# SITE INSPECTION NARRATIVE REPORT
PENETREX PROCESSING, INC., SITE
NASSAU COUNTY, NEW YORK
NYSDEC I.D. No. 130034

December 1993

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LMSE-93/0731&576/046

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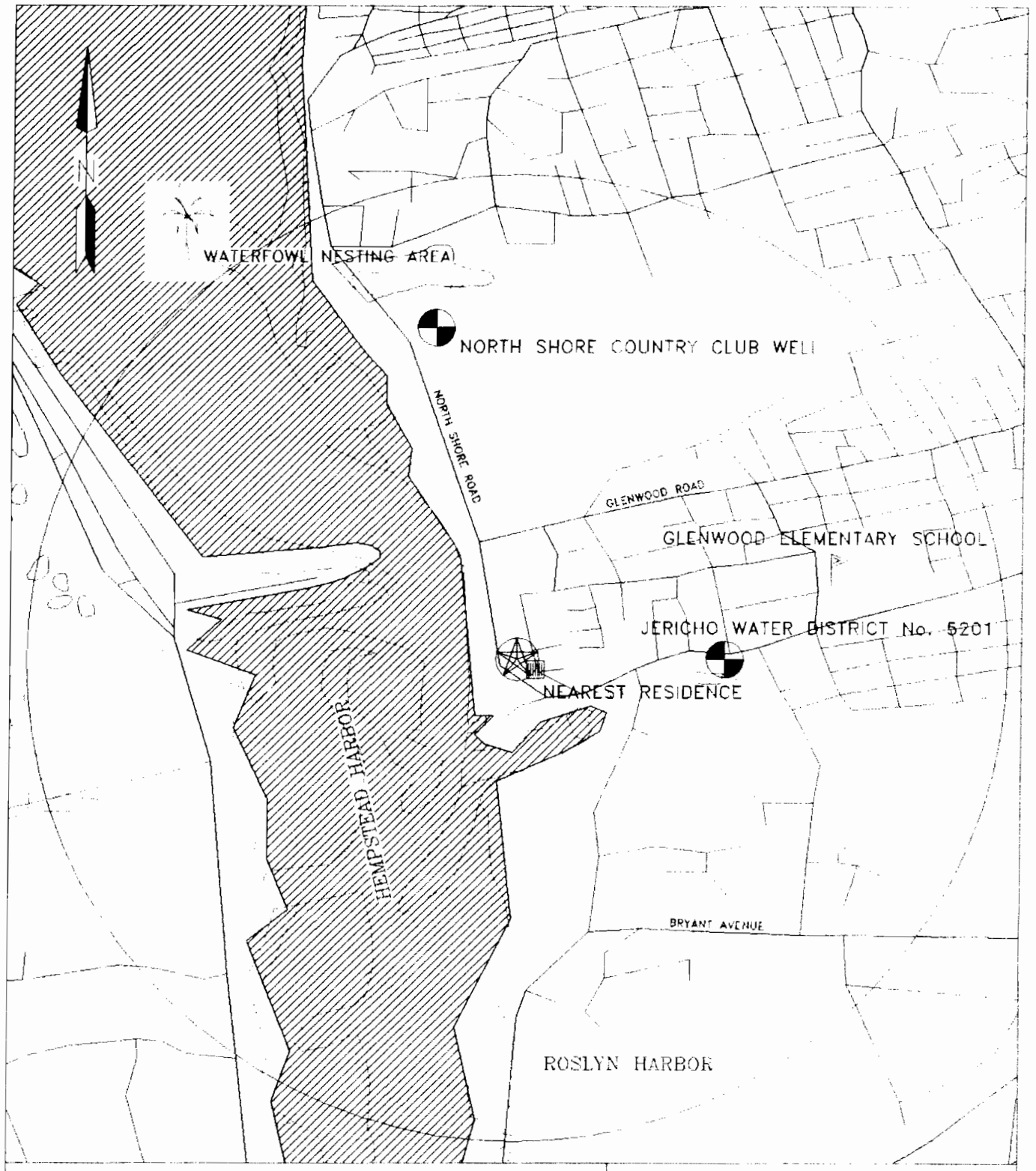
|---|---|
| DATE: | December 1993 |
| Prepared By: | Christina Fern, Lawler, Matusky & Skelly Engineers<br>EPA Region II |
| Site: | Penetrex Processing, Inc.<br>1 Shore Road<br>Glenwood Landing<br>Nassau County<br>New York |
| EPA I.D. No.: | NYD981079064 |
| CERCLA TDD No.: | NYD981079064 |

## 1 INTRODUCTION

A site inspection (Phase II investigation [SI]) was performed at the Penetrex Processing, Inc., site in 1992 by Lawler, Matusky & Skelly Engineers (LMS) under contract to the New York State Department of Environmental Conservation (NYSDEC) (Reference 1). Because the scope of the Phase II encompasses the same activities as an SI, all references to the SI will be understood to be references to the Phase II. The Penetrex site is located at 1 Shore Road, Glenwood Landing, Nassau County, New York (Figure 1). The geographical coordinates of the site are 40°50'35" north latitude, 73°38'55" west longitude. The site is 300 ft east of Hempstead Harbor, located due north of Northern Boulevard (North Hempstead Turnpike) at the Bryan Road exit (Reference 2) (Figure 1). The site is listed with the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) (Reference 3).

The purpose of the SI is to investigate potential Superfund (Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]) sites for evaluation pursuant to the Hazardous Ranking System (HRS). The objective of the SI is to evaluate the extent to which a site presents a threat to human health or the environment by collecting and analyzing wastes and/or environmental media samples and determining whether hazardous substances are present on the site and/or are migrating to the surrounding environment. Information obtained from the SI is used to determine whether the site qualifies for inclusion on the National Priorities List (NPL) or should be dropped from further Superfund consideration. The scope of the SI includes collecting analytical data and nonsampling information to complete an HRS package. The SI involves reviewing available information, conducting field work (Phase II investigation), and evaluating the SI data using the Prescore computer program to score the site.




SCALE: 0 500 1000 ft

This map was prepared by LMS' Geographic Information System (GIS) using data from the following sources: National Wetlands Inventory, NYSDEC Wetlands Inventory Maps.

LEGEND

- Local Roads
- Major Roads
- NYSDEC Wetlands
- National Wetlands

FIGURE 1

ONE-MILE RADIUS
PENETREX PROCESSING, INC.
NYSDEC I.D. No. 130034
1993 HRS Score

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

## 2 SITE DESCRIPTION AND REGULATORY HISTORY

### 2.1 Site Description

A two-story brick building covers about 50% of the site, a small section of grass and weeds border the building on the west and south, and the remainder is covered by pavement. To the north the site is bordered by Bay Oil Company, and Long Island Lighting Company (LILCO) property lies just north of Bay Oil Company; both have bulk petroleum storage tanks. The site is bordered by residential property on the south and the southeast. To the east the site is bordered by West Street. Residential homes lie to the east of West Street. The site is bordered on the west by Shore Road. Across Shore Road to the west is Applied Environmental Services, a former treatment, storage, and disposal facility (TSDF) and previously a bulk petroleum storage facility. Dry wells and two leaching pools were located on site south of the building, but now the cesspools are believed to be covered over with macadam (Figure 2); three dry wells have been surveyed on site.

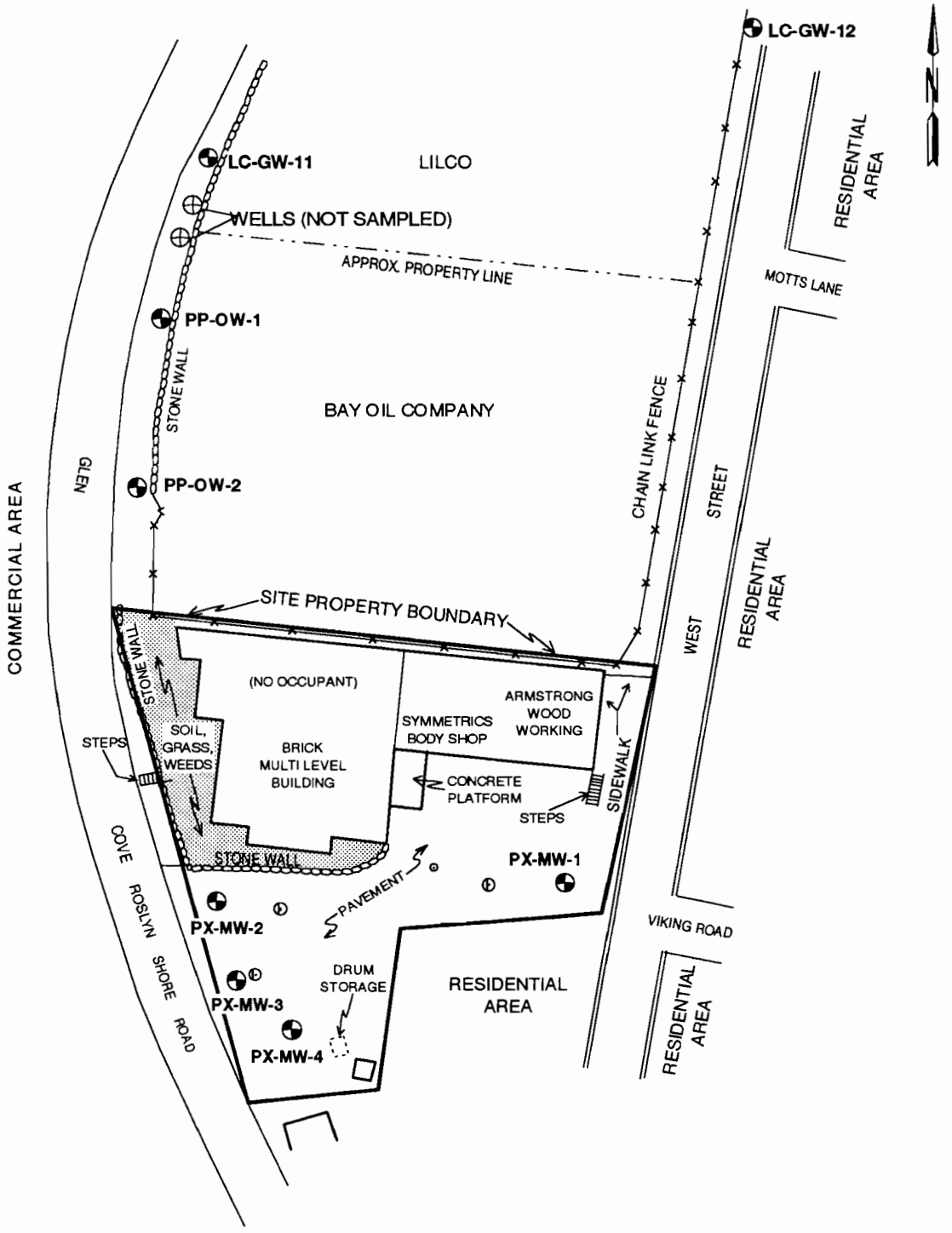
### 2.2 Regulatory History

Nassau County Department of Health (NCDOH) first inspected the site in October 1982 after observing an employee emptying a 5-gal container outside the site's building. NCDOH inspected the site and sampled the site's cesspool in March and May 1984 (Reference 4) (Table 1). NYSDEC first visited the site in September 1984 and with a search warrant inspected and searched the site in December 1984 (Reference 5). A site cesspool (dry well) was sampled in December 1984 (Reference 5 and Reference 6, pg. 3). On 28 May 1985 a Notification of Regulated Waste Activity Application for the site was received by the U.S. Environmental Protection Agency (EPA) and an EPA I.D. number was issued. "The former premises of Penetrex Inc." was listed as the generator; the waste generated was listed as F001, spent halogenated solvents (Reference 1). As required by NYSDEC a cleanup was conducted by site owners K&W Associates in July 1985. Cleanup operations included removal of 2300 gal of liquid from a dry well and excavation of 13 $yd^3$ of soil from the bottom of the dry well and six drums (Reference 6). In 1985 a Phase II investigation was conducted under a NYSDEC Order on Consent. The investigation, conducted by Blasland and Bouck Engineers, P.C., involved groundwater and soil sampling and analysis (Reference 6). In 1989 Blasland and Bouck Engineers conducted a supplemental Phase II investigation, which included additional groundwater measurements and soil sampling (Reference 7).

### 2.3 Operational History and Waste Characteristics

The site is owned and leased by K&W Associates of Roslyn, New York. Penetrex Processing, Inc., occupied the eastern half of the building from 1955 to August 1984. Mr. Saul Weinberger was reported as owner during the operation of Penetrex. The western half of the building was occupied by Nameplate Manufacturing Company of America. R&A Supply Company, a distributor of dry cleaning equipment, occupied the eastern half of the building from 1985 until 1988. The building is currently occupied by an auto body repair shop and a wood working shop. The western portion of the building is now empty.

Penetrex was a dry cleaning business that used standard dry cleaning solvents. Wastewater generated by Penetrex was allegedly discharged into on-site dry wells and/or cesspools.




**LEGEND**

- Monitoring well location
- Drains
- Soil, grass, weeds

0 80 ft

SCALE
1 in. = 80 ft

Source: YEC, Inc. survey map, 10 July 1992.

**FIGURE 2**

**SITE SKETCH**

**PENETREX PROCESSING**
**NYSDEC I.D. No. 130034**
**1993 HRS SCORE**

**LAWLER, MATUSKY & SKELLY ENGINEERS**
**Pearl River, New York**

TABLE 1

**PREVIOUS SAMPLING DATA**

| | 3/84* CESSPOOL (µg/l) | 5/84* CESSPOOL (µg/l) | 12/84* CESSPOOL SOIL | 5/25/89[a,b] SB-7, DUP SB-5 (0-1 ft) (mg/kg) DRY WELL No. 3 | 5/89[b] SB-1 2-4 ft | 5/89[b] SB-2 4-6 ft | 5/89[b] SB-6 2.6-3 ft | 11/89[a] DW-3 (mg/kg) (~3 ft) | 5/89[c] GROUNDWATER (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| Dichlorobenzene | NR | 1,000 | NR | NR | ND | ND | ND | ND | ND |
| Ethylbenzene | 7 | NR | NR | ND | ND | ND | ND | ND | ND |
| Tetrachloroethylene | 38,000 | 120,000 | P | 1,200 | 0.220 | 1.60 | 14.0 | 24.2 | 560 |
| Toluene | 6,700 | 6,900 | P | ND | ND | ND | ND | ND | ND |
| Trichloroethane | 67 | 2,300 | P | ND | ND | ND | ND | ND | ND |
| Trichloroethylene | 53 | 6,600 | P | 86 | ND | 0.033 | ND | 40 | 19 |
| Trichlorotrifluoroethane and dichloroethane | 800 | 13,000 | P | NR | NR | NR | NR | NR | NR |
| Xylene | 32 | NR | NR | ND | ND | ND | ND | ND | ND |
| Dichloroethane, total | NR | NR | NR | ND | ND | 0.016 | ND | ND | ND |
| 1,2-Dichloroethylene | NR | NR | NR | 26 | ND | ND | ND | ND | 74 |
| 1,1-Dichloroethane | NR | NR | NR | ND | ND | ND | ND | 13 | ND |
| Chloroform | NR | NR | NR | ND | ND | ND | ND | ND | 5 |
| Acetone | NR | NR | NR | ND | ND | ND | ND | ND | 490 |

*Collected prior to waste removal.

ND -Not detected at various detection limits.
NR -Not reported.
P - Reported as present, concentrations unknown.

[a]Same location.
[b]SB-3 (8-10 ft) and SB-4 (6-8 ft) were reported free of contaminants.
[c]Highest concentration reported from four monitoring wells.

Unpermitted industrial wastewater discharges occurring on site were described as the discharge of noncontact cooling water into an on-site cesspool and the discharge of separator water from dry cleaning equipment directly into the cesspool. Drums were also observed at the site in 1984 and 1985 (Reference 5). There is no information regarding Nameplate's waste generation and disposal practices.

Three wastestreams were reported during the site clean up: 2300 gal of liquid from the dry well; excavation of 13 $yd^3$ of soil from the bottom of the dry well; one 30-gal container and four 55-gal drums. Waste types are assumed to be of F001 designation, spent halogenated solvents, as stated on the notification of waste activity.

The site is not fenced and is easily accessible. Access to contaminated areas is limited by pavement or drain grates.

# 3 WASTE SOURCES

## 3.1 Sample Locations

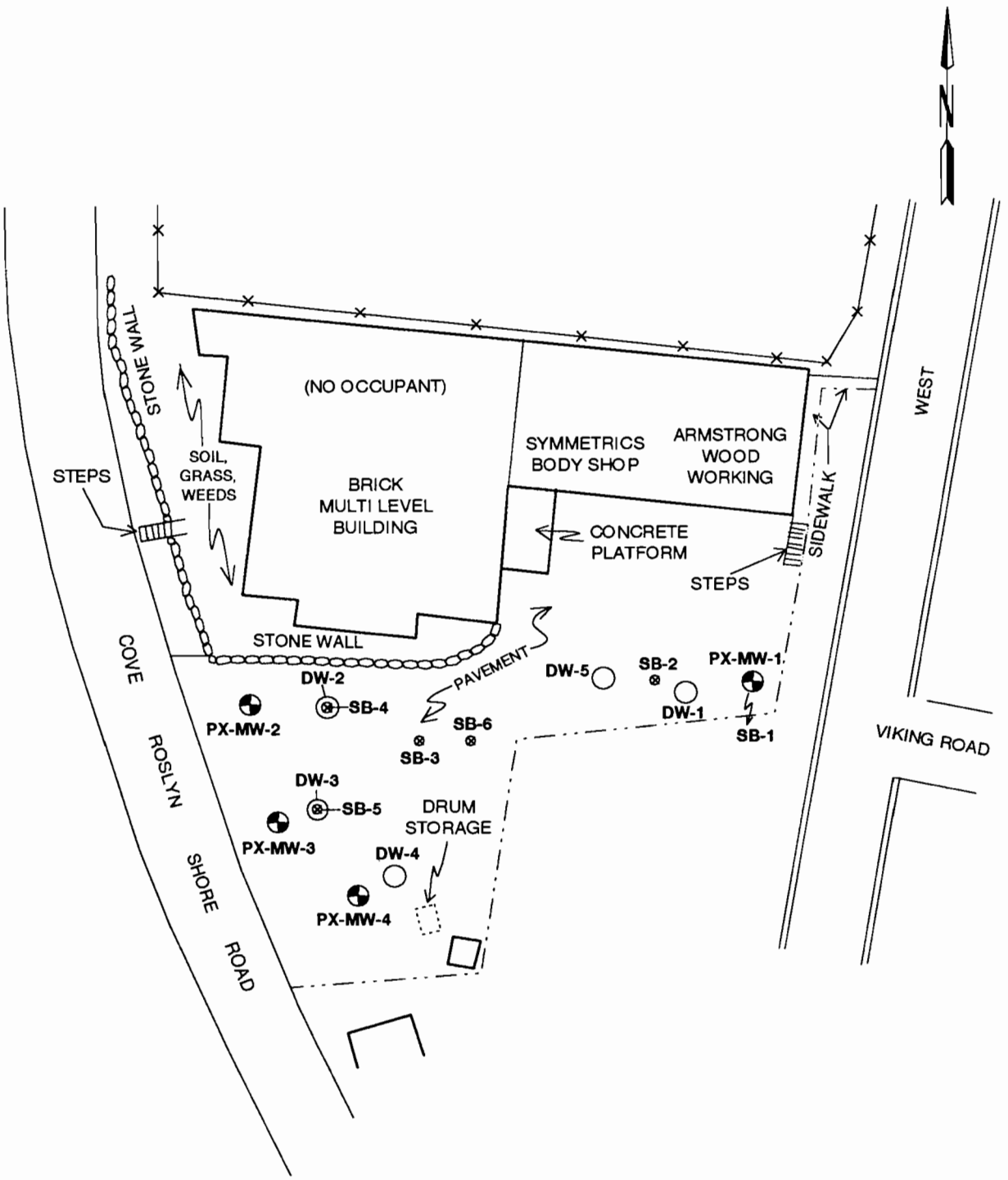
Previous site sampling is summarized in Table 1. In 1984 NCDOH sampled the site's cesspool and dry well; two liquid samples were analyzed (Reference 4). The exact locations of these samples are unknown, but they were presumably taken either southeast or southwest of the building. In May and November 1989 Blasland & Bouck conducted Phase II and supplemental Phase II investigations, respectively. Soil from the surface and from borings was collected and analyzed, and groundwater was analyzed (Figure 3 and Table 1). No soil samples were collected and analyzed during the SI.

