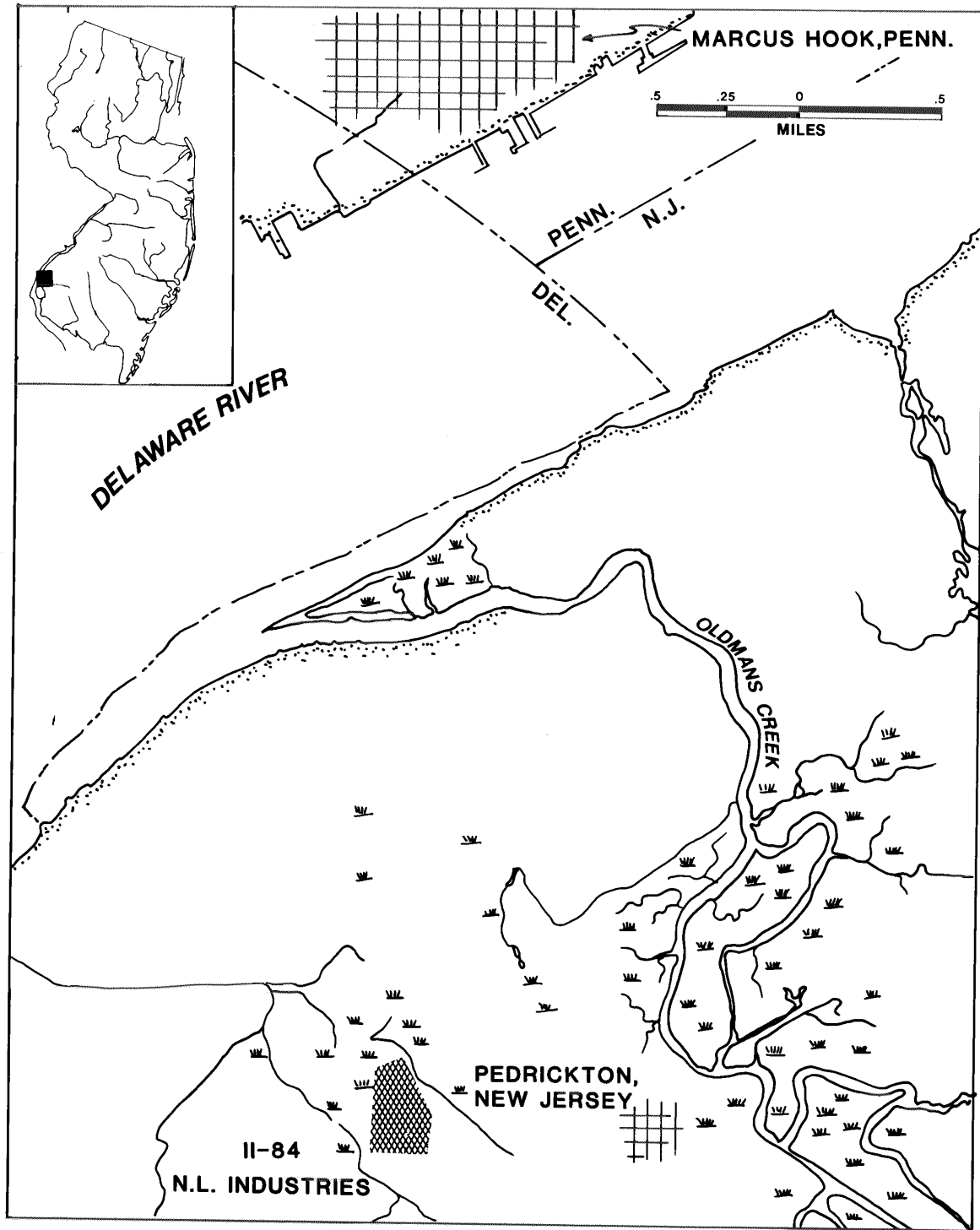


FIGURE 1. Site location.

parts of the Delaware Bay until the late summer and early fall when they also migrate back into the lower parts of the Bay (3).

