



Add \_\_\_\_\_  
 Modify \_\_\_\_\_  
 Reclassify \_\_\_\_\_  
 Delist \_\_\_\_\_

ADDITIONS/CHANGES TO REGISTRY OF  
 INACTIVE HAZARDOUS WASTE DISPOSAL SITES

Site Name Merrick Landfill DEC ID Number 130022  
 Site Address 1600 Merrick Road, Town of Hempstead County Nassau

- Add New Site: (Potential hazardous waste site, Site Inspection Summary Report, EPA Preliminary Assessment Form and Registry Form must be completed and attached)
- Modify Registry data (detail below)
- Reclassify from class \_\_\_ to class \_\_\_. (Justify below)
- Delist (justify below)

1990~91  
 Delist

Detail/Justification

A PRP Phase II investigation has been conducted by Velzy Associates in March 1988. This is an inactive municipal landfill, operated from 1950 to 1984. Prior to 1950 the site was used by local residents as an open dump. Also, the site consists of inactive incinerator complex, abandoned ash lagoons and an active refuse transfer station.

During its operation period the site received typical municipal solid waste. Although there is groundwater contamination of organic chemistry at low concentrations, no hazardous waste disposal has been documented. Concentrations observed are within normal ranges expected at a typical Part 360 landfill site.

Since there is no documentation of hazardous waste disposal at the site and there is no significant threat to groundwater and surface water, this site can be delisted and referred to the Division of Solid Waste Management.

Prepared by *M. J. Kaulke* Date: 12/19/89  
 Approvals:  
 Reg. Haz. Waste Eng. *Anthony Comdebor* Date: 3/27/90  
 R. Tramontano NYSDOH *R. Tramontano* Date: 9/25/90  
 R. Dana/DEE *Richard A. Dana* Date: 3/29/90  
 W. Demick/J. Swartwout *John B. Swartwout* Date: 3/26/90  
 D. Curtis *Thomas A. Reamon* Date: 12/19/89  
 T. Keamen  
 R. Marino *R. Marino* Date: 3/30/90  
 E. Barcomb *W. Demick for EHB* Date: 10/2/90



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF HAZARDOUS WASTE REMEDIATION  
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: D1

REGION: 1

SITE CODE: 130022

EPA ID:

NAME OF SITE : Merrick Landfill  
STREET ADDRESS: Merrick Landfill  
TOWN/CITY:  
Merrick

COUNTY:  
Nassau

ZIP:  
11566

SITE TYPE: Open Dump- Structure- Lagoon- Landfill-X Treatment Pond-  
ESTIMATED SIZE: 82 Acres

SITE OWNER/OPERATOR INFORMATION:

CURRENT OWNER NAME....: Town of Hempstead  
CURRENT OWNER ADDRESS.: Town Hall Plaza Main St., Hempstead, NY  
OWNER(S) DURING USE...: Town of Hempstead  
OPERATOR DURING USE...: Town of Hempstead  
OPERATOR ADDRESS.....: Town Hall Plaza - Main St., Hempstead, NY  
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From Unknown To

SITE DESCRIPTION:

This is an inactive municipal landfill, operated from 1950 to 1984. Prior to 1950, the site was used by local residents as an open dump. The site consists of an inactive incinerator complex, abandoned ash lagoons and an active refuse transfer station. During its operation period, the site received typical municipal solid waste. Although there is groundwater contamination of organic chemicals at low concentrations, no hazardous waste disposal has been documented. Concentrations observed are within normal ranges expected at a typical Part 360 landfill site. A Phase I investigation was completed. A Phase II investigation was completed by the PRP in 1988. There is no documentation of hazardous waste disposal. This site is being referred to DSW.