## 3.2 Analytical Results

Sampling of liquid from the cesspool in 1984 identified concentrations of tetrachloroethylene at 120,000 µg/l. Also detected were trichlorotrifluoroethane and dichloroethane, 13,000 µg/l; trichloroethylene, 6600 µg/l; trichloroethane, 2300 µg/l; and dichlorobenzene, 1000 µg/l. Toluene and xylene were also identified. During the May 1989 Phase II investigation a total of six soil samples were analyzed. The soil sample collected from the 1-ft interval at dry well No. 3 contained the highest concentrations of chlorinated solvents (tetrachloroethylene, 1200 mg/kg). Trichloroethylene was identified at 86 mg/kg and 1,2-dichloroethylene at 26 mg/kg. During the November 1989 supplemental Phase II, one sample collected from dry well No. 3 at a depth of 3 ft contained tetrachloroethylene at 24.2 mg/kg, trichloroethylene at 40.0 mg/kg, and 1,1-dichloroethane at 13.1 mg/kg (Reference 7).

## 3.3 Conclusions

Although several types of waste have been removed from the site (13 $yd^3$ of soil from a dry well, 2300 gal of liquid from the dry well and several drums), soil contaminated with chlorinated solvents remains at the site. Soil contaminants are impacting groundwater quality beneath the site and may eventually impact nearby Hempstead Harbor, into which groundwater discharges.




**LEGEND**

- Monitoring well
- Dry well
- Boring well
- **SB-2** Soil boring

0 50 ft

SCALE
1 in. = 50 ft

Source: YEC, Inc. survey map, 10 July 1992.

**FIGURE 3**

## SAMPLE LOCATIONS

**PENETREX PROCESSING**
**NYSDEC I.D. No. 130034**
**1993 HRS SCORE**

**LAWLER, MATUSKY & SKELLY ENGINEERS**
**Pearl River, New York**

# 4 GROUNDWATER

## 4.1 Hydrogeology

The site is located in the Atlantic Coastal Plain Physiographic Province, north of the groundwater divide that runs east-west across the center of Long Island, and west of the principal divide that runs northwest-southeast from Locust Valley to Brookville, Long Island. Regional groundwater flow in this area is westward towards Hempstead Harbor. The site is underlain by unconsolidated material of Cretaceous and Quaternary age. These deposits are over 500 ft thick under the site and overlie crystalline bedrock. From deepest to shallowest these sediments are: the Lloyd aquifer, the Raritan clay confining unit, the Magothy aquifer (not present under the site), the Port Washington aquifer, the Port Washington confining unit, and the upper glacial aquifer (References 1 and 6).

The upper glacial aquifer consists of late Pleistocene and Holocene age sand, gravel, silt, and clay deposits that overlie the Port Washington confining unit. The upper surface of the upper glacial deposits constitute present day land surface except in areas such as the Penetrex site, where they are overlain by recent Holocene deposits and/or fill materials. The water table at the site is found in this aquifer. The Holocene deposits are more recent deposits, consisting of sand, gravel, silt, clay, organic mud, peat, loam, and shells. Colors are gray, green, black, and brown. These deposits, which include undifferentiated artificial fill, salt-marsh and swamp deposits, and stream alluvium and shore deposits, typically range in thickness from 10 to 50 ft. The upper Pleistocene deposits are moraine (till), composed of unsorted clay, sand, gravel, and local lacustrine or marine deposits consisting of clay, silt, and sand (References 1 and 6).

The average horizontal hydraulic conductivity of the upper glacial aquifer is 270 ft/day (2000 $gpd/ft^2$) and the average vertical hydraulic conductivity is 27 ft/day (200 $gpd/ft^2$). The morainal deposits are estimated to be approximately 110 ft thick beneath the site and are assumed to directly overlie the Port Washington confining unit. These deposits consist predominantly of well to moderately sorted fine sand with some medium sand. All soil borings conducted by Blasland and Bouck were drilled or hand augered into the morainal deposits of the upper glacial aquifer (Reference 6). At approximately 12 ft deep at MW-1 traces of silty sand are present. This silty deposit becomes more dominant and extends across the site, varying in thickness from 2 ft at MW-1 to 10 ft at MW-3. This deposit is wedge shaped and increases in clay content and thickness in the southwest direction (References 1 and 6).

Groundwater flow at the site is to the northwest toward Hempstead Harbor, with a slight tidal influence. The shallow groundwater gradient at the site varies from 0.012 to the east of monitoring well MW-3 to 0.10 to the west of this well. This can be explained by the shallow geology of the site; monitoring well MW-1 is screened predominantly in fine sand deposits, whereas monitoring wells MW-2, -3, and -4 are screened in less permeable silty and clayey sands (Figure 3) (References 1 and 6).

## 4.2 Targets

Almost all potable water is supplied by a public or private water supplier; very few private residential wells are in use (Reference 8). Several water suppliers, including Jericho Water District, Port Washington Water District, Glen Cove District, Roslyn Water District, Sea Cliff Water District, and Old Westbury Water District, have production wells located within 4 miles of the site (References 9, 10, 11, 12, 13, and 14). The closest water supply well is located approximately 2200 ft east of the site. This well, N5201, is operated by the Jericho Water District, which reports that the well is used only during the summer and contributes to a much larger system. The well, reported to be situated in the Lloyd aquifer at a depth of 504 ft, produces clean water (Reference 9). The presence and nature of this well indicates that a wellhead protection area is also within 4 miles of the site (Reference 15). The next closest supply well, located 0.75 mile north at the North Shore County Club, is reported to be located in the Magothy aquifer at a depth of 180 ft, and is used for irrigation only. These are the only municipal supply wells within 1 mile of the site and are upgradient of the site. There are a total of 44 municipal supply wells located within a 4-mile radius of the site: 18 are located within the 1- to 2-mile radius; 15 wells within the 2- to 3-mile radius; and 11 within the 3- to 4-mile radius (References 9 through 14). These wells are all located in the Magothy and Lloyd aquifers. Two shallower wells at 89 and 92 ft (N4860 and N0087) are also reported to be in the Magothy (Reference 12).

## 4.3 Sample Locations

In May 1989 four monitoring wells were installed on site and sampled as part of the Blasland and Bouck's Phase II investigation (Figure 2).

During the SI groundwater samples were collected from three on-site monitoring wells and two off-site, downgradient monitoring wells located at a LILCO storage facility (Figure 2). One on-site well was designated upgradient and was located in the southeastern portion of the property.

## 4.4 Analytical Results

Groundwater, sampled in 1989, contained concentrations of tetrachloroethylene (560 µg/l), trichloroethylene (8 µg/l), and 1,2-dichloroethane (74 µg/l) in excess of New York State drinking water standards (Table 1) (Reference 6).

1,2-Dichloroethylene (total) at 330 µg/l, 1,1,1-trichloroethane at 440 µg/l, trichloroethylene at 210 µg/l, and tetrachloroethylene at 610 µg/l exceeded NYSDEC Class GA standards (5 µg/l) in the on-site monitoring wells (Table 2) (Reference 1). Chlorinated compounds were not detected in samples analyzed from off-site monitoring wells.

## 4.5 Conclusions

Groundwater beneath the site has been impacted by waste containing chlorinated solvents deposited on site. Groundwater at this depth is not used as a potable water supply. Groundwater at the site is tidally influenced by Hempstead Harbor, and it is probable that pollutants will migrate to Hempstead Harbor via groundwater discharge.

TABLE 2 (Page 1 of 4)

# GROUNDWATER SAMPLE DATA SUMMARY (JUNE 1992)

**Penetrex Processing NYSDEC I.D. No. 130034**

| PARAMETER | LC-GW-11 | LC-GW-12 | PX-MW-1 | PX-MW-2 | MS PX-MW-2 | MSD PX-MW-2 | NYSDEC CLASS GA STANDARDS |
|---|---|---|---|---|---|---|---|
| **VOLATILE ORGANICS (µg/l)** | | | | | | | |
| Methylene chloride | 2 b j | 1 b j | 22 b j | 18 b j | 33 b j | 34 b j | 5.0 |
| Acetone | 12 b | ND | ND | ND | ND | ND | NS |
| 1,1-Dichloroethane | ND | ND | 47 j | ND | ND | ND | 5.0 |
| 1,2-Dichloroethylene (total) | ND | ND | 2,300 | 3,100 | 2,800 | 3,000 | 5.0 |
| 1,1,1-Trichloroethane | ND | ND | 270 | 430 | 390 | 410 | 5.0 |
| Trichloroethylene | ND | ND | 180 | 190 | * | * | 5.0 |
| Tetrachloroethylene | ND | ND | 460 | 530 | 470 | 490 | 5.0 |
| **Tentatively Identified Compounds** | | | | | | | |
| Ethane, 1,1,2,-trichloro-1,2, | ND | ND | 410 j | 370j | NR | NR | 50 |

* - Spiking compound; data not representative of actual sample concentration.
b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
MS - Matrix spike.
ND - Not detected at analytical detection limit (Ref. 7)
NR - Not run.
NS - No standard.
MSD - Matrix spike duplicate.

TABLE 2 (Page 2 of 4)

## GROUNDWATER SAMPLE DATA SUMMARY (JUNE 1992)

**Penetrex Processing NYSDEC I.D. No. 130034**

| PARAMETER | PX-MW-3 | PX-MW-5* | FIELD BLANK (6/10/92) | TRIP BLANK | NYSDEC CLASS GA STANDARDS |
|---|---|---|---|---|---|
| **VOLATILE ORGANICS (µg/l)** | | | | | |
| Methylene chloride | 19 b j | 21 b j | 2 b j | 2 b j | 5.0 |
| 1,2-Dichloroethylene (total) | 2,800 | 3,300 | ND | ND | 5.0 |
| Chloroform | ND | ND | 5 j | ND | 7.0 |
| 1,1,1-Trichloroethane | 910 | 440 | ND | ND | 5.0 |
| Trichloroethylene | 590 | 210 | ND | ND | 5.0 |
| Tetrachloroethylene | 920 | 610 | ND | ND | 5.0 |
| **Tentatively Identified Compounds** | | | | | |
| Ethane, 1,1,2,-trichloro-1,2, | 2,300 j | 440 j | ND | ND | 50 |

* - Blind duplicate of PXMW-2.
b - Found in associated blanks.
j - Estimated concentration; compound present below quantitation limit.
ND - Not detected at analytical detection limit (Ref.7).

TABLE 2 (Page 3 of 4)

## GROUNDWATER SAMPLE DATA SUMMARY (JUNE 1992)

**Penetrex Processing NYSDEC I.D. No. 130034**

| PARAMETER | LC-GW-11 | FILTRATE LC-GW-11 | LC-GW-12 | FILTRATE LC-GW -12 | PX-MW -1 | PX-MW -2 | MSD PX-MW-2 | FILTRATE PX-MW -2 | DUP FILTRATE PX-MW-2 | NYSDEC CLASS GA STANDARDS | NATURAL AMBIENT GROUNDWATER RANGES (n) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **METALS (µg/l)** | | | | | | | | | | | |
| Aluminum | 1,170 N | ND N | 4,590 N | ND N | 452 N | 2,210 N | 2,250 | ND N | ND | NS | <5.0 - 1,000 |
| Antimony | ND | ND | ND | ND | ND | ND | ND | ND | ND | 3.0 GV | N/A |
| Arsenic | 9.9 B | 2.8 B | 3.5 B | ND | ND | 3.7 B | 5.2 B | ND W | ND | 25 | <1.0 - 30 |
| Barium | 69.2 B | 55.6 B | 38.8 B | 7.0 B | 19.1 B | 33.8 B | 34.6 B | 17.5 B | 18.4 B | 1,000 | 10 - 500 |
| Beryllium | ND | ND | ND | ND | ND | ND | ND | ND | ND | 3.0 GV | <10 |
| Cadmium | ND | ND | ND | ND | ND | 5.9 | ND | ND | ND | 10 | <1.0 |
| Calcium | 26,000 | 25,300 | 11,900 | 11,000 | 15,200 | 31,600 | 31,830 | 31,200 | 31,900 | NS | 1,000 - 150,000 |
| Chromium | 4.0 B | ND | 11.0 | ND | ND | 4.8 B | 4.6 B | ND | ND | 50 | <1.0 - 5.0 |
| Cobalt | ND | ND | ND | ND | ND | 8.2 B | 9.0 B | ND | ND | NS | <10 |
| Copper | 34.8 | ND | 22.2 B | ND | ND | 13.2 B | 12.1 B | ND | ND | 200 | <1.0 - 30 |
| Iron | 18,000 | 10,100 | 12,200 | 11.7 B | 765 | 7,510 | 7,980 | 53.0 B | 46.0 B | 300 (m) | 10 - 10,000 |
| Lead | 2.4 B | ND | 6.3 | ND | 1.0 B | 4.8 SA | 2.3 B | ND | ND | 25 | <15 |
| Magnesium | 5,310 | 5,120 | 4,770 B | 4,400 B | 2,210 B | 4,020 B | 4,050 B | 3,890 B | 3,980 B | 35,000 GV | 1,000 - 50,000 |
| Manganese | 1,460 | 1,410 | 18.1 | ND | 3,090 | 561 | 590 | 68.1 | 69.3 | 300 (m) | <1.0 - 1,000 |
| Mercury | ND | ND | ND | 0.30 | 0.12 B | ND | 0.12 B | ND | ND | 2.0 | <1.0 |
| Nickel | ND N R | ND N R | ND N R | ND N R | ND N R | 140 N R * | 14.0 B * | ND N R | ND | NS | <10 - 50 |
| Potassium | 5,330 | 4,080 B | 2,930 B | 2,200 B | 2,320 B | 6,940 | 7,690 | 8,300 | 6,560 | NS | 1,000 - 10,000 |
| Selenium | ND W | ND | ND | ND W | ND | 1.4 B | 1.1 B | 1.0 B | ND | 10 | <1.0 - 10 |
| Silver | ND | ND | ND | ND | ND | ND | ND | ND | ND | 50 | <5.0 |
| Sodium | 61,200 | 59,600 | 9,140 | 8,820 | 17,400 | 32,100 | 32,150 | 31,400 | 32,100 | 20,000 | 500 - 120,000 |
| Thallium | ND | ND | ND | ND | ND | ND | ND | ND | 1.7 B | 4.0 GV | N/A |
| Vanadium | 6.9 B | ND | 64.3 | ND | ND | 13.9 B | 13.4 B | ND | ND | NS | <1.0 - 10 |
| Zinc | 25.0 N R | 25.4 N R | 46.5 N R | 24.6 N R | 15.3 B N | 241 N R* | 49.4 * | 26.2 N R | 26.0 | 300 | <10 - 2,000 |
| Cyanide | NR | NR | NR | NR | NR | NR | NR | NR | NR | 100 | N/A |

* - Reported concentrations should be interpreted as estimated due to poor correlation between sample and duplicate.
(m) - Iron and manganese not to exceed 500 µg/l.
(n) - Ref. 10.
B - Value less than contract-required detection limit but greater than instrument detection limit.
N - Spiked sample recovery not within control limits.
R - Duplicate analysis not within control limits.
W - Post-digestion spike out of control limits; sample absorbance less than 50% of spike absorbance.

GV - Guidance value.
N/A - Not available.
ND - Not detected at analytical detection limit (Ref. 7).
NR - Not run.
NS - No standard.
SA - Value determined by method of standard addition.
DUP - Duplicate sample analysis.
MSD - Matrix spike duplicate.

