

NOAA Hazardous Waste Site Report

Metal Bank of America (III-26)
Philadelphia, Pennsylvania
April 13, 1984

Location and Nature of Site:

The Metal Bank of America, Inc. property is a six-acre area of fill on the tidal Delaware River (Figure 1). Within the city limits of Philadelphia. It is 1.2 miles seaward of the Philadelphia Water Departments' Torresdale water intakes. The site is presently being used for storage of scrap materials including transformer casings, condensers, paper insulation, fabricated sheet and bar metal, and other unidentified materials.

The site consists of about 10-15 feet of artificial fill over a gently sloping, compact clay. The area of primary concern at this site is a buried 6,000-gallon tank which was used for temporary storage of transformer oil containing PCB's. The oils were transported to the site in electrical transformers, which were reportedly disassembled on the site during the period from 1968 to 1972, when Metal Bank closed the operation.

The intertidal zone on the perimeter of the property contained a zone of oil seepage estimated to be 70 feet long. During September 1977, the U.S. Coast Guard conducted initial sampling and analysis of an oil seep discharging into the Delaware River from the property. The samples of the seep were collected for analysis and found to contain 802 ppm PCBs'. Subsequent detailed studies conducted at the site included drilling, coring and sampling in the suspected spill area. As a result of the data collected, a detailed site investigation was conducted by the U.S. Environmental Protection Agency and Pennsylvania Department of Environmental Resources.

Results of analyses of intertidal sediments and liquids indicated that PCB's were present in the sediments and in an oil slick on the river. Roy F. Weston, Inc. studies (6, 7) indicated that up to 15,000 gallons of PCB-contaminated oil were in the groundwater under, and spreading beyond, the site and leaching into the Delaware River.

During 1983, three wells were installed on the site to recover and treat contaminated groundwater. A total of 10,280,860 gallons of water were recovered; of this, 3,453 gallons of PCB oil/water mixture were contained in a settling tank for treatment. In addition, 201 drums were removed. No cleanup of the river is being considered. The parties responsible for cleanup are Metal Bank, Inc. and Union Corp.