HAZARDOUS WASTE DISPOSED: Confirmed-  
TYPE

Suspected-  
QUANTITY (units)

SITE CODE: 130022

ANALYTICAL DATA AVAILABLE:

Air- Surface Water-X Groundwater- Soil- Sediment-

CONTRAVENTION OF STANDARDS:

Groundwater- Drinking Water- Surface Water- Air-

LEGAL ACTION:

TYPE..: Consent Order X State- X Federal-  
STATUS: Negotiation in Progress- Order Signed- X

REMEDIAL ACTION:

Proposed- Under design- In Progress- Completed-  
NATURE OF ACTION: .

GEOTECHNICAL INFORMATION:

SOIL TYPE: Sand

GROUNDWATER DEPTH: Landfill const. in surface water

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

ASSESSMENT OF HEALTH PROBLEMS:

## EXECUTIVE SUMMARY

The Merrick Landfill is located in the Town of Hempstead, Nassau County, New York (Figure 1) in a generally residential and commercial area. The facility operated at the 1600 Merrick Road site from 1950 until 1984. Before this time the site was reportedly used by local residents as an open dump.

The site is an inactive municipal landfill, which was closed in 1984. The total acreage of the site is 82 acres, of which the southern 42 acres comprise the actual landfill, and the northern area is utilized by the Town of Hempstead for administration buildings, roadways, parking areas, an inactive incinerator complex, abandoned ash lagoons, and an active refuse transfer station.

The Phase II Investigation involved the following: collection and review of existing data; installation and sampling of monitoring wells; ash and sediment sampling; preparation of a Hazard Ranking Score (HRS) and documentation for the site; and preparation of a summary report.

Results of boring for well installations confirmed at multiple locations the existence of the "twenty foot clay" layer generally thought to separate the Upper Glacial Aquifer from the aquifer of drinking water concern, the Magothy.

Results of groundwater analyses showed that bay water has intruded beneath the site making that portion of the Upper Glacial Aquifer unsuitable as potable water. The levels of

heavy metals in groundwater sampled from beneath the site were generally low. Mercury, nickel, selenium and vanadium were reported at one or two locations at low, but greater than background, levels.

Eleven organic contaminants were identified but of these only two, chlorobenzene and bis (2-ethylhexyl) phthalate were reported above their Contract Laboratory Program (CLP) detection limits. The contaminant of greatest concentration in groundwater was bis (2-ethylhexyl) phthalate, a plasticizer. Phthalates can be bio-accumulated by aquatic organisms and have been implicated in the reduced reproductive success of these organisms. Groundwater may be a pathway for phthalate movement from landfill to bay.

Soil samples taken from the area of the ash and lagoons for the incinerator show elevated levels of heavy metals. The average concentration of lead, cadmium and total chromium were 414.7, 9.1 and 8.0 parts per million. Analysis of sediments from the creek into which ash lagoons previously discharged shows that some heavy metal enrichment has occurred. Samples from the head of the creek contained mercury at 0.46 ppm and beryllium at 1.0 ppm, but these were below detection levels in sediments taken from the mouth of the creek (Meadow Brook). The head of the tidal creek is upgradient of the landfill.

The Phase I Report (1985) stated that surface leachate had been observed at the site however, no leachate was visible during the Phase II effort. Nevertheless, surface water is considered a contaminant pathway of concern because of the

adjacent Merrick Bay. Groundwater is identified as a contaminant pathway of moderate concern. Air does not appear to be a significant contaminant pathway.

The HRS scores developed for the Merrick Landfill are as follows:

$$SM = 14.10 \quad (S_{gw} = 18.46 \quad S_{sw} = 15.94 \quad S_a = 0)$$

$$SFE = 0$$

$$SDC = 0$$

*revise*

These scores are indicative of overall low migration potential. From these HRS scores and the supporting data, it is concluded that the Merrick Landfill is not presently a significant contributor to air, groundwater or surface water contaminant pathways. The levels of contaminants present in groundwaters beneath the landfill are such as would be controlled through the use of normal landfill closure methods.