TABLE 2 (Page 4 of 4)

# GROUNDWATER SAMPLE DATA SUMMARY (JUNE 1992)

**Penetrex Processing NYSDEC I.D. No. 130034**

| PARAMETER | PX-MW-3 | FILTRATE PX-MW-3 | PX-MW-5 | FILTRATE PX-MW-5 | FIELD BLANK 6/10/92 | NYSDEC CLASS GA STANDARDS | NATURAL AMBIENT GROUNDWATER RANGES (n) |
|---|---|---|---|---|---|---|---|
| **METALS (µg/l)** | | | | | | | |
| Aluminum | 408 N | ND N | 1,560 N | ND N | ND N | NS | <5.0 - 1,000 |
| Antimony | ND | ND | ND | ND | ND | 3.0 GV | N/A |
| Arsenic | 15.2 | 10.0 | 4.3 B | ND | ND W | 25 | <1.0 - 30 |
| Barium | 76.5 B | 57.5 B | 31.0 B | 18.7 B | ND | 1,000 | 10 - 500 |
| Beryllium | ND | ND | ND | ND | ND | 3.0 GV | <10 |
| Cadmium | 2.5 B | ND | ND | ND | ND | 10 | <1.0 |
| Calcium | 41,000 | 38,800 | 32,600 | 32,400 | ND | NS | 1,000 - 150,000 |
| Chromium | ND | ND | 3.6 B | ND | ND | 50 | <1.0 - 5.0 |
| Cobalt | 16.4 B | 16.5 B | 10.0 B | ND | ND | NS | <10 |
| Copper | 3.0 B | ND | 9.6 B | 3.8 B | ND | 200 | <1.0 - 30 |
| Iron | 21,600 | 6,540 | 6,540 | 38.6 B | 27.1 B | 300 (m) | 10 - 10,000 |
| Lead | 2.4 B | ND | 3.2 | ND | ND | 25 | <15 |
| Magnesium | 5,170 | 4,970 | 4,100 B | 4,080 B | ND | 35,000 GV | 1,000 - 50,000 |
| Manganese | 510 | 483 | 535 | 81.5 | ND | 300 (m) | <1.0 - 1,000 |
| Mercury | ND | 0.13 B | 0.13 B | ND | ND | 2.0 | <1.0 |
| Nickel | 18.4 B N R | 12.6 B N R | ND N R | ND N R | ND N R | NS | <10 - 50 |
| Potassium | 3,610 B | 4,410 B | 8,740 | 7,010 | ND | NS | 1,000 - 10,000 |
| Selenium | ND | ND | ND W | ND W | ND | 10 | <1.0 - 10 |
| Silver | ND | ND | ND | ND | ND | 50 | <5.0 |
| Sodium | 33,800 | 32,700 | 32,700 | 33,000 | ND | 20,000 | 500 - 120,000 |
| Thallium | ND | ND | ND | ND | ND | 4.0 GV | N/A |
| Vanadium | ND | ND | 10.8 B | ND | ND | NS | <1.0 - 10 |
| Zinc | 22.3 N R | 6.7 B N R | 37.1 N R | 31.9 N R | 7.4 B N R | 300 | <10 - 2,000 |
| Cyanide | NR | NR | NR | NR | NR | 100 | N/A |

(m) - Iron and manganese not to exceed 500 µg/l.
(n) - Ref. 10.
B - Value less than contract-required detection limit but greater than instrument detection limit.
N - Spiked sample recovery not within control limits.
R - Duplicate analysis not within control limits.
W - Post-digestion spike out of control limits; sample absorbance is less than 50% of spike absorbance.

GV - Guidance value.
N/A - Not available.
ND - Not detected at analytical detection limit (Ref. 7).
NR - Not run.
NS - No standard.

## 5 SURFACE WATER PATHWAY

### 5.1 Hydrology

The site is situated approximately 300 ft east of Hempstead Harbor. The average slope of the site is about 3% towards Hempstead Harbor. Hempstead Bay is the recipient of drainage for the surrounding region. Three drain grates currently located on site collect rain water; these drains are also designated as dry wells and drain directly to groundwater and the surrounding soil beneath the site. Waste generated by Penetrex reportedly was discharged to on-site drains without a State Pollutant Discharge Elimination System (SPDES) permit (Reference 5). Surface water not collected by outside dry wells drains to Hempstead Harbor. Hempstead Harbor drains to Long Island South, approximately 4 to 5 miles north of the site (Figure 4). Across Long Island Sound are the shores of Westchester County, New York, about 10 miles from the site. Long Island Sound completes the 15-mile migration pathway to the northeast and southwest.

### 5.2 Targets

There are no drinking water intakes on Hempstead Harbor. There is both recreational and commercial fishing in Hempstead Harbor and on Long Island Sound (Reference 16). Commercial shellfishing in the vicinity of the site is limited to waters farther north and northeast. Most of Hempstead Harbor is usually closed to commercial shellfishers because of intermittent pollution caused by rain and surface water runoff (pesticides, oil, animal feces, etc.) (Reference 16).

According to the NYSDEC Tidal Wetlands Map the shoreline of Hempstead Harbor is a littoral zone (Reference 17). The entire harbor shoreline (both east and west shores) is also designated a National Wetland (Reference 18); therefore, the closest wetland is just 300 ft due east of the site and continues for at least 5 miles along the shoreline to Long Island Sound. Approximately 800 ft southwest of the site are two recharge basins designated as National Wetlands (Reference 19). There are approximately 235 NYSDEC freshwater and Federally designated wetlands within 4 miles of the site, including the shores of Hempstead Harbor as far as Long Island Sound (Reference 18). There are hundreds more wetlands located on Long Island Sound. The closest NYSDEC significant habitat is a waterfowl nesting area located over a mile away to the northwest (Reference 20). There are no Federally listed or proposed endangered or threatened species known to be living within 4 miles of the site (Reference 21).

### 5.3 Sample Locations

No surface water samples were collected as part of the SI.

### 5.4 Analytical Results

No analytical data are available for surface water located near the site.

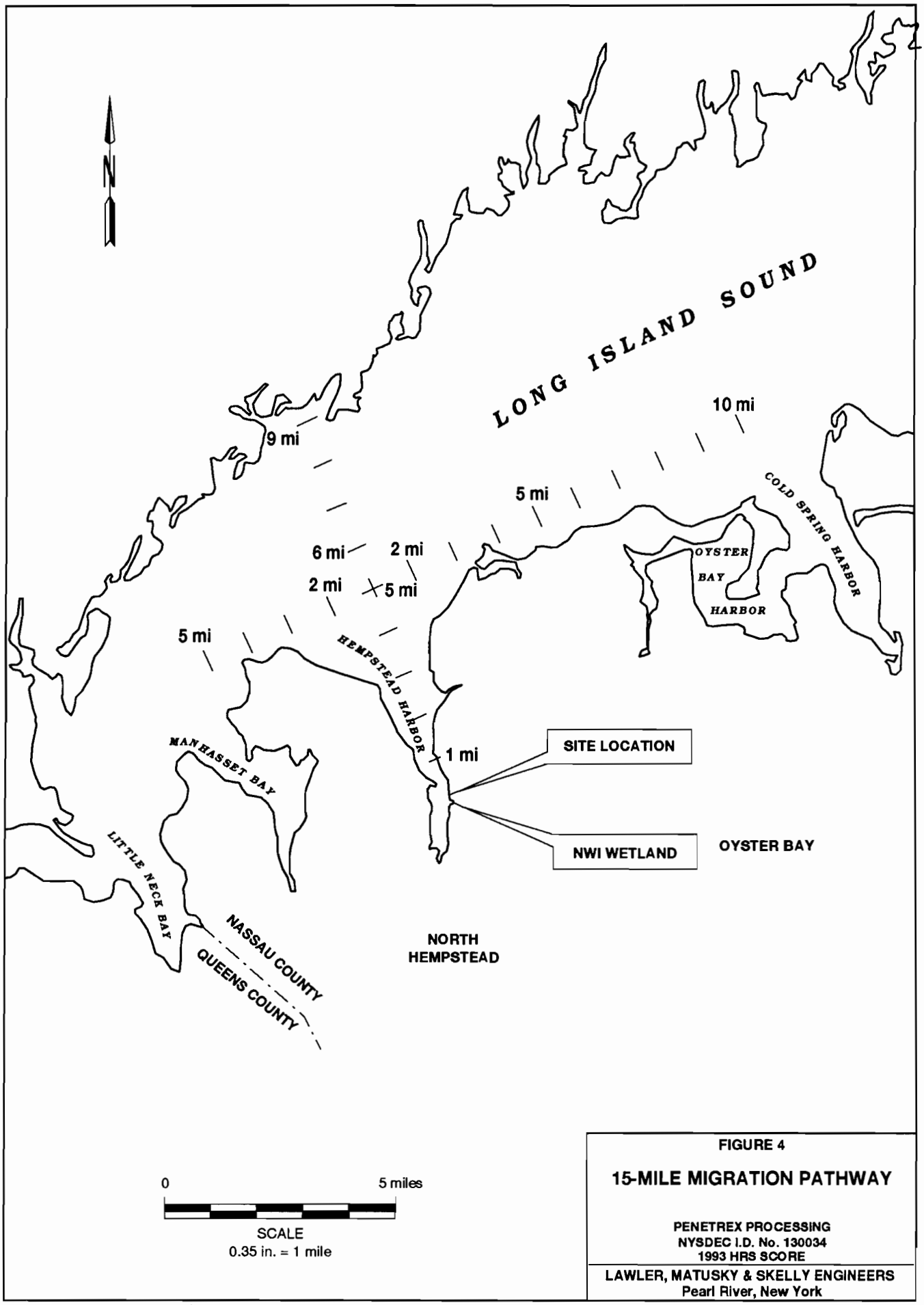



**FIGURE 4**

## 15-MILE MIGRATION PATHWAY

PENETREX PROCESSING
NYSDEC I.D. No. 130034
1993 HRS SCORE

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

### 5.5 Conclusions

Pollution migration to nearby Hempstead Harbor was not investigated during the SI. Because most of the site is paved with asphalt, contaminant migration by the overland route is not likely. Groundwater beneath the site, however, is tidally influenced and mixes with waters of Hempstead Harbor. It is possible for site contaminants to migrate to the harbor via groundwater discharge.

## 6 SOIL EXPOSURE AND AIR PATHWAYS

### 6.1 Physical Conditions

The site is an active commercial property, with an automobile repair shop and woodworking shop operating on the premises. The on-site building covers about 50% of the site area; nearly all the remaining surface is covered with westerly sloping bituminous pavement. Drains (dry wells) are not paved over. Residential property borders the site on two sides; there is no fence and access to the site is easy.

### 6.2 Soil and Air Targets

Two small businesses are currently on site. It is estimated that five workers are on site full time. The nearest residences border the site to the south and southwest (References 1 and 2); these homes are within 200 ft of the site building. There are approximately 393 people living with 0.25 mile of the site; 1339 within 0.25 to 0.5 mile; 3050 within 0.5 to 1 mile; 17,115 within 1 to 2 miles; 37,894 within 2 to 3 miles; and 42,733 within 3 to 4 miles (Reference 22).

As discussed in Section 5.2, the closest wetland is a Federally and NYSDEC designated tidal wetland located at the shoreline of Hempstead Harbor, approximately 300 ft east of the site. The closest NYSDEC freshwater wetland is just over 0.5 mile from the site. Total National Wetlands Inventory (NWI) and NYSDEC freshwater wetlands within 0 to 0.25 mile of the site is five; within 0.25 to 0.5, five; within 0.5 to 1, 21; within 1 to 2 miles, 61; within 2 to 3 miles, 88; and within 3 to 4 miles, 55 (Reference 18). No Federally listed or proposed endangered species are known to exist within 4 miles of the site (Reference 21). There are approximately 35 NYSDEC significant habitats known in the area of the site, the closest being over 1 mile northwest of the site (Reference 20).

### 6.3 Soil Sample Locations

No soil samples were collected during the SI.

### 6.4 Soil Analysis Results

No soil analysis were included in the SI. Soil analysis from previous investigations is discussed in Section 3.2.

### 6.5 Air Monitoring

No air monitoring was conducted during the SI.

### 6.6 Conclusions

The site, located in a commercial and residential area, is not fenced and access is unlimited. A small portion of the site bordering the west and south sides of the building is not paved. The remainder of the site is paved, and areas of contaminated soil are paved over or covered with drain grates. Exposure of on-site workers and nearby residents to the contaminated soil is not likely. There is no indication of a release of contamination to the air.

## 7 SUMMARY AND CONCLUSIONS

The Penetrex SI gathered data necessary to evaluate the site as a candidate for NPL consideration. Groundwater samples were collected and analyzed to characterize the site.

In the past Penetrex disposed of dry cleaning wastes on site without a SPDES permit. These wastes contained chlorinated solvents, including tetrachloroethylene, trichloroethylene, trichloroethane, and dichloroethanes. As requested by NYSDEC, the property owner conducted a cleanup of an on-site dry well and drum removal. As documented in later investigations, the waste removal action was incomplete and soil containing chlorinated compounds still remains at the site.

Investigations, including the most recent SI, show that groundwater beneath the site has been impacted by site activities. Concentrations of 1,2-dichloroethylene, 1,1,1-trichloroethane, trichloroethylene, and tetrachloroethylene exceed NYSDEC groundwater standards. Groundwater beneath the site moves northwest toward Hempstead Harbor, and a slight tidal influence has been demonstrated. Groundwater pollutants beneath the site have the potential to migrate to the nearby harbor and possibly impact wetlands and aquatic life. Environmental impact on the harbor from the site may be difficult to identify because of other pollution already present in the harbor and other polluters located near the site.

Cleanup at the site should be continued.

Groundwater beneath the site is not used as a source of potable water; a municipal well, located 2200 ft east of the site at a depth of 504 ft below grade in a different aquifer, is not impacted by the site.

## 8 SITE SCORE

The prescore for the Penetrex site, 34.41, was obtained using Prescore Software Version 2.0, May 1993. This score represents a site with groundwater contamination and the potential to release contaminants to sensitive environments via the groundwater to the surface water migration pathway. No surface water or fisheries target samples were collected during the SI. The groundwater to surface water migration pathway score is zero because no targets

have been identified; however, there is a potential for surface water to be impacted by site groundwater. For the groundwater migration pathway, residential populations were counted as targets in the Lloyd Aquifer scoring because a standby well is located to the east of the site. Counting these individuals drives the score above 28.5.

REFERENCES

Penetrex Processing Inc. - 10/20/93

[1] Lawler, Matusky & Skelly Engineers (LMS). 1993. Phase II investigation report, Penetrex Processing, Inc.

[2] U.S. Geological Survey Maps:

USGS Quadrangle Map, Sea Cliff, NY, 1968, photorevised 1979.
USGS Quadrangle Map, Hicksville, NY, 1967, photorevised 1979.
USGS Quadrangle Map, Mamaroneck, NY-CT, 1967, photorevised 1975.

[3] U.S. Environmental Protection Agency (EPA). 1993. Information on the Penetrex Processing, Inc., site obtained from the Comprehensive Environmental Response, Compensation, Liability, and Information System (CERCLIS) data base.

[4] Memorandum of conversation between Christina Fern, LMS, and Laurie Lutzker, NCDOH, concerning past activities at the Penetrex Processing, Inc., site. 21 September 1993.

[5] Deposition of John Woodworth, NYSDEC, concerning investigation of past activities at the Penetrex Processing, Inc., site. 19 February 1985.

[6] Blasland & Bouck Engineers, P.C. 1989. Phase II investigation report, Penetrex site, Glenwood Landing, New York. Prepared for Shea & Gould.

[7] Blasland & Bouck Engineers, P.C. 1990. Supplemental Phase II investigation report, Penetrex site, Glenwood Landing, New York. Prepared for Shea & Gould.

[8] Well count data from the National Waterworks Association. 19 May 1993.

[9] Memorandum of conversation between Christina Fern, LMS, and Joseph Passariello, Jericho Water District, concerning public water supplies nearest the Penetrex Processing, Inc., site. 12 October 1993.

[10] Correspondence from Stephen J. Nakelski, Port Washington Water District, to Christina Fern, LMS, concerning locations and depths of the District's operating wells. 21 July 1993.

[11] Correspondence from Angelo Martino, City of Glen Cove Office of the Water Department, to Christina Fern, LMS, concerning Glen Cover Water Department water supply sources. 20 July 1993.

[12] Correspondence from Carmine Cipriano, Roslyn Water District, to Christina Fern, LMS, concerning Roslyn Water District water supply sources. 8 July 1993.

[13] Communications between Christina Fern, LMS, and Anthony Grella, Sea Cliff Water Co., concerning Sea Cliff Water Co. wells and population served. 1 and 2 July 1993.

## REFERENCES CITED
*(Continued)*


[14] Lawler, Matusky & Skelly Engineers (LMS). 1993. Water summary worksheets.

[15] New York State Department of Environmental Conservation (NYSDEC). 1990. New York State Wellhead Protection Program. Submitted to U.S. Environmental Protection Agency.

[16] Memorandum of conversation between Christina Fern, LMS, and Paul Chevallier NYSDEC Stony Brook, concerning fishing in Hempstead Harbor. 14 October 1993.

[17] New York State Department of Environmental Conservation (NYSDEC). Tidal wetlands map 614-518, index map number 2.

[18] Lawler, Matusky & Skelly Engineers (LMS). 1993. Figure and table showing wetlands within a 4-mile radius of the Penetrex Processing, Inc., site. Produced by LMS' Geographical Information System (GIS) using data from National Wetlands Inventory (NWI) maps and NYSDEC wetlands maps.

[19] Lawler, Matusky & Skelly Engineers (LMS). 1993. Listing of wetland, school, residence, habitat, and well nearest the Penetrex Processing, Inc., site. Based on data from NWI Fish & Wildlife Service topographical map, USGS topographical map, LMS (1993), NYSDEC NY Natural Heritage Program, and base map of Nassau County (Dynamap 2000, GDT).

[20] Correspondence from Burrell Buffington, NYSDEC, to Christina Fern, LMS, concerning rare plants, animals, and natural communities in the vicinity of the Penetrex Processing, Inc., site. 16 July 1993.

[21] Correspondence from Leonard P. Corin, U.S. Department of the Interior Fish & Wildlife Service, to Christina Fern, LMS, concerning threatened or endangered species in the vicinity of the Penetrex Processing, Inc., site. 14 July 1993.

[22] Lawler, Matusky & Skelly Engineers (LMS). 1993. Table listing population within a 4-mile radius of the Penetrex Processing, Inc., site. Data from U.S. Census of Population and Housing (1990) processed through LMS' GIS.

[23] U.S. Environmental Protection Agency (EPA). 1992. Hazard Ranking System Guidance Manual. Publication 9345.1-07.

[24] U.S. Department of Commerce. No date. Rainfall Frequency Atlas of the United States For Durations From 30 Minutes to 24 Hours and Return periods From 1 to 100 Years.

REFERENCE 1

# ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK PHASE II INVESTIGATIONS

**Penetrex Processing, Inc., Site**
Village of Glenwood Landing, Nassau County
NYSDEC I.D. No. 130034

**Report**

Prepared for:

DIVISION OF HAZARDOUS WASTE REMEDIATION
**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**
50 Wolf Road
Albany, New York 12233-7010



LMSE-93/0171&576/046

Prepared By:

**LAWLER, MATUSKY & SKELLY ENGINEERS**
Environmental Science & Engineering Consultants
One Blue Hill Plaza
Pearl River, New York 10965

March 1993

REFERENCE 2

U.S. Geological Survey Maps:

USGS Quadrangle Map, Sea Cliff, NY, 1968, photorevised 1979.
USGS Quadrangle Map, Hicksville, NY, 1967, photorevised 1979.
USGS Quadrangle Map, Mamaroneck, NY-CT, 1967, photorevised 1975.

