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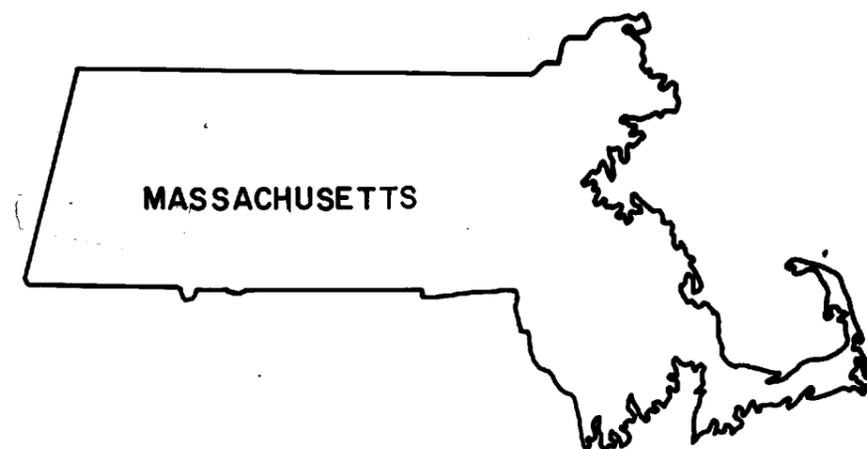
# Photographic Analysis of Suspected PCB Dump Site Marsh Island, Massachusetts

Superfund Records Center  
SITE: New Bedford  
BREAK: 174  
OTHER: 25747



SDMS DocID 25747

prepared for  
EPA Region 1  
and OERR



U.S. v. AVX Original Litigation Document

New Bedford  
Harbor

Admin. Rec.

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17.4

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# **Photographic Analysis of Suspected PCB Dump Site Marsh Island, Massachusetts**

by

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CONTENTS

	<u>Page</u>
Introduction . . . . .	1
Site Location . . . . .	2
Analysis of Photograph Taken:	
December 13, 1938 . . . . .	4
May 1, 1956 . . . . .	6
April 10, 1962 . . . . .	8
February 27, 1974 . . . . .	10
References . . . . .	12

FIGURES

Location Diagram . . . . .	3
Photograph Taken:	
December 13, 1938 . . . . .	5
May 1, 1956 . . . . .	7
April 10, 1962 . . . . .	9
February 27, 1974 . . . . .	11

## INTRODUCTION

Dumping of dredge spoils from New Bedford Harbor onto Marsh Island peninsula was detected on 1938 photography by the EPA - Environmental Photographic Interpretation Center (EPIC). A brief description of this site and 70 other potential pollution point sources was made available to EPA - Region 1 in the report Land Use and Point Source Inventory--New Bedford, Massachusetts (August, 1982). Because the possibility exists that these dredge spoils are contaminated with PCBs, EPA - Region 1 officials have now requested that EPIC conduct an in-depth historical photographic study of the Marsh Island site.

Two sources of information were used to prepare this historical analysis of the Marsh Island peninsula: aerial photographs from the years 1938, 1956, 1962, and 1974 and the U.S. Geological Survey (U.S.G.S.) topographic map of New Bedford North, Massachusetts.\* While only one print of a site is shown for each year, pairs of photographs were available to the analyst for 1956 and 1974. These pairs allow stereoscopic (3D) viewing of the sites. The apparent height and depth of objects and terrain created by the stereoscopic viewing of pairs of photographs render the scene more familiar and understandable.

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\*For a complete description of the map and photos used in this report, see References, page 12.

## SITE LOCATION

Marsh Island peninsula is located on the east bank of the Acushnet River between the Highway 195 and Huttlestone Avenue bridges in the city of Fairhaven, Massachusetts.

Aerovox Corporation, a known discharger of PCBs, is located on the west bank of the Acushnet River, 2.4 km (1.5 miles) north of Marsh Island.

Cornell-Dubilier, another known discharger of PCBs, is located on the west shore of New Bedford Harbor (at the mouth of the Acushnet River) 4.2 km (2.6 miles) south of Marsh Island. Because the current in the Acushnet River is affected by tidal fluctuations in Buzzard's Bay to the south, PCBs dumped at Cornell-Dubilier possibly could have migrated upstream to a dredging operation in the vicinity of Marsh Island.



MARSH ISLAND

LOCATION DIAGRAM

APPROX. SCALE 1:11,400

Analysis of December 13, 1938 Photograph

A dredge west of Popes Island is pumping material onto Marsh Island peninsula via a large pipeline which crosses New Bedford Harbor. Ground stains and dumped material are visible on Popes Island. On the Marsh Island peninsula the pipeline branches into two lines, and white material is flowing from the eastern branch.

The Marsh Island peninsula is diked along its entire coastline and along portions of its landward side. Another small section of dike is located in the water outside the main dike on the north side of the peninsula.

The southern half of the peninsula is covered with a thick layer of light-toned, fine-textured material (probably sand). This layer extends out to the dikes on the west, south and east sides and terminates in a well-defined sloping edge on the north. A slightly lower medium-toned fan of depositional material has built up north of the pipeline termini. The northernmost side of the peninsula is the area of lowest elevation. Pools of standing liquid are visible in this area.