## SECTION 2.0 - SITE HISTORY

The Merrick Landfill encompasses a total area of about 82 acres. The landfill is located on the south shore of Nassau County, and is bounded to the south by Merrick Bay, to the north by administrative buildings and Merrick Road, to the east by Merrick Road Park and Mud Creek, and to the west by a narrow tidal creek. This overall site is comprised of three major use areas including:

o	Town of Hempstead Offices	21.0 acres
o	Incinerator site	18.7 acres
o	Landfill site	42.5 acres
		<hr/>
	Total Area	82.2 acres

The current landfill area is approximately 3500 feet long, 300 feet wide at the south end, 800 feet wide at the north end, and ranges in height between 0 feet and 125 feet above mean sea level (MSL).

The landfill site is a filled wetland area with elevations ranging from sea level to 125 feet at the top. Side slopes are very steep, exceeding 50% in many areas. The site contains an estimated 3.8 million cubic yards of municipal solid waste. The site perimeter is either fenced or adjacent

to open water. As such, access to the landfill is restricted.

The Merrick Landfill has been in operation since 1950, originally serving as a disposal site for incinerator residue. The incinerator has not been in use since 1980. In more recent years, typical municipal solid waste, i.e., garbage, rubbish, demolition debris, street sweeping and landscaping waste have been received in the landfill. Based upon records available for 1979 through 1981, the incoming percentage of the five waste categories listed above were: garbage 78%, rubbish 14 1/2%, demolition debris (negligible), street sweepings 1 1/2% and landscaping 6%. During this period the landfill was receiving approximately 15,100 tons per month of solid waste. Between July 1983 and its closure in 1984, the landfill received only residential refuse. Refuse disposal into the Merrick Landfill was discontinued in March 1984.

There are no records that indicate that the Merrick Landfill site has ever been used for the disposal of sewage sludge, industrial sludge, hazardous/toxic materials or related materials.

Topographic maps developed from aerial photography have been prepared for the site in the years 1979, 1981 and 1984. Based on these surveys the volume of waste material in the landfill is computed to be about 3,800,000 cubic yards (CY).

The landfill density assumed for compacted refuse in the landfill is 1,000 lb/CY, which includes an allowance for