REFERENCE 3

---> /9 <---

Error - Incorrect range specification

Option? t 1/2/9

File: 1 Entry: 9

**FINDS** Accession Number NYD981079064

(EPAID) EPA ID: NYD981079064
(REG) Region: 02

(ID) SITE IDENTIFICATION INFORMATION:

Primary Name:
(NAME) FORMER PREMISES OF PENETREX IN
(STREET) ONE SHORE RD
(CITY) GLENWOOD LANDING
(STATE) NY
(ZIP) 11547
(COUNTY) NASSAU
(CNTYCD) County Code: 059
(OWNER) Ownership Indicator: P
(LUPD) Last Update Date: 04-17-90

(SRC) Source:

| Acronym | ID |
|---|---|
| RCRIS | NYD981079064 |

Option? go rcris
Invalid database name: RCRIS

Option? go cerclis

CERCLIS - Version 5.00/1.19 (Mar, 1993) ($95/Hr.)

Latest Database Update: March, 1993 (Potentially Responsible Parties)
March, 1993 (Hazardous Waste Sites)

Latest news for CERCLIS . . .
7 May 93; Potentially Responsible Parties (PRPs) Updated In CERCLIS

Option? t 1/2/9

File 1 is being converted to local identifiers.
Conversion to local identifiers resulted in 0 unique occurrences.

Warning: No information was output as a result of this request.

REFERENCE 4

**MEMORANDUM OF CONVERSATION**

M Laurie Lutzker OF Nassau County Dept of Health
Public Health Sanitarian

JOB: Penetrex DATE: 9-21-93
JOB NUMBER: S 76 046 8016 TIME: ~4PM
CONCERNING: Nassau County Health Dept involvement with Penetrex site
AND DECIDED: As noted by Laurie L.

Oct 1982 NCHD observes employee dumping 5 gal pail outside building
dumped: 50:1 soln of ~~Dem~~ Cote
water : Dem Kote (NaOH + Petro Distillate)

6/1983 warned them not to discharge
2/24/84 observed overflowing leachpool
3/2/84 inspection
sampled cesspool's liq sample
800 ppb { ~~T~~ Trichlorotrifluoroethane
1,2 Dichloroethene
38 000 PCE
6700 Toluene
67 TCA
53 Trichloroethylene
7 Ethyl benzene
32 Xylene
3/84 inspection.
3/5/84 "
5/2/84 Cesspool sample taken Liquid
13000 ppb ~~T~~. Trichlorotrifluoroethane
1,1 Dichloroethene
2300 TCA
6600 TCE
120 000 PCE
6900 Toluene
1000 Dichlorobenzene
8/84 Facility Closed

CC: SIGNED: Christine Fern
CC: SIGNED:

LMS Lawler, Matusky & Skelly Engineers

REFERENCE 5

A3-1

STATE OF NEW YORK

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

---

In the Matter of the Summary Abatement, pursuant to Section 71-0301 of the Environmental Conservation Law of the State of New York (the "ECL") of a Condition or Activity which presents an Imminent Danger to the Health and Welfare of the People of the State of New York or is Likely to Result in Irreversible or Irreparable Damage to Natural Resources, Maintained and Engaged in By

AFFIDAVIT

SAUL WEINBERGER,

Respondent

---

STATE OF NEW YORK )
COUNTY OF SUFFOLK ) ss:

JOHN WOODWORTH, being duly sworn, deposes and says:

1. I am an Environmental Conservation Investigator in the Bureau of Environmental Conservation Investigations (BECI) in the Division of Law Enforcement of the New York State Department of Environmental Conservation (the "Department"). I am assigned to the BECI's White Plains Field Unit, White Plains, New York. I have held that position continuously since October 1982. In the course of my duties, I investigate known and suspected violations of the ECL and regulations promulgated pursuant thereto.

2. The following matters are within my personal knowledge, or have been related to me by other staff of the Department, or other individuals, in the course of my investigation into the matters described herein.

3. The Department has jurisdiction over the management of industrial and hazardous waste within the State of New York, pursuant to Article 27, Title 9 of the ECL. The Department also has jurisdiction over the regulation of the discharge of pollutants from outlets or point sources into the waters of the State of New York, pursuant to Article 17, Title 8 of the ECL. In addition, pursuant to Article 17, Title 8 of the ECL, the Department issues permits for such discharges, under a program known as the State Pollutant Discharge Elimination System (SPDES). Said permits will hereinafter be referred to as "SPDES permits."

4. The Department is authorized, empowered, and directed to enter upon and inspect property within the State of New York for the purpose of investigating those areas where the existence of pollution is known or suspected, and for the purpose of ascertaining compliance or non-compliance with any provision of the ECL, or any rule or regulation promulgated thereto. Such inspections are authorized by Section 3-0301(2)(g) of the ECL. Furthermore, Section 17-0829 of the ECL authorizes the Department to enter upon any premises at which any point source

of the discharge of industrial pollutants is located, for the purpose of inspection, and for the purpose of ascertaining compliance or non-compliance with any provision of Article 17, Title 8 of the ECL, any rule or regulation promulgated pursuant thereto, and any permit or order issued thereunder.

5. The Nassau County Department of Health (NCDH) is a duly authorized agent of the Department for the purpose of conducting the inspections described in Paragraph 4, above, within the County of Nassau.

6. Since September 1984, in the course of my official duties, I have been conducting an investigation into environmental conditions, and possible violations of the ECL and regulations promulgated pursuant thereto, occurring at premises operated as a commercial facility by Penetrex Processing Company ("Penetrex"), located at 1 Shore Road, in Glenwood Landing, Town of North Hempstead, County of Nassau, State of New York (the "Facility").

7. I am informed by Allen Fitzgerald, Public Health Sanitarian for NCDH, that Penetrex operated the Facility as a dry cleaning establishment, and that NCDH conducted several inspections, during the spring of 1984, at the Facility, pursuant to Section 17-0829 of the ECL. In the course of said inspections, NCDH determined that unauthorized discharges into an on-site cesspool had resulted in elevated concentrations of

various contaminants in said cesspool, in excess of guidelines established by the New York State Department of Health (NYSDOH). In the course of said inspections, NCDH further determined that unpermitted industrial wastewater discharges were occurring at the Penetrex facility, specifically: 1) the discharge of non-contact cooling water into an on-site cesspool; and 2) the discharge of separator water from dry cleaning equipment directly to said cesspool. Said cesspool was located fifty (50) feet south of the building in which Penetrex conducted its operations. Such discharges are unlawful unless authorized by SPDES permits. According to official records of the Department, at no time did Penetrex obtain or possess any SPDES permits authorizing any such discharges at the Facility. I am further informed by Allen Fitzgerald that, between May 1984 and August 1984, NCDH attempted to compel Penetrex to remediate the contamination described above. However, no such remediation was, or has been accomplished.

8. Upon information and belief, the property at which Penetrex operated the Facility is owned by an individual named Saul Weinberger, who maintains offices at 390 Willis Avenue, Roslyn Heights, New York. Said property shall hereinafter be referred to as the "Site." I am informed by Michael Weinberger, the son and authorized representative of Saul Weinberger, that Penetrex no longer operates the Facility, and has not done so since August 1984.

9. On September 27, 1984, in the course of my official duties, I went to the Site. I observed a two-story building on the premises of the Site. It appeared that said building was divided into two (2) portions. One of said portions was the Facility, formerly occupied by Penetrex. The other portion appeared to be operated by a company called Name Plate Manufacturing Co. of America. I spoke to an individual named Prisco, who identified himself as the owner and operator of said company. Mr. Prisco stated that his company's facility had in-ground septic tanks for waste water and sanitary waste and that said tnks were separate from the discharge system serving the former Penetrex Facility. He also stated that the space formerly used by Penetrex was unoccupied.

10. On the above date, in the course of my official duties, I further observed that the Site is approximately one-~~half (1/2) mile~~ THOUSAND FEET to the east of Hempstead Harbor.

11. On October 11, 1984, in the course of my official duties, I drove past the Site. In front of the Facility I observed four (4) 55-gallon drums and one (1) 30-gallon drum.

12. According to official records of the Department, neither the Facility nor the Site is a permitted facility for the treatment, storage or disposal of industrial-commercial waste, or hazardous waste, pursuant to the provisions of Article 27, Titles 7 and 9 of the ECL, and Part 360 of Title 6 of the

Official Compilation of Codes, Rules and Regulations of the State of New York ("6 NYCRR").

13. On November 29, 1984, I applied for a Search Warrant authorizing personnel of the Department, and of NCDH, to enter upon the premises of the Site, to collect samples from the cesspool described in Paragraph 7, above, and from the drums described in Paragraph 11, above, and to subsequently transport said samples to an independent laboratory for chemical analysis. On the above date, said Search Warrant was issued by the Hon. Abbey L. Boklan, Judge of the County Court of Nassau County. On December 3, 1984, said Search Warrant was duly executed, and the above described samples were collected, and subsequently transported to an independent laboratory for chemical analysis. On February 11, 1985, a report on the results of said chemical analysis was received at the Department's White Plains Office.

14. On February 15, 1985, in the course of my official duties, I again went to the Site. I observed that the drums described in Paragraph 11, above, were still on the Site. It appeared that said drums were in the same locations on the Site where I had observed them in the course of executing the above-described Search Warrant.

15. On the above date, in the course of my visit to the Site, I learned that a company named R & A Supply Company ("R & A") is presently occupying the Facility. I am informed

by the President of R & A, Fred Shelty, that R & A has occupied the Facility since January 1, 1985, and that R & A engages in the business of the distribution of dry cleaning equipment.

John Woodworth
JOHN WOODWORTH

Sworn to before me this 19th day of February, 1985

Anne Claire Scrocco
Notary Public

ANNE CLAIRE SCROCCO
Notary Public, State of New York
No. 44-4795925
Qualified in Rockland County
Commission Expires March 30, 1985

REFERENCE 6

REPORT

130034

# PHASE II INVESTIGATION
# PENETREX SITE
# GLENWOOD LANDING, NEW YORK

Shea & Gould

New York, New York

August 1989

BLASLAND & BOUCK ENGINEERS, P.C.
BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

REFERENCE 7

REPORT

# SUPPLEMENTAL PHASE II INVESTIGATION PENETREX SITE GLENWOOD LANDING, NEW YORK

Shea & Gould

New York, New York

February 1990

BLASLAND & BOUCK ENGINEERS, P.C.
BLASLAND, BOUCK & LEE
ENGINEERS & GEOSCIENTISTS

REFERENCE 8

Wellcount. 5/19/93

576047

90 POP: 1990 POPULATION.
90 HOUSE: 1990 NUMBER OF HOUSEHOLDS
UTILITY: NUMBER OF HOUSEHOLDS SERVED BY A PRIVATELY OR PUBLICLY OWNED WATER SUPPLY COMPANY WHOSE SOURCE MAY BE SURFACE WATER, GROUND WATER, OR A COMBINATION
DRILL: NUMBER OF HOUSEHOLDS WITH A PRIVATE DRILLED WELL.
DUG: NUMBER OF HOUSEHOLDS WITH A PRIVATE DUG WELL.
OTHER: NUMBER OF HOUSEHOLDS WITH AN UNSPECIFIED SOURCE OF WATER (CISTERN, SPRING, CREEK, RIVER, LAKE, ETC.)
* NO HOUSEHOLD DATA WERE TABULATED UNDER THIS ZIP CODE WHICH REPRESENTS A LARGE BUSINESS OR POST OFFICE BOX; HOWEVER, ALL ZIP CODES HAVE BEEN INCLUDED FOR COMPLETENESS.

| STATE TOTALS | 90 POP | 90 HOUSE | UTILITY | DRILL | DUG | OTHER |
|---|---|---|---|---|---|---|
| NY | 17990460 | 7226903 | 6329430 | 703302 | 121040 | 73111 |
| CNTY TOTALS | | | | | | |
| NASSAU | 1290662 | 447472 | 445480 | 1213 | 205 | 576 |
| CNTY ZIP CODES | | | | | | |
| 11001 | 27941 | 10015 | 9996 | 18 | 0 | 1 |
| 11002 | * | * | * | * | * | * |
| 11003 | 31107 | 10552 | 10542 | 10 | 0 | 0 |
| 11010 | 24584 | 8775 | 8767 | 8 | 0 | 0 |
| 11020 | 4838 | 1727 | 1703 | 0 | 0 | 24 |
| 11021 | 17218 | 8032 | 8026 | 2 | 0 | 5 |
| 11022 | * | * | * | * | * | * |
| 11023 | 8007 | 3002 | 2986 | 1 | 0 | 15 |
| 11024 | 7218 | 2457 | 2440 | 12 | 0 | 5 |
| 11025 | * | * | * | * | * | * |
| 11027 | * | * | * | * | * | * |
| 11030 MANHASSET | 19048 | 6822 | 6799 | 2 | 5 | 16 |
| 11040 | 37792 | 13170 | 13123 | 38 | 0 | 10 |
| 11042 | 1 | 0 | 0 | 0 | 0 | 0 |
| 11043 | * | * | * | * | * | * |
| 11044 | * | * | * | * | * | * |
| 11050 PORT WASHINGTON | 27474 | 10323 | 10318 | 0 | 0 | 5 |
| 11051 | * | * | * | * | * | * |
| 11052 | * | * | * | * | * | * |
| 11053 | * | * | * | * | * | * |
| 11054 | * | * | * | * | * | * |
| 11055 | * | * | * | * | * | * |
| 11099 | * | * | * | * | * | * |
| 11501 | 20018 | 8243 | 8194 | 13 | 0 | 36 |
| 11507 ALBERTSON | 7056 | 2434 | 2429 | 5 | 0 | 0 |
| 11509 | 2801 | 1289 | 1285 | 2 | 2 | 0 |
| 11510 | 31209 | 10843 | 10825 | 11 | 0 | 7 |
| 11514 | 4863 | 1777 | 1777 | 0 | 0 | 0 |
| 11516 | 7304 | 2723 | 2723 | 0 | 0 | 0 |
| 11518 | 11948 | 4714 | 4706 | 0 | 0 | 8 |
| 11520 | 41059 | 14026 | 13952 | 39 | 0 | 34 |

| | | | | | | # Private wells | |
|---|---|---|---|---|---|---|---|
| 11530 | | 26747 | 8993 | 8947 | 21 | 8 | 17 |
| 11535 | | * | * | * | * | * | * |
| 11536 | | * | * | * | * | * | * |
| 11542 | GLEN COVE | 24969 | 9060 | 9051 | 3 | 0 | 6 |
| 11545 | GLEN HEAD | 13592 | 4211 | 4197 | 14 | 0 | 0 |
| 11547 | GLENWOOD LANDING | * | * | * | * | * | * |
| 11548 | GREENVALE | 1278 | 463 | 462 | 1 | 0 | 0 |
| 11550 | | 50957 | 15688 | 15602 | 33 | 18 | 36 |
| 11551 | | * | * | * | * | * | * |
| 11552 | | 22021 | 7298 | 7298 | 0 | 0 | 0 |
| 11553 | | 20394 | 5929 | 5924 | 0 | 5 | 0 |
| 11554 | | 36401 | 11349 | 11322 | 0 | 0 | 27 |
| 11555 | | * | * | * | * | * | * |
| 11556 | | * | * | * | * | * | * |
| 11557 | | 8471 | 3112 | 3110 | 2 | 0 | 0 |
| 11558 | | 8887 | 3046 | 3046 | 0 | 0 | 0 |
| 11559 | | 6643 | 2518 | 2514 | 0 | 0 | 4 |
| 11560 | LOCUST VALLEY | 6932 | 2602 | 2496 | 88 | 4 | 14 |
| 11561 | | 39065 | 18211 | 18162 | 42 | 7 | 0 |
| 11563 | | 22674 | 8678 | 8658 | 12 | 6 | 2 |
| 11564 | | * | * | * | * | * | * |
| 11565 | | 9498 | 3302 | 3298 | 0 | 0 | 4 |
| 11566 | | 35860 | 11817 | 11802 | 8 | 7 | 0 |
| 11568 | OLD WESTBURY | 4552 | 1333 | 1317 | 6 | 0 | 10 |
| 11569 | | * | * | * | * | * | * |
| 11570 | | 26004 | 9734 | 9683 | 15 | 11 | 26 |
| 11571 | | * | * | * | * | * | * |
| 11572 | | 31396 | 10815 | 10808 | 5 | 1 | 0 |
| 11575 | | 14783 | 3927 | 3927 | 0 | 0 | 0 |
| 11576 | RASLYN | 10890 | 4176 | 4173 | 3 | 0 | 0 |
| 11577 | | 11809 | 4148 | 4107 | 11 | 7 | 23 |
| 11579 | SEA CLIFF | 5069 | 2070 | 2048 | 13 | 0 | 9 |
| 11580 | | 34008 | 12150 | 12130 | 7 | 7 | 6 |
| 11581 | | 19035 | 6876 | 6876 | 0 | 0 | 0 |
| 11582 | | * | * | * | * | * | * |
| 11583 | | * | * | * | * | * | * |
| 11588 | | * | * | * | * | * | * |
| 11590 | | 36294 | 11528 | 11503 | 11 | 0 | 14 |
| 11592 | | * | * | * | * | * | * |
| 11593 | | * | * | * | * | * | * |
| 11594 | | * | * | * | * | * | * |
| 11595 | | * | * | * | * | * | * |
| 11596 | | 10990 | 3804 | 3769 | 27 | 0 | 8 |
| 11597 | | * | * | * | * | * | * |
| 11598 | | 12987 | 4588 | 4574 | 2 | 12 | 0 |
| 11599 | | * | * | * | * | * | * |
| 11696 | | 6682 | 2446 | 2416 | 13 | 0 | 17 |
| 11709 | | 7015 | 2663 | 2621 | 28 | 0 | 14 |
| 11710 | | 34251 | 11375 | 11369 | 0 | 6 | 0 |
| 11714 | | 22147 | 7122 | 7086 | 21 | 7 | 9 |
| 11732 | | 3302 | 1197 | 1196 | 1 | 0 | 0 |
| 11735 | | 31166 | 10709 | 10664 | 22 | 0 | 23 |
| 11736 | | * | * | * | * | * | * |
| 11737 | | * | * | * | * | * | * |
| 11753 | | 10907 | 3705 | 3705 | 0 | 0 | 0 |
| 11756 | | 47656 | 15183 | 15102 | 33 | 5 | 43 |
| 11758 | | 52278 | 16866 | 16822 | 24 | 3 | 17 |
| 11762 | | 23432 | 7426 | 7409 | 0 | 3 | 13 |
| 11765 | | 885 | 342 | 302 | 39 | 1 | 0 |
| 11771 | | 9771 | 3886 | 3468 | 352 | 57 | 9 |

| | | # of Households | Housing Units Served by water supply Comp | Private well Drill | Private well Dug | Other |
|---|---|---|---|---|---|---|
| 11773 | * | * | * | * | * | * |
| 11774 | * | * | * | * | * | * |
| 11775 | * | * | * | * | * | * |
| 11783 | 21666 | 7082 | 7032 | 36 | 0 | 15 |
| 11791 | 25011 | 8277 | 8181 | 84 | 10 | 2 |
| 11793 | 32025 | 10744 | 10715 | 28 | 0 | 0 |
| 11797 | 8543 | 2757 | 2744 | 6 | 6 | 0 |
| 11801 | 36267 | 12183 | 12144 | 28 | 0 | 12 |
| 11802 | * | * | * | * | * | * |
| 11803 | 28725 | 9441 | 9402 | 13 | 7 | 19 |
| 11804 | 5241 | 1718 | 1707 | 0 | 0 | 11 |
| 11805 | * | * | * | * | * | * |
| 11815 | * | * | * | * | * | * |
| 11819 | * | * | * | * | * | * |
| 11853 | * | * | * | * | * | * |
| 11854 | * | * | * | * | * | * |
| 11855 | * | * | * | * | * | * |