Two hillocks are present on the west side of the peninsula. The southern one exhibits signs of probable excavation along its south side.

Vehicle access to the site appears possible only in the southeast corner of the site. Two long, light-toned objects, possibly tanks, are present on site.



CITY OF  
NEW BEDFORD

MARSH ISLAND

DIKES

KENDRICK AVE

MOUNDED MATERIAL

STANDING  
LIQUID

DEPOSITION FAN

DIKE

HILLOCKS

POSS TANK

MAIN STREET

PROB  
EXCAVATION

POSS TANK

HEDGE STREET

SMOKE

DIKE

ACCESS  
POINT

FAIRHAVEN

PLUME

PIPELINE

NEW BEDFORD HARBOR

LEGEND

DRAINAGE

DUMPED MATERIAL

DREDGE

GROUND STAIN

POPES ISLAND

MARSH ISLAND

DECEMBER 13, 1938

APPROX. SCALE 1:5,800

#### Analysis of May 1, 1956 Photograph

Little change has occurred on the site since 1938.

The layer of fine-textured white material still covers the south end of the peninsula. It has changed only slightly since 1938. The fan of darker material on the northeast edge of the light-toned material is slightly larger than it was in 1938. No signs of recent dumping of dredge spoils remain in this area. The area appears to have a thin cover of vegetation. The low area on the north side of the peninsula is very dark in tone, probably due to thicker vegetation cover and, possibly, higher soil moisture content.

A drainage ditch, which contains liquid, has been dug inside the dike on the northern edge of the site. A pit is connected to this ditch via a small channel. Standing liquid is visible in the pit. In 1938 this pit may have been present under a pool of standing liquid.

Additional material has been dumped outside the dike on the northeast corner of the site. A new man-made ditch now extends along the west side of this fill area.

Distinct signs of excavation are visible on the south side of the southern hillock. It does not appear as if additional material has been removed since 1938.

The dike still extends around the entire perimeter of the site, broken only by two new drainage outlets on the north side. Additional filling has occurred between the main dike and the smaller dike on the north side of the peninsula.



CITY OF  
NEW BEDFORD

FAIRHAVEN

DUMPED MATERIAL

KENDRICK AVE

DITCH

DIKES

HILLOCK

DITCH

PIT

PROB  
VEGETATION

DEPOSITION FAN

EXCAVATION

HILLOCK

MARSH ISLAND

DIKE

NEW BEDFORD HARBOR

HEDGE ST

LEGEND

DRAINAGE

MARSH ISLAND

MAY 1, 1956

APPROX. SCALE 1:3,800

Analysis of April 10, 1962 Photograph

No signs of additional dumping of dredge spoils are present on Marsh Island peninsula.

Linear ridges of mounds are now visible in the light-toned layer of fill. These were present in 1938 and 1956, but they were less noticeable on the earlier, small-scale photographs.

Additional fill has been added to the area between the two dikes on the north side of the site. Additional filling has also occurred in the northeast corner of the site, where mounded material and refuse are visible.

The drainage ditches present in 1956 are visible in more detail on the 1962 photograph, but they appear essentially unchanged.

The dike no longer extends virtually unbroken around the entire peninsula; portions of it are still present.

Two radio antennas and their associated small buildings are now present on site.



MARSH ISLAND

APRIL 10, 1962

APPROX. SCALE 1:2,100

Analysis of February 27, 1974 Photograph

No signs of additional dumping of dredge spoils are present on Marsh Island peninsula.

The linear ridges of mounds are still visible in the fine-textured fill on the south side of the site. No additional filling has occurred between the two dikes on the north side of the site. Little, if any, additional material has been added to the filled area in the northeast corner of the site. A small amount of dumped material is now present near a new access point on the east side of the site. Dumped material is also visible in the woods east of the site.

The drainage ditches on the north side of the site are not as well-defined on the 1974 photograph as they were on the 1962 photograph. Patches of snow are present on the north side of the site.

Some additional revegetation has occurred since 1962 along the north and far south sides of the peninsula.

The two radio antennas are still present. A probable vehicle is visible on the new road that connects the southern part of the site with the filled area in the northeast corner of the site.



NEW BEDFORD HARBOR

LEGEND

— — — — — DRAINAGE

MARSH ISLAND

FEBRUARY 27, 1974

APPROX. SCALE 1:2,700

REFERENCES

Aerial Photography

<u>Date</u>	<u>Source</u>	<u>Approx. Original Scale</u>	<u>EPIC Frame No.</u>
December 13, 1938	National Archives and Records Service	1:24,000	38/002 6-01
May 1, 1956	National Oceanographic Service	1:30,000	3081
April 10, 1962	National Oceanographic Service	1:15,000	3065
February 27, 1974	U.S. Geological Survey	1:24,000	2629

U.S. Geological Survey Maps

<u>Date</u>	<u>Name and Type</u>	<u>Scale</u>
1979	New Bedford North, Mass. 7 1/2 minute topographic	1:25,000

Publications

Land Use and Point Source Inventory--New Bedford, Massachusetts (PIC #82025),  
Environmental Protection Agency--Environmental Photographic Interpretation  
Center, Warrenton, Virginia. August, 1982.