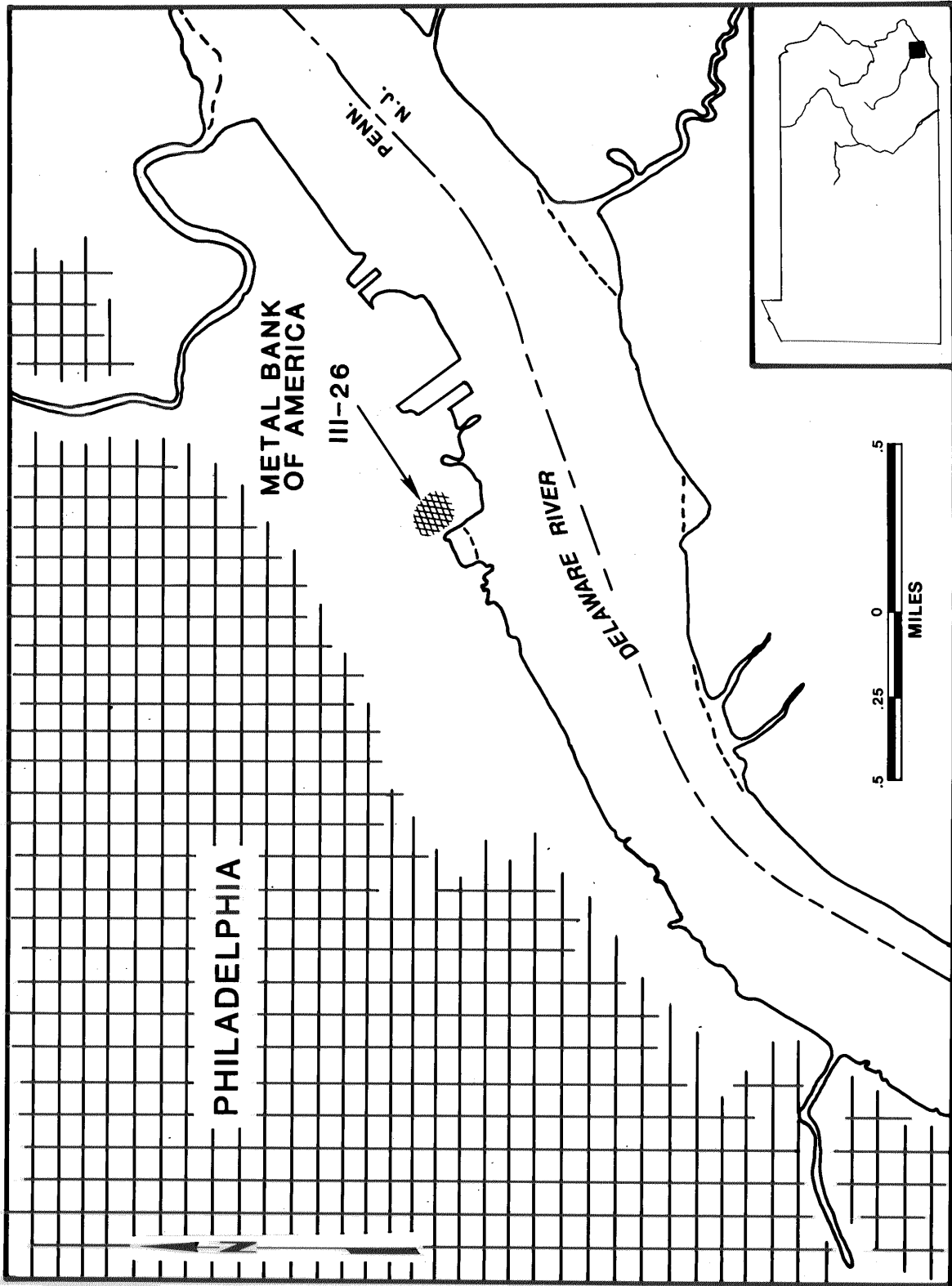


FIGURE 1. Site location.

Proximity of Chemical Hazard to Marine Resources:

Contamination of the tidal Delaware River by PCB's from the Metal Banks site is well documented. The 1978 Weston study (6) indicated PCB contamination of an oil slick on the river (802-981 ppm) and in the intertidal zone (1071 ppm). The study concludes that the oil discharge via seepage is a greater PCB threat to the Delaware River than the groundwater discharge, however, the pool of oil also provides a continuing source of PCB's to the groundwater, and hence to the Delaware River via that route.

Marine Resources at Risk:

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

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	Comm. Fish.	Rec. Fish.	Migr. Route	Season
<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			X	
<u>Non-anadromous</u>							
White perch			X		X	X	
Flounder			X				
Bluefish			X				
Atlantic croaker			X				
Spotted seatrout					X		
Channel catfish	X						
White catfish				X	X		
Brown bullhead				X	X		
Bluegill	X				X		
Black crappie	X				X		

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 (4). The adults return to the lower parts of Delaware Bay. Juvenile fish, hatched in the spring, remain in the upper parts of

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

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 is the shortnose sturgeon, a species of special Federal concern.

The Delaware Bay estuarine system is an important wintering area for many waterfowl and seabirds, particularly loons and grebes, and gannet. They tend to concentrate in coastal bays and wetland areas. Some tidal flats are present in the vicinity of Philadelphia, and some species of fish may be harvested by recreational and commercial fishermen in the Delaware River adjacent to this site.

Tinicum National Environment Center is located on the Delaware River in the vicinity of the Metal Bank of America.

Summary of Site-Related Actions:

Considerable investigation of the site has been conducted by Roy F. Weston under contract to the U.S. Coast Guard and the U.S. Environmental Protection Agency. A civil suit by EPA and the City of Philadelphia against Metal Banks, Inc. and Union Corp, was won in 1983. Cleanup of the site has already begun and is expected to be completed in 1984.

NOAA Reviewer: Ann Hayward Rooney, SSC Mid-Atlantic
(804)428-3636

EPA Contact: Robin Aitkin, Project Officer
(215)597-9328

Other Contacts: State of Pennsylvania - Mike Steiner
(717)787-7383

References:

1. National Marine Fisheries Service, 1974. Anglers Guide to the United States Atlantic Coast
2. United States 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, United States Fish and Wildlife Service.
5. Research Planning Institute, Environmental Sensitivity Atlas, Pennsylvania, (unpublished).

6. Roy F. Weston, Inc. "Hydrogeologic Investigation of a Subsurface Oil Spill at the Metal Bank of America, Inc. Disposal Site, Philadelphia". West Chester, PA. October 1978.
7. Roy F. Weston, Inc. "Evaluation of Alternatives for Control of PCB Contamination at Metal Bank of America, Inc." West Chester, PA. March 1980.