1990 CENSUS HOUSEHOLD WATER SUPPLY DATA: ZIP CODE TOTALS FOR SCHENECTADY COUNTY, NEW YORK

EXPLANATION OF COLUMN HEADINGS:

90 POP: 1990 POPULATION.
90 HOUSE: 1990 NUMBER OF HOUSEHOLDS
UTILITY: NUMBER OF HOUSEHOLDS SERVED BY A PRIVATELY OR PUBLICLY OWNED WATER SUPPLY COMPANY WHOSE SOURCE MAY BE SURFACE WATER, GROUND WATER, OR A COMBINATION
DRILL: NUMBER OF HOUSEHOLDS WITH A PRIVATE DRILLED WELL.
DUG: NUMBER OF HOUSEHOLDS WITH A PRIVATE DUG WELL.
OTHER: NUMBER OF HOUSEHOLDS WITH AN UNSPECIFIED SOURCE OF WATER (CISTERN, SPRING, CREEK, RIVER, LAKE, ETC.)
* NO HOUSEHOLD DATA WERE TABULATED UNDER THIS ZIP CODE WHICH REPRESENTS A LARGE BUSINESS OR POST OFFICE BOX; HOWEVER, ALL ZIP CODES HAVE BEEN INCLUDED FOR COMPLETENESS.

| STATE TOTALS | 90 POP | 90 HOUSE | UTILITY | DRILL | DUG | OTHER |
|---|---|---|---|---|---|---|
| NY | 17990460 | 7226903 | 6329430 | 703302 | 121040 | 73111 |
| CNTY TOTALS | | | | | | |
| SCHENECTADY | 165869 | 68546 | 62535 | 4649 | 1113 | 246 |
| CNTY ZIP CODES | | | | | | |
| 12008 | 344 | 125 | 120 | 5 | 0 | 0 |
| 12053 | 3991 | 1445 | 139 | 1089 | 159 | 58 |
| 12056 | 2661 | 984 | 52 | 700 | 172 | 60 |
| 12137 | 1537 | 628 | 43 | 482 | 86 | 17 |
| 12141 | * | * | * | * | * | * |
| 12150 | 1094 | 436 | 314 | 82 | 34 | 6 |
| 12301 | * | * | * | * | * | * |
| 12302 | 29218 | 11264 | 9682 | 1248 | 296 | 37 |
| 12303 | 27635 | 11550 | 10750 | 583 | 192 | 24 |
| 12304 | 20557 | 8574 | 8530 | 36 | 0 | 8 |
| 12305 | 5631 | 2882 | 2876 | 0 | 0 | 6 |
| 12306 | 22848 | 9399 | 8890 | 350 | 135 | 24 |
| 12307 | 7834 | 3782 | 3782 | 0 | 0 | 0 |
| 12308 | 14782 | 6629 | 6610 | 15 | 3 | 0 |

Urban Water Sources

| CITY | WATER SOURCE | WATER QUALITY |
|---|---|---|
| West New York | SURFACE WATER | |
| West Orange | CONJUNCTIVE | |
| Woodbridge | GROUND WATER | Soft; not fluoridated. |
| [redacted] | | |
| Albany | SURFACE WATER | Alkaline, very soft; 43 paper mill; not fluoridated. |
| Amsterdam | SURFACE WATER | Acid, very soft; not fluoridated. |
| Auburn | SURFACE WATER | Alkaline, hard; not fluoridated. |
| Batavia | SURFACE WATER | Alkaline, soft; fluoridated. |
| Binghamton | SURFACE WATER | Neutral, hard; fluoridated. |
| Buffalo | SURFACE WATER | Alkaline, hard; fluoridated. |
| Cheektowaga | SURFACE WATER | |
| Cohoes | SURFACE WATER | |
| Corning | GROUND WATER | |
| Cortland | GROUND WATER | Alkaline, medium hard; not fluoridated. |
| Dunkirk | SURFACE WATER | Alkaline, moderately hard; not fluoridated. |
| Elmira | SURFACE WATER | Alkaline; fluoridated. |
| Endicott | GROUND WATER | |
| Freeport | GROUND WATER | |
| Geneva | SURFACE WATER | Alkaline, hard; not fluoridated. |
| Glen Cove | GROUND WATER | |
| Glen Falls | SURFACE WATER | Alkaline, very soft; not fluoridated. |
| Gloversville | SURFACE WATER | Alkaline, very soft; fluoridated. |
| Hempstead | GROUND WATER | |
| Hornell | SURFACE WATER | Neutral, soft; not fluoridated. |
| Huntington | GROUND WATER | |
| Irondequoit | SURFACE WATER | |
| Ithaca | SURFACE WATER | |
| Jamestown | GROUND WATER | Neutral, hard; fluoridated. |
| Johnson City | GROUND WATER | |
| Kenmore | SURFACE WATER | |
| Kingston | SURFACE WATER | Alkaline, very soft; not fluoridated. |
| Lackawanna | SURFACE WATER | |
| Levittown | GROUND WATER | |
| Lockport | SURFACE WATER | Alkaline, soft; fluoridated. |
| Long Beach | GROUND WATER | |
| Lynbrook | GROUND WATER | |
| Mamoroneck | SURFACE WATER | Neutral, soft; fluoridated. |
| Middletown | CONJUNCTIVE | Neutral, soft; not fluoridated. |
| Mount Vernon | SURFACE WATER | Acid, soft; not fluoridated. |
| Newburgh | SURFACE WATER | |
| New Rochelle | SURFACE WATER | |
| New York | CONJUNCTIVE | Alkaline, soft; fluoridated. |
| Niagara Falls | SURFACE WATER | Alkaline, hard; fluoridated. |
| North Tonawanda | SURFACE WATER | Medium hard. |
| Ogdensburg | SURFACE WATER | Normal; fluoridated. |
| Olean | SURFACE WATER | Neutral, soft; fluoridated. |
| Ossining | SURFACE WATER | Alkaline, very soft; not fluoridated. |
| Oswego | SURFACE WATER | Alkaline, hard; fluoridated. |
| Peekskill | SURFACE WATER | Neutral, soft. |
| Plattsburg | SURFACE WATER | Acid, hard; fluoridated. |
| Port Chester | SURFACE WATER | Alkaline, very soft; not |

| | | |
|---|---|---|
| | | fluoridated. |
| Poughkeepsie | SURFACE WATER | Alkaline, soft; fluoridated. |
| Rochester | SURFACE WATER | Neutral, soft. |
| Rockville Centre | GROUND WATER | |
| Rome | SURFACE WATER | Chlorine-Complete filtration. |
| Saratoga Springs | SURFACE WATER | Alkaline, soft. |
| Schenectady | GROUND WATER | Alkaline, hard; not fluoridated. |
| Syracuse | SURFACE WATER | Alkaline, soft; not fluoridated. |
| Troy | SURFACE WATER | Neutral, soft; fluoridated. |
| Utica | SURFACE WATER | Acid, soft; fluoridated. |
| Valley Stream | GROUND WATER | |
| Watertown | SURFACE WATER | Alkaline, soft; fluoridated. |
| Watervliet | SURFACE WATER | |
| White Plains | CONJUNCTIVE | Alkaline, soft; fluoridated. |
| Yonkers | SURFACE WATER | 2 sources (1 acid-very soft; 1 acid hard); fluoridated. |

PENNSYLVANIA

| CITY | WATER SOURCE | WATER QUALITY |
|---|---|---|
| Abington | SURFACE WATER | |
| Aliquippa | GROUND WATER | |
| Allentown | CONJUNCTIVE | Alkaline, hard; not fluoridated. |
| Altoona | SURFACE WATER | Alkaline, medium soft; not fluoridated |
| Ambridge | GROUND WATER | Varies from 4 to 15 gr.; not fluoridated |
| Beaver Falls | SURFACE WATER | |
| Bethlehem | SURFACE WATER | Neutral, very soft; fluoridated. |
| Braddock | SURFACE WATER | |
| Bradford | CONJUNCTIVE | Acid, very soft. |
| Butler | SURFACE WATER | Alkaline, soft; not fluoridated. |
| Carbondale | SURFACE WATER | |
| Carlisle | SURFACE WATER | Alkaline, hard. |
| Chambersburg | SURFACE WATER | Acidic, very soft; fluoridated. |
| Charleroi | SURFACE WATER | |
| Cheltenham | SURFACE WATER | |
| Chester | SURFACE WATER | Alkaline, soft; not fluoridated. |
| Clairton | SURFACE WATER | |
| Dunmore | SURFACE WATER | |
| Duquesne | GROUND WATER | Alkaline, soft; not fluoridated. |
| Easton | CONJUNCTIVE | Alkaline, soft; fluoridated. |
| Erie | SURFACE WATER | Alkaline, hard; fluoridated. |
| Greensburg | SURFACE WATER | Alkaline, soft; not fluoridated. |
| Harrisburg | SURFACE WATER | Alkaline, soft; fluoridated. |
| Haverford | SURFACE WATER | |
| Hazleton | CONJUNCTIVE | Very soft. |
| Jeannette | SURFACE WATER | |
| Johnstown | SURFACE WATER | Acid, very soft. |
| Kingston | SURFACE WATER | |
| Lancaster | SURFACE WATER | Alkaline, hard; fluoridated. |
| Lebanon | SURFACE WATER | Alkaline, soft; fluoridated. |
| Lower Merion | SURFACE WATER | |

REFERENCE 9

M Joseph Passariello OF Jericho Water District
516 921 8200

**MEMORANDUM OF CONVERSATION**

JOB: Jericho HRS
DATE: 10-12-93
JOB NUMBER: 576046
TIME: 230
CONCERNING: nearest public water supply well

AND DECIDED:
left message for him to call me

Jericho # [redacted] 11 NYS # 5201
- located on Motts Cove Rd in Roslyn Harbor
is used only in summer when demand is higher
- pumps from the Lloyd Aquifer
- draws clean water - no treatments

Jericho #27 located on Glen Cove Rd in Greenvale
is active.
- about 1-2 miles from site

Jericho # 6, 7, 16 all within 200 ft of each other
located on Wheatley Road in Brookville

thank # 2200 ft east of site ⇒ 5201

CC:
SIGNED: Christina Ferri
CC:
SIGNED:

LMS Lawler, Matusky & Skelly Engineers

# JERICHO WATER DISTRICT

## SOURCES OF SUPPLY

| J.W.D. NUMBER | NYSDEC NUMBER | TOTAL DEPTH | APPROVED CAPACITY G.P.M. | EFFECTIVE CAPACITY | MGD | FORMATION | 1990 STATIC WATER LEVEL FT.* |
|---|---|---|---|---|---|---|---|
| 3 | N 198 | 628 | 1,130 | 1,050 | 1.51 | Magothy | 165 |
| 4 | N 199 | 611 | 1,120 | 1,000 | 1.44 | Magothy | 172 |
| 5 | N 570 | 600 | 1,200 | 1,000 | 1.44 | Magothy | 158 |
| 6 | N 2474 | 514 | 1,200 | 1,200 | 1.73 | Magothy | 154 |
| 7 | N 3475 | 484 | 1,200 | 1,200 | 1.73 | Magothy | 134 |
| 9 | N 4245 | 565 | 1,200 | 1,200 | 1.73 | Magothy | 147 |
| 11 | N 5201 | 504 | 1,200 | 1,200 | 1.73 | Lloyd | 34 |
| 12 | N 6092 | 640 | 1,200 | 1,200 | 1.73 | Magothy | 186 |
| 13 | N 6093 | 605 | 1,200 | 1,200 | 1.73 | Magothy | 166 |
| 14 | N 6651 | 615 | 1,200 | 1,200 | 1.73 | Magothy | 152 |
| 16 | N 7446 | 490 | 1,200 | 1,200 | 1.73 | Magothy | 144 |
| 17 | N 7593 | 473 | 1,200 | 1,200 | 1.73 | Magothy | 207 |
| 18 | N 7772 | 568 | 1,200 | 1,200 | 1.73 | Magothy | 193 |
| 19 | N 7773 | 565 | 1,200 | 1,200 | 1.73 | Magothy | 191 |
| 20 | N 10149 | 600 | 1,390 | 1,388 | 2.00 | Magothy | 172 |
| 22 | N 7781 | 459 | 1,200 | 1,200 | 1.73 | Magothy | 150 |
| 23 | N 8043 | 683 | 1,200 | 1,200 | 1.73 | Magothy | 143 |
| 25 | N 8355 | 595 | 1,388 | 1,388 | 2.00 | Magothy | 207 |
| 27 | N 8713 | 377 | 1,388 | 1,388 | 2.00 | Magothy | 111 |
| 29 | N 11107 | 585 | 1,388 | 1,388 | 2.00 | Magothy | 153 |
| 30 | N 11295 | 535 | 1,388 | 1,388 | 2.00 | Magothy | 157 |
| | | | 26,040 (37.5 mgd) | 25,590 (36.8 mgd) | | | |

* Distance in feet from pump base down to static water level

REFERENCE 10

**PORT WASHINGTON WATER DISTRICT**

38 SANDY HOLLOW ROAD • POST OFFICE BOX 432 • PORT WASHINGTON, NEW YORK 11050 • (516) PO 7-0171

COMMISSIONERS:
BETTY FORQUER, Chairman
THOMAS J. MURRAY JR., Secretary
DAVID R. BRACKETT, Treasurer



American Water Works Association Member

RITA FRASCA, Office Manager
STEPHEN J. NAKELSKI, Superintendent

July 21, 1993

Lawler, Matusky & Skelly Engineers
Environmental Science & Engineering Consultants
One Blue Hill Plaza - PO Box 1509
Pearl River, New York 10965

Attn: Ms. Christina Fern
Project Scientist

Re: Hazard Ranking System Study
for New York State Department of Environmental Conservation

Dear Ms. Fern:

In accordance with your request, contained in the attached letter of July 2, 1993, we return herewith your map on which we have shown the locations of the District wells. An attached sheet lists the District's operating wells and shows their depths. In addition, the District has approximately 8,550 water service accounts.

Please furnish all data concerning the analysis of ground water monitoring wells at the site, or other data that caused the South Glenwood Landing site to be placed on the DEC list of hazardous waste disposal sites.

Very truly yours,

BOARD OF COMMISSIONERS OF THE
PORT WASHINGTON WATER DISTRICT

Stephen J. Nakelski
Superintendent

SJN:map

Encls: (3)

cc: Thomas J. Casey

PORT WASHINGTON WATER DISTRICT

Listing of Wells

| DEC No. | PWWD No. | Year Drilled | Depth | Elev. M.P. | Cap. GPM | Screen Elev. | Location |
|---|---|---|---|---|---|---|---|
| ~~N35~~ | ~~N35~~ | ~~1932~~ | ~~387~~ | ~~17.24~~ | ~~OBS~~ | ~~287-387~~ | Sandy Hollow Rd. |
| ~~N819~~ | ~~S.H. 6~~ | ~~1933~~ | ~~90~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| ~~N820~~ | ~~S.H. 7~~ | ~~1933~~ | ~~90~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| ~~N821~~ | ~~S.H. 8~~ | ~~1933~~ | ~~90~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| ~~N822~~ | ~~S.H. 9 (UNSD)~~ | ~~1933~~ | ~~90~~ | ~~20.00~~ | ~~ART~~ | 60-90 | Sandy Hollow Rd. |
| ~~N823~~ | ~~S.H. 10~~ | ~~1933~~ | ~~90~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| ~~N824~~ | ~~S.H. 1~~ | ~~1933~~ | ~~392~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| ~~N825~~ | ~~S.H. 2~~ | ~~1933~~ | ~~394~~ | ~~DESTOYED~~ | | | Sandy Hollow Rd. |
| ~~N826~~ | ~~S.H. 3~~ | ~~1933~~ | ~~372~~ | ~~DESTROYED~~ | | | Sandy Hollow Rd. |
| N1715 | Neulist 1 | 1941 | 490 | 102.87 | 510 | 430-480 | Neulist Ave. |
| N1716 | Neulist 2 | 1941 | 483 | 108.34 | 550 | 425-475 | Neulist Ave. |
| N2030 | Neulist 3 | 1945 | 218 | 108.39 | 450 | 190-215 | Neulist Ave. |
| ~~N2101~~ | ~~Neulist OBS (UNSD)~~ | ~~1945~~ | ~~201~~ | ~~105.20~~ | ~~OBS~~ | ~~191-~~201 | Neulist Ave. |
| N2052 | Hewlett 4 | 1945 | 331 | 158.31 | 750 | 275-325 | Birchdale La. |
| N4223 | Southport 5 (UNSD) | 1952 | 330 | 197.57 | 700 | 277-330 | Emerson Ct. |
| ~~N4859~~ | ~~S.H. 3 (UNSD)~~ | ~~1954~~ | ~~389~~ | ~~31.44~~ | ~~250~~ | ~~355-385~~ | Sandy Hollow Rd. |
| N4860 | S.H. 1 | 1954 | 89 | 23.22 | 500 | 60-89 | Sandy Hollow Rd. |
| N5209 | Bar Beach 6 | 1954 | 293 | 194.59 | 450 | 260-300 | Bar Beach Rd. |
| ~~N5210~~ | ~~Bar Beach OBS~~ | ~~1954~~ | ~~302~~ | ~~200.98~~ | ~~OBS~~ | ~~292-302~~ | Bar Beach Rd. |
| ~~N5228~~ | ~~Hewlett OBS~~ | ~~1945~~ | ~~334~~ | ~~160.24~~ | ~~OBS~~ | ~~324-334~~ | Birchdale La. |
| ~~N5530~~ | ~~Wysong OBS~~ | ~~1954~~ | ~~382~~ | ~~63.20~~ | ~~OBS~~ | ~~372-382~~ | Wysong's Hollow |
| N5876 | Ricks 7 | 1955 | 245 | 85.85 | 400 | 168-238 | Chestnut Rd. |
| ~~N5918~~ | ~~Ricks OBS~~ | ~~1955~~ | ~~188~~ | ~~95.97~~ | ~~OBS~~ | ~~178-188~~ | Chestnut Rd. |
| N6087 | S.H. 2 | 1956 | 92 | 22.71 | 500 | 62-92 | Sandy Hollow Rd. |
| ~~N7551~~ | ~~Morley 8~~* | ~~1963~~ | ~~483~~ | ~~166.64~~ | ~~1400~~ | ~~375-~~469 | C. Morley Park |
| ~~N7552~~ | ~~Morley 9~~* | ~~1963~~ | ~~458~~ | ~~147.10~~ | ~~1400~~ | ~~388-~~454 | C. Morley Park |
| ~~N7553~~ | ~~Morley OBS~~ | ~~1964~~ | ~~406~~ | ~~157.98~~ | ~~OBS~~ | ~~396-406~~ | C. Morley Park |
| ~~N7554~~ | ~~Morley OBS~~ | ~~1964~~ | ~~464~~ | ~~195.57~~ | ~~OBS~~ | ~~454-464~~ | C. Morley Park |
| N9809 | Stonytown 10 | 1980 | 527 | 113.47 | 1350 | 437-527 | Stonytown Rd. |

NOTES: UNSD-unused, OBS-observation
ART-artisian (flowing), depth & elevations are in feet.