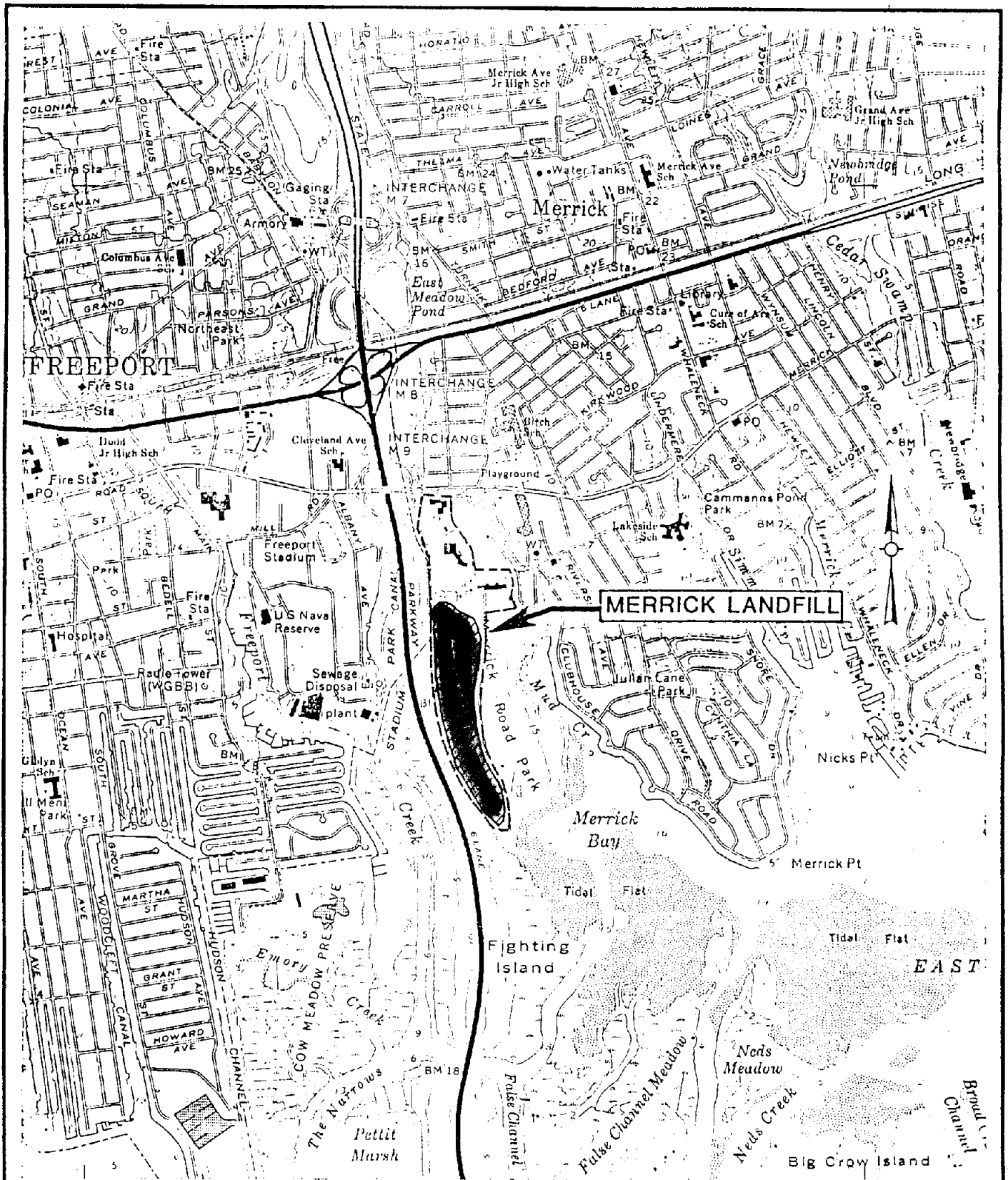
cover material (20 to 25% by volume) incorporated in the waste. Using this density the final in-place tonnage at the Merrick landfill is approximately 1,900,000 tons.

The Town of Hempstead has an ongoing contract with Browning-Ferris Industries, Inc. (BFI), of Kenmore, New York for hauling approximately 208,000 tons per year of refuse for disposal at a private landfill in Goshen, Orange County, New York. As part of this operation a portion of the Merrick incinerator facility has been converted, by BFI, into a refuse transfer station. A permanent transfer station was constructed at the Merrick site in 1987.

#### 2.1 Land Use and Water Supply

Land use in the vicinity of the landfill includes park land, commercial properties, residential dwellings, and the Meadowbrook Parkway Right-of-Way. The building nearest to the landfill is the new transfer station on the north end of the landfill property. (Figure 3-1). The Town of Hempstead Department of Sanitation Administration Building is about 1,100 feet away.

The area surrounding the landfill utilizes municipal water supply wells for potable drinking water supplies. The nearest municipal wells are the Village of Freeport's and New York Water Service's Well Fields, which are approximately one (1) to two (2) miles north of the landfill. The well nearest to the landfill is a golf course irrigation well at Merrick Road Park, and is about 300 feet east of the



MAP SOURCE: U.S.G.S. 7.5 MINUTE SERIES FREEPORT, NEW YORK, QUADRANGLE, 1979  
 COORDINATES: LAT. -40°39'08", LONG. -73°33'47" ----- FACILITY BOUNDARIES

**MERRICK LANDFILL  
 PHASE II INVESTIGATION**



**FIGURE 1  
 SITE LOCATION MAP**

**Velzy** ASSOCIATES

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