Table 1. Fishery Resources of the Tidally Influenced Regions of the Delaware River Near Philadelphia (1,2,5)

Finfish Species	Adult Habitat	Spawning Area	Nursery Area	Commer. Fish.	Rec. Fish.	Migr. Route
<u>Anadromous</u>						
Alewife			X		X	X
Blueback Herring			X		X	X
American Shad			X		X	X
Shortnose Sturgeon						X
Atlantic Sturgeon						X
Striped Bass			X		X	X
Gizzard Shad			X			
<u>Non-Anadromous</u>						
Atlantic menhaden			X			
White perch			X		X	X
Bluefish			X			
Atlantic croaker			X			
Channel Catfish	X					
Brown bullhead					X	
Bluegill	X				X	
Black crappie	X				X	

The N. L. Industries site is located approximately 23 miles upstream of known spawning grounds of the Atlantic sturgeon at Supawna Meadows National Wildlife Refuge. The Atlantic sturgeon is a species of concern to the state of Pennsylvania.

This region of the Delaware River is unlikely to be an important nursery or spawning area for other anadromous fish due to the fairly high level of development in this area and to their preference for less saline waters for spawning, but many fish migrate through this area en route to upstream spawning grounds. Among these species are the Atlantic sturgeon, a species of special state concern, and the shortnose sturgeon, a species of special Federal concern. Some tidal flats are present in the vicinity of Chester, and some species of fish may be harvested by recreational and commercial fishermen in the Delaware River adjacent to this site.

The Delaware Bay estuarine system is an important wintering area for many waterfowl and seabirds, particularly loons, grebes, and gannet. They tend to concentrate in coastal bays and wetland areas. Bald eagles nest at Augustine Wildlife Area and Appoquinimink Wildlife Area.

Several State and Federal Management Areas are located on the Delaware River in the vicinity of the Wade Property:

Ft. Mott State Park	19 mi downstream
Ft. Delaware State Park	22 mi downstream
Supawna Meadows National Wildlife Refuge	23 mi downstream
Appoquinimink Wildlife Area	34 mi downstream
Augustine Wildlife Area	29 mi downstream
Tinicum National Environment Center	4 mi upstream

Summary of Site-Related Actions:

In March 1983, National Smelting of New Jersey purchased the Pedricktown facility from N. L. Industries. National Smelting has assumed responsibility for maintaining compliance with all soil, ground, and surface water standards at the facility, regardless of the discharge source or whether it was caused by prior pollution activities of N. L. Industries. N. L. Industries has already cleaned all exposed paved areas and removed approximately three acres of contaminated soil to an on-site landfill. In addition, N. L. Industries was required to pay six hundred thousand dollars to the New Jersey Department of Environmental Protection for that agency to monitor and remedy existing ground water pollution at the facility. N. L. Industries has filed a closure/post closure plan for the lined landfill which includes remedying all groundwater contamination which might emanate from the dump. They have also assumed responsibility for designing a groundwater pollution abatement system and for the installation of abatement wells at the site.

NOAA Reviewer: Gary Ott, SSC - U.S. Coast Guard District III
(212) 668-7152
FTS 664-7152

References:

1. National Marine Fisheries Service, 1974. Anglers Guide to the United States Atlantic Coast.
2. U.S. Fish and Wildlife Service, 1980. Atlantic Coast Ecological Inventory.
3. Breder, C.M., and D. E. Rosen, 1966. Modes of Reproduction in Fishes. TFH Publications.
4. Byrne, D. Personal Communication, Delaware River Anadromous Fishery Project, U.S. Fish and Wildlife Service.
5. Research Planning Institute. Environmental Sensitivity Atlas - Pennsylvania. Unpublished.
6. New Jersey Department of Environmental Protection, 1983. Site Descriptions for Hazardous Waste Sites. August 1983.