W.Hamm 060490

* Wells located out of District

9/21/93 - Upper Glacial S.H. 1 and S.H. 2 located in Magothy per PWWD office

REFERENCE 11

OFFICE OF THE
WATER DEPARTMENT
CITY HALL
GLEN COVE, N.Y. 11542

DONALD P. DERIGGI
MAYOR AND SUPERVISOR

LOUIS D'AMBROSIO
SUPERINTENDENT
DEPARTMENT OF PUBLIC WORKS

ANGELO MARTINO
SUPERVISOR
676-2297

July 20, 1993

Ms. Christina Fern
Project Scientist
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
P.O. Box 1509
Pearl River, New York 10965-8509

Dear Ms. Fern:

Enclosed please find the information you requested.

I have also enclosed maps and have highlighted where our wells are located.

If you need any additional information, please feel free to contact me.

Sincerely yours,

Angelo Martino

ANGELO MARTINO
Supervisor

AM/ag
Enclosure

# GLEN COVE WATER DEPARTMENT

## SOURCES OF SUPPLY

| GCWD NUMBER | NYSDEC NUMBER | TOTAL DEPTH | APPROVED CAPACITY G.P.M. | EFFECTIVE CAPACITY G.P.M. | MGD | FORMATION | 1990 STATIC WATER LEVEL FT.(4) |
|---|---|---|---|---|---|---|---|
| **Site** | | | | | | | |
| Carney St. #21 | N8326 | 168' | 1,400(1) | 0 | - | Magothy | 44.33 |
| Roxbury | N5762 | 279' | 1,400 | 1,400(3) | 2.02 | Magothy | 87.5 |
| Seaman Rd. #1 | N3892 | 250' | 700(1) | 0 | 0 | Magothy | 102.5 |
| Seaman Rd. #2 | N5261 | 235' | 1,400(1,2) | 0 | 0 | Magothy | |
| Morgan Is. | N835 | 303' | 450(2) | 0 | 0 | Lloyd | 8.7 |
| Duck Pond #30 | N9210 | 275' | 1,400 | 1,400(3) | 2.02 | Magothy | 91.25 |
| Duck Pond #31 | N9211 | 269' | 1,400 | 1,400(3) | 2.02 | Magothy | 90 |
| Kelly St. | N9334 | 298 | 1,390 | 1,390(3) | 2 | Magothy | 78 |
| | | | 9,540 (13.74 MGD) | 5,590 (8.06 MGD) | | | |

(1) Restricted because of organic contamination
(2) Well is presently inoperative
(3) Active well
(4) Distance in feet from pump base down to static water level
(5) kelly – Air stripper 1989

REFERENCE 12

# ROSLYN WATER DISTRICT



24 WEST SHORE ROAD
ROSLYN, NEW YORK 11576-1448
(516) 621-7770
Fax (516) 621-9630

July 8, 1993

Ms. Christine Fein
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
P.O. Box 1509
Pearl River, New York 10965

Re: Water Supply Wells
File # 576-047

Dear Ms. Fein:

In reply to your letter of July 2, 1993, I have marked the map submitted in blue showing our well sites.

The number of accounts served by the Roslyn Water District are 5,776.

I am enclosing a schedule of wells showing additional information requested.

Please contact me at (516) 621-7770 if additional information is needed.

Very truly yours,
Roslyn Water District

Carmine Cipriano
Business Manager

# ROSLYN WATER DISTRICT

## SOURCES OF SUPPLY

| R.W.D. NUMBER | NYSDEC NUMBER | DEPTH | APPROVED TOTAL G.P.M. | CAPACITY CAPACITY | EFFECTIVE MGD | FORMATION | 1990 STATIC WATER LEVEL FT.** |
|---|---|---|---|---|---|---|---|
| Site | | | | | | | |
| 1 | [N 1870 | 260 | 207 | | | Magothy | |
| | [N 1871 | 260 | 207 | | | Magothy | |
| | [N 1872 | 260 | 50 | | | Magothy | |
| | [N 1873 | 260 | 207 | 1100] | 1.58 | Magothy | Flowing |
| | [N 1874 | 260 | 207 | | | Magothy | |
| | [N 1875 | 260 | 207 | | | Magothy | |
| | [N 1876 | 260 | 207 | | | Magothy | |
| | [N 1877 | 555 | 207 | | | Lloyd | |
| 2* | N 2400 | 444 | 1000* | 980* | 1.41 | Magothy | 118 |
| 3 | N 4265 | 490 | 1200 | 1200 | 1.73 | Magothy | 141 |
| 4 | N 4623 | 503 | 1200 | 1100 | 1.58 | Magothy | 225 |
| 5 | N 5852 | 482 | 1200 | 1200 | 1.73 | Magothy | 185 |
| 6 | N 7104 | 436 | 1200 | 1200 | 1.73 | Magothy | 101 |
| 7 | N 7873 | 530 | 1200 | 1200 | 1.73 | Magothy | 204 |
| 8 | N 8010 | 448 | 1200 | 1200 | 1.73 | Magothy | 184 |
| | | | 9,699* | 9,180* | | | |
| | | | 8,699 | 8,200 | | | |
| | | | (13.96 mgd) | (13.22 mgd) | | | |
| | | | 12.53 mgd | 11.81 mgd | | | |

* Well No. 2 not presently in service

** Distance in feet from pump base down to static water level

REFERENCE 13

M _____ OF Sea Cliff Water Co

**MEMORANDUM OF CONVERSATION**

JOB: Remsey PRESCORE DATE: 7/1/83

JOB NUMBER: 576046 TIME: ~3 30pm

CONCERNING: _____

AND DECIDED:

Anthony Grella Superintendent

| | Dpth | GPM |
|---|---|---|
| Glen Cad well | 310' | ~~1400~~ 1380 |
| Sea Cliff well | 610' Lloyd Aqui | 1400 |

Total population served 17500 Approx
for 4266 accounts

send maps to
Anthony Grella
Sea Cliff Water Co
325 Prospect Ave
Sea Cliff NY 11579

Port Washington
516 767 0171

CC: _____ SIGNED: Chris Fern

CC: _____ SIGNED: _____

LMS Lawler, Matusky & Skelly Engineers

**MEMORANDUM OF CONVERSATION**

Mr Superintendent OF North Shore County Club
516 676 0500

JOB: Penetry HRS DATE: 9-22-93

JOB NUMBER: 576046 TIME: ~1030am

CONCERNING: well

AND DECIDED:

9-21-93 - left message for him to call me

23-93 One well at the North Shore County Club
190 ft deep Magothy
used for irrigation only

Club gets water from Jamaica water Co / Sea Cliff Water Company.

CC: SIGNED:

CC: SIGNED:

LMS Lawler, Matusky & Skelly Engineers

Lawler, Matusky & Skelly Engineers

Environmental Science & Engineering Consultants

JOHN P. LAWLER, P. E.
FELIX E. MATUSKY, P. E.
MICHAEL J. SKELLY, P. E.
KARIM A. ABOOD, P. E.
PATRICK J. LAWLER, P. E.
FRANCIS M. McGOWAN, P. E.
THOMAS L. ENGLERT, P. E.
PETER M. McGRODDY, P. E.
THOMAS E. PEASE, P. E.

ONE BLUE HILL PLAZA
P.O.BOX 1509
PEARL RIVER, NEW YORK 10965
(914) 735-8300
FACSIMILE (914) 735-7488

2 July 1993
File No. 576-046

Mr. Anthony Grella
Sea Cliff Water Co.
325 Prospect Avenue
Sea Cliff, New York 11519

Re: Water Supply Wells

Dear Mr. Grella:

Lawler, Matusky & Skelly Engineers (LMS) has been contracted by the New York State Department of Environmental Conservation (NYSDEC) to evaluate Hazard Ranking System (HRS) prescores. Prescores are conducted to determine whether sites are eligible to be nominated for the National Priorities List. As part of the prescore process groundwater usage (particularly drinking water) within a 4-mile radius of the site is evaluated.

I have enclosed a map with a site designated (in pink) and 1-mile radius increments also drawn. Please use the enclosed map to locate (mark in some color other than black) public or private drinking water supply wells, and return the map to me. Also, any information on any private wells in use would be helpful. If you have any questions, please call me at 914/735-8300. Your help is very much appreciated.

Very truly yours,

Christina Fern

Christina Fern
Project Scientist

CF:cmr
enc

7/29/93

I HAVE MARKED THE MAP AS REQUESTED. IF YOU HAVE ANY QUESTIONS PLEASE CONTACT ME AT (516) 676-1166.

Tony Grella

REFERENCE 14

BY SA DATE 9/8/93 CHKD. BY ____ DATE ____

**LAWLER, MATUSKY & SKELLY ENGINEERS**

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

SHEET NO. 1 OF ____

JOB NO. 576-046-8016

SUBJECT PENETREX - HRS
GLEN COVE WATER DEPT.

| WELL NO | GCWD NO. | LOCATION | DISTANCE TO SITE (MILES) | DEPTH (FT.) | AQUIFER | REMARKS |
|---|---|---|---|---|---|---|
| S1 | N3892 | SEAMAN RD. | 4.0 | 250 | MAGOTHY | *RESTRICTED |
| S2 | N5261 | SEAMAN RD | 4.0 | 235 | | *RESTRICTED |
| 30 | N9210 | DUCK POND | 3.5 | 275 | | ACTIVE |
| 31 | N9211 | DUCK POND | 3.5 | 269 | | ACTIVE |
| 21 | N8326 | CARNEY ST. | 2.2 | 168 | | ACTIVE |
| 21a | — | CARNEY ST. | 2.2 | | | *RESTRICTED |
| 21b | — | CARNEY ST. | 2.2 | | | *RESTRICTED |
| 101 | N9334 | KELLY ST. | 3.7 | 298 | | AIR STRIPPER (1989) |
| 102 | — | NANCY G. | 3.2 | 300 | ↓ | ACTIVE |
| 103 | N835 | MORGAN ISL. | — | 303 | LLOYD | OUTSIDE FOUR MILE RADIUS |

* RESTRICTED BECAUSE OF ORGANIC CONTAMINATION.

BY SA DATE 9/9/93 CHKD. BY ____ DATE ____

**LAWLER, MATUSKY & SKELLY ENGINEERS**
ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS
ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

SHEET NO. 2 OF ____
JOB NO. 576-046-8016

SUBJECT PENETREX - HRS
SEA CLIFF WATER DISTRIC

| WELL NO. | DEC No. ? | LOCATION | DISTANCE TO SITE (MILES) | DEPTH (FT.) | AQUIFER | REMARKS Capacity gpm |
|---|---|---|---|---|---|---|
| 104 | — | SEA CLIFF | 1.75 | ? 610 | Lloyd ~~SEA CLIFF~~ W.C. | 1400 |
| 105 | — | GLEN HEAD | 1.50 | ? 310 | Magothy ~~SEA CLIFF~~ W.C. | 1380 |
| ~~106~~ | — | NORTH SHORE COUNTRY CLUB | 0.60 | ? 180 | Magothy ~~PRIVATE~~ O | |
| 107 | — | CEDAR BRK. CLUB | 2.50 | ? | ~~PRIVATE~~ | |
| 108 | — | GOLF COURSE | 1.75 | ? | ~~PRIVATE~~ | |

Village of Old Westbury

1. Private 3 golf courses potable - yes irrigation

Glen Head - supplied potable up till 1 year ago irrigation
Cedar Brook irrigation
North Shore Country Club Superintendent 9:30 AM or lunch
~~Glen Head~~ 6760500
Glen Head 6764050
4050

BY SA DATE 9/9/93 **LAWLER, MATUSKY & SKELLY ENGINEERS** SHEET NO. 3 OF 3

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

CHKD. BY ____ DATE ____

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

JOB NO. 576-046-8016

SUBJECT PENETREX - HRS
ROSLYN WATER DISTRICT

| WELL NO. | NYSDEC No. | LOCATION | DISTANCE to SITE (miles) | DEPTH (FT.) | AQUIFER | REMARKS |
|---|---|---|---|---|---|---|
| 1 | N1870 | ROSLYN RD. & NORTHEN BLVD. | 1.5 | 260 | MAGOTHY | |
| | N1871 | ↓ | ↓ | ↓ | ↓ | |
| | N1872 | | | | | |
| | N1873 | | | | | |
| | N1874 | | | | | |
| | N1875 | | | | | |
| | N1876 | | | ↓ | ↓ | |
| | N1877 | ↓ | ↓ | 555 | LLOYD | |
| 2 | N2400 | ALBERTSON RD. | 2.75 | 444 | MAGOTHY | NO PRESENTLY IN SERVICE |
| 3 | N4265 | EAST HILLS (PUMP STA.) | 2.25 | 490 | ↓ | |
| 4 | N4623 | RENAISSANCE COUNTRY CLUB | 2.65 | 503 | | |
| 5 | N5852 | BIRCH DR. | 1.75 | 482 | | |
| 6 | N7104 | GLEN COVE RD. | 1.65 | 436 | | |
| 7 | N7873 | EAST HILLS (WATER TK) | 2.50 | 530 | | |
| 8 | N8010 | WILLIS RD. | 2.10 | 448 | ↓ | |

BY SA DATE 9/9/93 CHKD. BY ____ DATE ____

**LAWLER, MATUSKY & SKELLY ENGINEERS**

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

SHEET NO. 4 OF ____

JOB NO. 576-046-8016

SUBJECT PENETREX - HRS
PORT WASHINGTON WATER DISTR.

| WELL NO. | PWWD No. | LOCATION | DISTANCE to SITE (MILES) | DEPTH (FT.) | AQUIFER | REMARKS |
|---|---|---|---|---|---|---|
| SH-1 | N4860 | SANDY HALLOW RD. | 2.6 | 89 | ~~PWWD~~ | |
| SH-2 | N6087 | SANDY HALLOW RD. | 2.6 | 92 | | |
| BB-6 | N5209 | BAR BEACH RD. | 1.5 | 293 | | |
| NEULIST-1 | N1715 | NEULIST AVE | 2.1 | 490 | | |
| NEULIST-2 | N1716 | NEULIST AVE. | 2.1 | 483 | | |
| NEULIST-3 | N2030 | NEULIST AVE. | 2.1 | 218 | | |
| RICKS-7 | N5876 | CHESTNUT RD. | 2.25 | 248 | | |
| SOUTHPORT-5 | N4223 | EMERSON CT. | 1.75 | 330 | | |
| STONYTOWN-10 | N9809 | STONYTOWN RD. | 1.9 | 527 | | |
| HEWLETT-4 | N2052 | BIRCHDALE LA. | 1.5 | 331 | ↓ | |

BY SA DATE 9/9/93

CHKD. BY ____ DATE ____

**LAWLER, MATUSKY & SKELLY ENGINEERS**

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

SHEET NO. 1 OF 1

JOB NO. 576-046-8016

SUBJECT PENETREX - HAZARD RANKING SYSTEM

| DISTANCE FROM SITE: (MILES) | | NO. OF WELLS |
|---|---|---|
| 0 - .25 | | 0 |
| .25 - .50 | | 0 |
| .50 - .75 | × | 1 |
| .75 - 1.0 | | 0 |
| 1.0 - 2.0 | × ××× ×××××××××××× | 17 |
| 2.0 - 3.0 | ××× ××××××××××××× | 15 |
| 3.0 - 4.0 | ××××××× × | ~~8~~ |

TOTAL = ~~39~~41

BY SA DATE 9/10/93

CHKD. BY ____ DATE ____

**LAWLER, MATUSKY & SKELLY ENGINEERS**

ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

ONE BLUE HILL PLAZA
POST OFFICE BOX 1509
PEARL RIVER, NEW YORK 10965

SHEET NO. 1 OF 1

JOB NO. 576-046-8016

SUBJECT PENTTREX - HRS

| TOWN | POPULATION | PRIVATE WELLS |
|---|---|---|
| MANHASSET | 19048 | 7 |
| PORT WASHINGTON | 27474 | 0 |
| ALBERTSON | 7056 | 5 |
| GLEN COVE | 24969 | 3 |
| GLEN HEAD | 13592 | 14 |
| GLENWOOD LANDING | * | * |
| GREENVALE | 1278 | 1 |
| LOCUST VALLEY | 6932 | 92 |
| OLD WESTBURY | 4552 | 6 |
| ROSLYN | 10890 | 3 |
| SEA CLIFF | 5069 | 13 |
| | 120 560 | 144 |

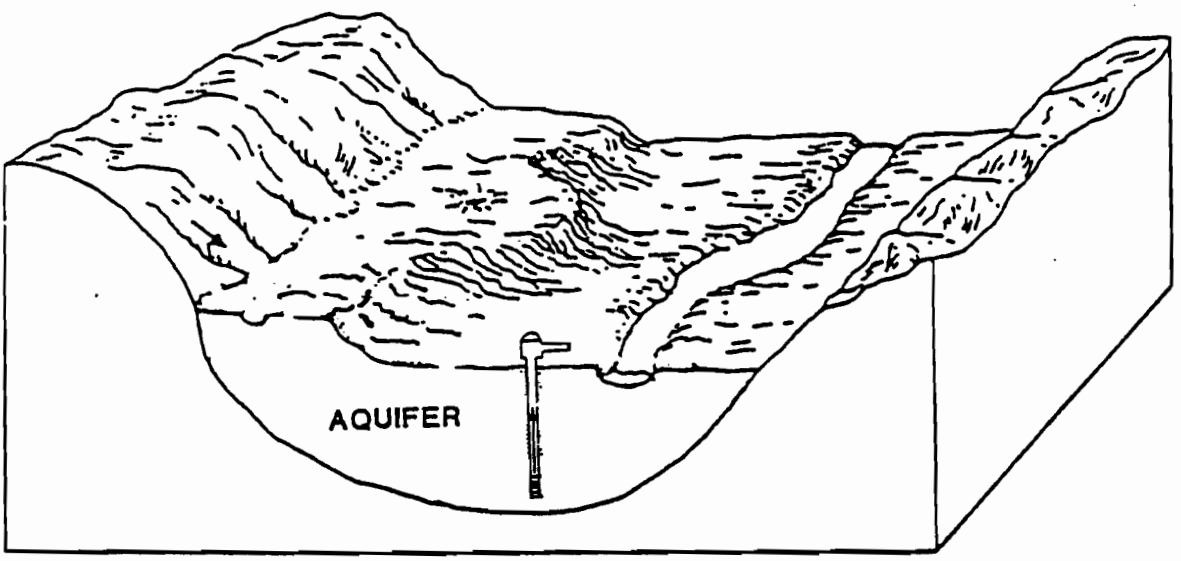
* NO HOUSEHOLD DATA TABULATED UNDER ZIP CODE.

REFERENCE 15

8282

Department of Environmental Conservation

# NEW YORK STATE WELLHEAD PROTECTION PROGRAM




**Submittal**
**to**
**United States Environmental Protection Agency**

New York State Department of Environmental Conservation
MARIO M. CUOMO, *Governor* THOMAS C. JORLING, *Commissioner*

***September 1990***

8282

TABLE 3.1.
WELLHEAD PROTECTION AREA
DELINEATION SUMMARY

| Geographic Region | Aquifer Area | Wellhead Protection Area Baseline Delineation |
|---|---|---|
| Long Island | Magothy & Lloyd Aquifers | Deep Flow Recharge Area |
| | Glacial Aquifer | Simplified Variable Shape:<br>1,500 ft. radius upgradient<br>500 ft. radius downgradient |
| Upstate | Unconsolidated Aquifers | Aquifer Boundaries (land surface) |
| | Bedrock Aquifers | Fixed Radius: 1,500 ft. radius |

numerous 3 to 12 square mile WHPA's (1-2 mile radius) for non-community wells intersect or nearly intersect across the State. It must be recognized that all fresh groundwaters in bedrock aquifers are classified as GA groundwaters and thus are already protected by substantial statewide protection programs which use rigorous ambient water quality standards in their design.

3. Mapping and Case Studies:

Mapping will be performed according to the phasing priorities described in Section 3.3. Case studies of fixed radius approaches are not considered to be of significant benefit. As proposals for revisions based on alternative approaches are submitted to the Department of Environmental Conservation, they will be evaluated for potential use as models for comparable hydrogeologic conditions.

4. Public Water Supply Significance:

Relatively few municipal community systems utilize bedrock aquifers in New York State and those that do are generally with low population dependence. Public water supplies in bedrock aquifers are typically non-community wells serving small numbers of people.

Magothy and Lloyd Aquifers - Long Island

1. WHPA Definition:

The boundaries of the wellhead protection area for public water supplies using the Magothy and Lloyd aquifers are the boundaries of the Deep Flow Recharge Area as recognized by the Department of Environmental Conservation. Refinements within the overall WHPA may include further definition of Wellfield Management Areas, pending approval by the Department of Environmental Conservation.

2. Rationale:

The Deep Flow Recharge Area was determined to be the most important overall groundwater protection area for wells in the Magothy and Lloyd aquifers in the Long Island Groundwater Management Program already adopted and certified by the Governor of New York as an element of the New York State Water Quality Management Program. The delineations have also been adopted in the Suffolk County Sanitary Code.

3. Mapping and Case Studies:

Mapping of the Deep Flow Recharge Area is already completed. Additional case studies are not considered appropriate.

4. Public Water Supply Significance:

Most public water in Nassau County is withdrawn from the Magothy aquifer. The majority of public water supplies in Suffolk County are also withdrawn from the Magothy aquifer. Of those public water supplies in Suffolk County utilizing the Glacial aquifer, approximately half are located within the Deep Flow Recharge Area. Thus, these wells are included within the overall wellhead protection area for the deeper aquifers.

Glacial Aquifer - Long Island

1. WHPA Definition:

The boundaries of the wellhead protection area for public water supplies using the Glacial aquifer are defined as a fixed variable shape zone with a fixed radius in the upgradient groundwater flow direction of 1,500 feet and a fixed radius in the downgradient direction of 500 feet. Revisions may be made, pending approval by the Department of Environmental Conservation.

REFERENCE 16

**MEMORANDUM OF CONVERSATION**

M Richard Schweem OF Fish statistics Dept of Commerce; National Oceanic & Atmospheric National Marine Fisheries

JOB: Lawler JOB NUMBER: 570046 DATE: 10-14-93 TIME:

CONCERNING: Fishing in Hempstead Harbor

AND DECIDED:

301 713 2316 David Sullivan

talk to Port Agent

Fred Blossom 516 475 6988

- Called left message for Blossom

10-15-93

Fred Blossom & talk to NYSDEC 516 444 0305

Tom Drum or Paul Chevallier

* Paul Chevallier &

shell fishing in region. Most of the area is closed Hempstead Bay has a conditional. Hempstead Bay has intermittent pollution caused by rainfall / surface water runoff of pesticides, oil, cat & dog feces etc. ... )

shell Fish Production 1992 annual

(Clams, oysters, Scallops, Conch - Hempstead Township, mostly Oyster Bay &

Hard Clams 3646 bushel @ $275460 mkt value

soft clam 151 bushels @ $591. mkt value

- Area is 75% Oyster Bay ~~mostly Hempstead~~

Area SS1 - closed - East Bay, Hempstead Bay and all Tributaries west of Wantagh State Parkway

SS2 South Oyster Bay & tributary East of Wantagh State Pkwy & west of the Nassau / Suffolk County line

SS1 - ~~closed~~ closed most of the time

SS2 - open most of the time

CC: SIGNED:

CC: SIGNED:

LMS Lawler, Matusky & Skelly Engineers

REFERENCE 17

2,100,000 Fi

615,000 M

# TIDAL WETLANDS MAP

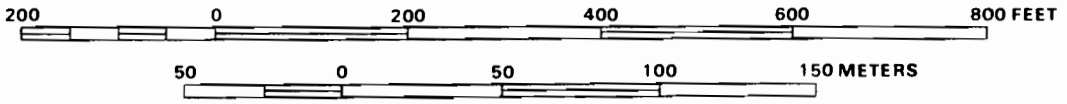
## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

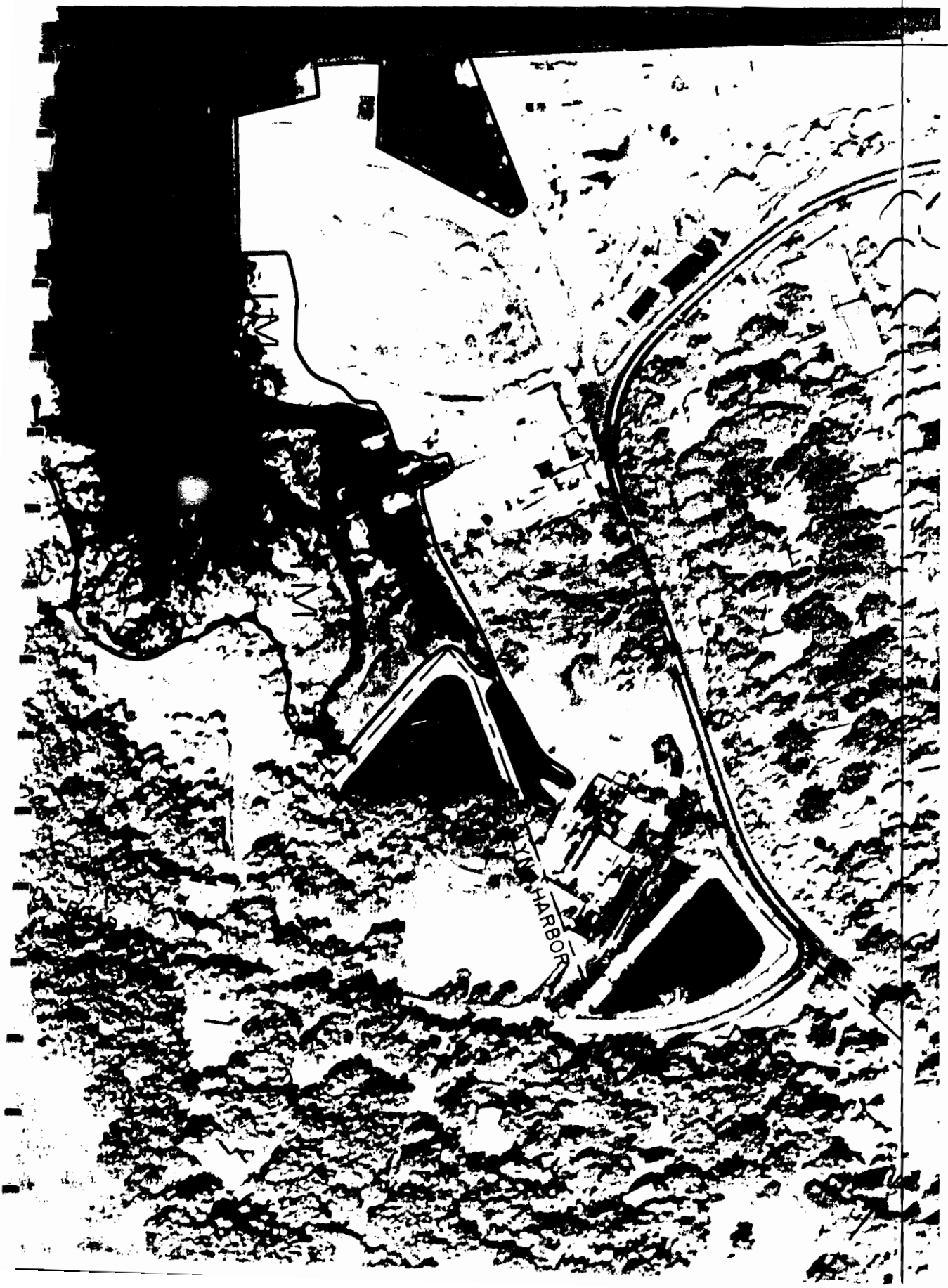
## MAP 614-518

### INDEX MAP NUMBER 2

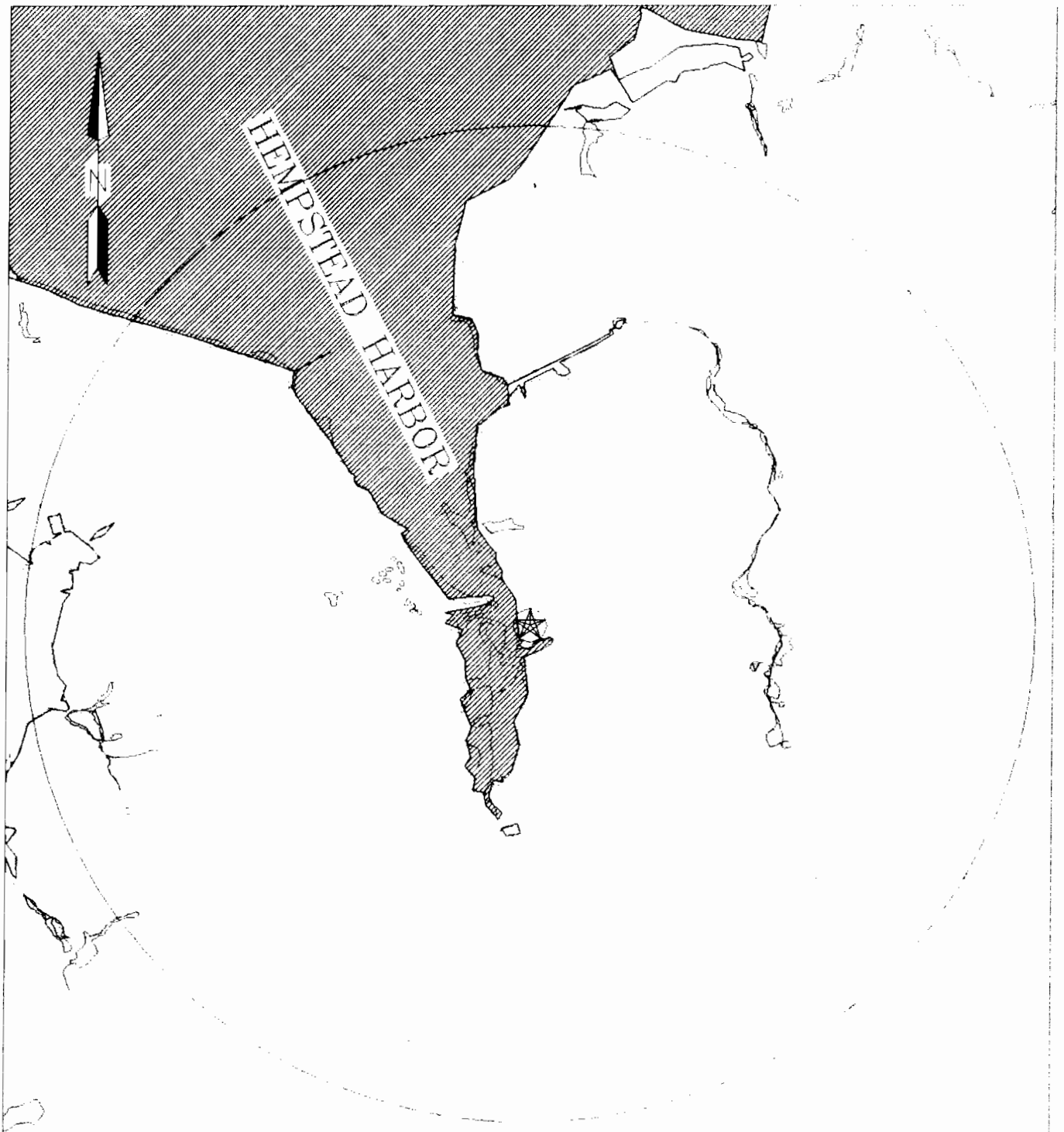
COPIES OF TIDAL WETLAND MAPS AND INDEX MAPS ARE AVAILABLE FROM
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
BUILDING NUMBER 40, STATE UNIVERSITY OF NEW YORK
STONY BROOK, NEW YORK 11794

### SCALE 1:2400




HARBOR

REFERENCE 18




SCALE: 0 1 2 miles

This map was prepared by LMS' Geographic Information System (GIS) using data from the following sources: National Wetlands Inventory, NYSDEC Wetlands Inventory Maps.

LEGEND

NYSDEC Wetlands

National Wetlands

FOUR-MILE RADIUS MAP
OF WETLANDS AROUND THE
PENETREX PROCESSING, INC. SITE

NYSDEC ID. No. 130034
1993 HRS Score

LAWLER, MATUSKY & SKELLY ENGINEERS
Pearl River, New York

**PENETREX**
**WETLANDS COUNT**

| DISTANCE FROM THE SITE (miles) | WETLANDS | | |
|---|---|---|---|
| | FEDERAL | NYSDEC | TOTAL |
| 0 - 0.25 | 5 | 0 | 5 |
| 0.25 - 0.5 | 5 | 0 | 5 |
| 0.5 - 1 | 16 | 5 | 21 |
| 1 - 2 | 38 | 23 | 61 |
| 2 - 3 | 63 | 25 | 88 |
| 3 - 4 | 48 | 7 | 55 |

Reference: LMS Geographic Information System (GIS) using data from NWI Maps and NYSDEC Wetland maps.

REFERENCE 19

**PENETREX NEAREST:**

| | |
|---|---|
| **Wetland:** | Distance: 837 ft Direction: SE<br>Area: 444,444 $ft^2$ or 10.2 acres<br>POWZH: Palustrine, open water, intermittently exposed permanent, diked, impounded |
| Reference: | NWI Map, Sea Cliff, NY Quadrangle Photo Revised 1981 |
| **School:** | ENE - 3311 ft<br>Glenwood Elementary School |
| Reference: | USGS Topo. Sea Cliff, NY |
| **Residence:** | Border Property < 200 ft |
| Reference: | LMS GIS |
| **Habitat:** | 5844 ft NNW; waterfowl nesting area |
| Reference: | NYSDEC Natural Heritage Program, 15 July 1993<br>2200 ft east; Jericho Water District No. 5201 |
| **Well:** | 3674 ft - NNW North Shore Country Club Well |
| Reference: | USGS Topo. Sea Cliff, NY; Reference 9 |

REFERENCE 20

**New York State Department of Environmental Conservation**

Wildlife Resources Center
Information Services
700 Troy-Schenectady Road
Latham, New York 12110-2400

**Thomas C. Jorling**
**Commissioner**

July 16, 1993

Christina Fern
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza, P.O. Box 1509
Pearl River, New York 10965

Dear Ms. Fern:

We have reviewed the New York Natural Heritage Program files with respect to your recent request for biological information concerning three inactive hazardous waste sites, as indicated on your enclosed maps, located throughout the New York City and Long Island Area of New York State.

Enclosed is a computer printout covering the area you requested to be reviewed by our staff. The information contained in this report is considered sensitive and may not be released to the public without permission from the New York Natural Heritage Program.

Our files are continually growing as new habitats and occurrences of rare species and communities are discovered. In most cases, site-specific or comprehensive surveys for plant and animal occurrences have not been conducted. For these reasons, we can only provide data which have been assembled from our files. We cannot provide a definitive statement on the presence or absence of species, habitats or natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

This response applies only to known occurrences of rare animals, plants and natural communities and/or significant wildlife habitats. You should contact our regional office, Division of Regulatory Affairs, at the address enclosed for information regarding any regulated areas or permits that may be required (e.g., regulated wetlands) under State Law.

If this proposed project is still active one year from now we recommend that you contact us again so that we can update this response.

Sincerely,

Burrell Buffington

Burrell Buffington
NY Natural Heritage Program

garment
they
well

Encs.
cc: Reg. 1 & 2, Wildlife Mgrs.
Reg. 1, Fisheries Mgr.



NY Natural Heritage Program is supported in part by
The Nature Conservancy

REFERENCE 21

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, New York 13045

TAKE PRIDE IN AMERICA

LAWLER, MATUSKY & SKELLY

July 14, 1993

JUL 19 1993

Ms. Christina Fern
Project Scientist
Lawler, Matusky & Skelly Engineers
One Blue Hill Plaza
P.O. Box 1509
Pearl River, NY 10965

Dear Ms. Fern:

This responds to your letter of June 24, 1993, requesting information on the presence of endangered or threatened species in the vicinity of the following inactive waste sites:

1. Cardwell Condenser, located on the north side of East Montauk Highway in Lindenhurst, Suffolk County, New York.

2. Penetrex Processing, located on West Street in Glenwood Landing, Nassau County, New York.

3. Pergament Mall, located along Route 440 (Richmond Avenue) near New Springville, Staten Island, Richmond County, New York.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the respective project impact areas. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the U.S. Fish and Wildlife Service (Service). Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under the Fish and Wildlife Coordination Act or other legislation.

For information on the Federally listed endangered shortnose sturgeon (*Acipenser brevirostrum*), and other listed marine species that be found in waters surrounding the project sites, you should contact Mr. Douglas W. Beach, National Marine Fisheries Service, Habitat Conservation Branch, One Blackburn Drive, Gloucester, Massachusetts 01930-2298.

If you have any questions regarding this letter, contact Tom McCartney at (607) 753-9334.

Sincerely,

David A Stilwell

Acting For
Leonard P. Corin
Field Supervisor

cc: NYSDEC, Stony Brook & Long Island City, NY (Regulatory Affairs)
NYSDEC, Latham, NY
COE, New York, NY
EPA, Chief, Marine & Wetlands Protection Branch, New York, NY
NMFS, Gloucester, MA

REFERENCE 22

## POPULATION COUNT - PENETREX*

| RADIUS (Miles) | POPULATION |
|---|---|
| 0 - 0.25 | 393 |
| 0.25 - 0.5 | 1,339 |
| 0.5 - 1 | 3,050 |
| 1 - 2 | 17,115 |
| 2 - 3 | 37,894 |
| 3 - 4 | 42,733 |

**Reference:**

Census of Population and Housing, 1990: Summary Tape File 1A on CD-ROM (New York). Machine-readable data file. Prepared by the Bureau of the Census - Washington: The Bureau [producer and distributor], 1991.

*These data were processed through LMS' Geographic Information System (GIS).

REFERENCE 23

United States
Environmental Protection
Agency

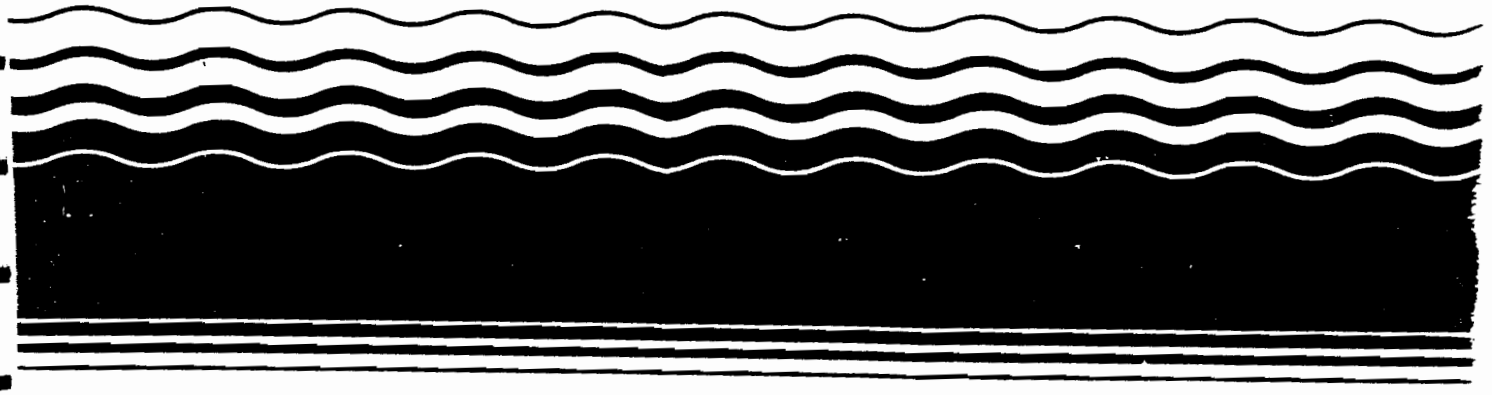
Office of Solid Waste
and Emergency
Response

Publication 9345.1-07
PB92-963377
EPA 540-R-92-026
November 1992

Superfund

EPA

# Hazard Ranking System Guidance Manual



**REFERENCE 24**

U.S. DEPARTMENT OF COMMERCE
Luther H. Hodges, Secretary

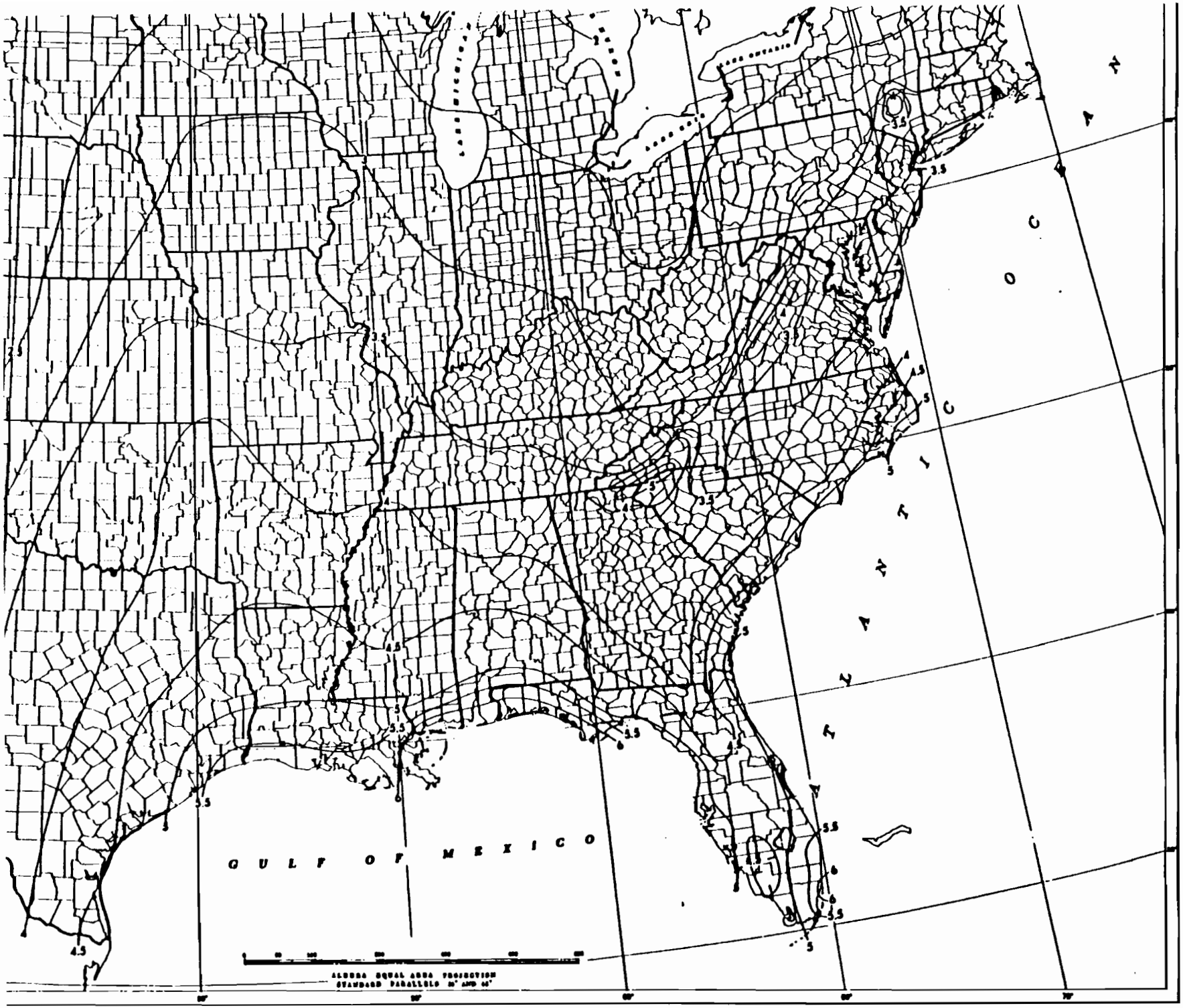
WEATHER BUREAU
F. W. Reichelderfer, Chief

TECHNICAL PAPER NO. 40

# RAINFALL FREQUENCY ATLAS OF THE UNITED STATES

## for Durations from 30 Minutes to 24 Hours and Return Periods from 1 to 100 Years

Prepared by
DAVID M. HERSHFIELD
Cooperative Studies Section, Hydrologic Services Division
for
Engineering Division, Soil Conservation Service
U.S. Department of Agriculture


GULF OF MEXICO
ATLANTIC OCEAN
ALBERS EQUAL AREA PROJECTION
STANDARD PARALLELS 29° AND 45°

HRS DOCUMENTATION RECORD
Penetrex Processing Inc. - 12/14/93

1. Site Name: Penetrex Processing Inc.
   (as entered in CERCLIS)

2. Site CERCLIS Number: NYD981079064

3. Site Reviewer:

4. Date: 18 October 1993

5. Site Location: Glenwood Landing/Nassau,New York
   (City/County,State)

6. Congressional District: 05

7. Site Coordinates: Single

   Latitude: 40°50'35. Longitude: 73°38'55.

| | Score |
|---|---|
| Ground Water Migration Pathway Score (Sgw) | 68.67 |
| Surface Water Migration Pathway Score (Ssw) | 0.00 |
| Soil Exposure Pathway Score (Ss) | 4.60 |
| Air Migration Pathway Score (Sa) | 0.00 |

| | |
|---|---|
| Site Score | 34.41 |

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" (CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

NPL Characteristics Data Collection Form
Penetrex Processing Inc. - 12/14/93

## Record Information

1. Site Name: Penetrex Processing Inc.
   (as entered in CERCLIS)

2. Site CERCLIS Number: NYD981079064

3. Site Reviewer:

4. Date: 18 October 1993

5. Site Location: Glenwood Landing/Nassau,New York
   (City/County,State)

6. Congressional District: 05

7. Site Coordinates: Single

   Latitude: 40°50'35. Longitude: 73°38'55.

## Site Description

1. Setting: Suburban

2. Current Owner: Private - Industrial

3. Current Site Status: Inactive

4. Years of Operation: Inactive Site,from and to dates: 1955 to 1984

5. How Initially Identified: State/Local Program

6. Entity Responsible for Waste Generation:

   - Other - Dry Cleaning operations

7. Site Activities/Waste Deposition:

   - Illegal Dumping
   - Discharge to Sewer/Surface Water

## Waste Description

8. Wastes Deposited or Detected Onsite:

   - Organic Chemicals
   - Solvents

## Response Actions

9. Response/Removal Actions:

   - Other Removal Action Has Occurred

## RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - Not Applicable

## Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 4682.0

14. Residential Population Within 4 Miles: 102524.0

## Water Use Information

15. Local Drinking Water Supply Source:

    - Ground Water (within 4 mile distance limit)

16. Total Population Served by Local Drinking Water Supply Source: 102524.0

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

- Municipal (Services over 25 People)

18. Surface Water Adjacent to/Draining Site:

- Wetland
- River
- Bay
- Ocean

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: soil

| | |
|---|---|
| a. Wastestream ID | contaminated soil |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.01 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 26000.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 5.20E+00 |

| Wastestream Constituent Hazardous Substances | Concent. | Units | Liquid | Qualifier |
|---|---|---|---|---|
| Tetrachloroethene | 1.0E+02 | ppb | NO | |
| Trichloroethane, 1,1,1- | 1.0E+02 | ppb | NO | |
| Trichloroethylene | 1.0E+02 | ppb | NO | |

| | |
|---|---|
| a. Wastestream ID | contaminated liquid |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.01 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 23000.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 4.60E+00 |

| Wastestream Constituent Hazardous Substances | Concent. | Units | Liquid | Qualifier |
|---|---|---|---|---|
| Tetrachloroethene | 1.0E+02 | ppb | YES | |
| Trichloroethane, 1,1,1- | 1.0E+02 | ppb | YES | |
| Trichloroethylene | 1.0E+02 | ppb | YES | |

WASTE QUANTITY

Penetrex Processing Inc. - 12/14/93

| | |
|---|---|
| a. Wastestream ID | drums |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.00 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 2500.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 5.00E-01 |

| | |
|---|---|
| a. Wastestream ID | |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.00 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 0.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 0.00E+00 |

| | |
|---|---|
| a. Wastestream ID | |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.00 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 0.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 0.00E+00 |

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

| | | | |
|---|---|---|---|
| a. Source ID | | soil | |
| b. Source Type | | Contaminated Soil | |
| c. Secondary Source Type | | N.A. | |
| d. Source Vol.(yd3/gal) | Source Area (ft2) | 30.00 | 0.00 |
| e. Source Volume/Area Value | | 1.20E-02 | |
| f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b) | | 1.47E-02 | |
| g. Data Complete? | | NO | |
| h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f) | | 1.03E+01 | |
| i. Data Complete? | | NO | |
| k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h) | | 1.03E+01 | |

| Source Hazardous Substances | Depth (feet) | Liquid | Concent. | Units |
|---|---|---|---|---|
| Dichloroethane, 1,1- | > 2 | NO | 1.3E+01 | ppm |
| Dichloroethylene, cis-1,2- | < 2 | NO | 4.7E+00 | ppm |
| Dichloroethylene, trans-1,2- | < 2 | NO | 4.7E+00 | ppm |
| Tetrachloroethene | < 2 | NO | 8.3E+02 | ppm |
| Trichloroethylene | < 2 | NO | 5.0E+01 | ppm |

Documentation for Source Type:

Soil samples collected during Phase II investigations of May 1989 and November 1989 identified chlorinated compounds as follows:
Tetrachloroethylene 1200 mg\kg
Trichloroethylene 86 mg\kg
1,2-Dichloroethylene 26 mg\kg Source (area of observed contamination) is limited to immediate area of drywells because the majority of the site is covered with asphalt.

Reference: 1,6,7

Documentation for Source Hazardous Substances:

Groundwater analyses identified the following chlorinated compounds:
1,2-dichloroethylene 3300 ug/l
1,1,1-trichloroethane 910 ug/l trichloroethylene 590 ug/l
tetrachloroethylene 920 ug/l

Reference: 1 and 7

Documentation for Source Volume:

Estimaated quantity of contaminated soil contained in dry wells.
Majority of site is paved with asphalt.

Reference: 1

Documentation for Source Area:

Unknown

Reference:

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE:

| | |
|---|---|
| a. Wastestream ID | chlorinated solvent |
| b. Hazardous Constituent Quantity (C) (lbs.) | 0.00 |
| c. Data Complete? | NO |
| d. Hazardous Wastestream Quantity (W) (lbs.) | 0.00 |
| e. Data Complete? | NO |
| f. Wastestream Quantity Value (W/5,000) | 0.00E+00 |

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

| | | | |
|---|---|---|---|
| a. Source ID | | | |
| b. Source Type | | Contaminated Soil | |
| c. Secondary Source Type | | N.A. | |
| d. Source Vol.(yd3/gal) | Source Area (ft2) | 60.00 | 0.00 |
| e. Source Volume/Area Value | | 2.40E-02 | |
| f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b) | | 0.00E+00 | |
| g. Data Complete? | | NO | |
| h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f) | | 0.00E+00 | |
| i. Data Complete? | | NO | |
| k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h) | | 2.40E-02 | |

| Source Hazardous Substances | Depth (feet) | Liquid | Concent. | Units |
|---|---|---|---|---|
| Dichloroethylene, cis-1,2- | < 2 | NO | 1.3E+01 | ppm |
| Dichloroethylene, trans-1,2- | < 2 | NO | 1.3E+01 | ppm |
| Tetrachloroethene | < 2 | NO | 1.2E+03 | ppm |
| Trichloroethane, 1,1,1- | < 2 | NO | 0.0E+00 | ppm |
| Trichloroethylene | < 2 | NO | 0.0E+00 | ppm |

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

| No. | Source ID | Migration Pathways | Vol. or Area Value (2e) | Constituent or Wastestream Value (2f,2h) | Hazardous Waste Qty. Value (2k) |
|---|---|---|---|---|---|
| 1 | soil | GW-SW-A | 1.20E-02 | 1.03E+01 | 1.03E+01 |
| 2 | | | 2.40E-02 | 0.00E+00 | 2.40E-02 |

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

| Migration Pathway | Contaminant Values | | HWQVs* | WCVs** |
|---|---|---|---|---|
| Ground Water | Toxicity/Mobility | 1.00E+02 | 10 | 6 |
| SW: Overland Flow, DW | Tox./Persistence | 4.00E+01 | 10 | 3 |
| SW: Overland Flow, HFC | Tox./Persis./Bioacc. | 2.00E+03 | 10 | 10 |
| SW: Overland Flow, Env | Etox./Persis./Bioacc. | 2.00E+03 | 10 | 10 |
| SW: GW to SW, DW | Tox./Persistence | 4.00E+01 | 10 | 3 |
| SW: GW to SW, HFC | Tox./Persis./Bioacc. | 2.00E+03 | 10 | 10 |
| SW: GW to SW, Env | Etox./Persis./Bioacc. | 2.00E+03 | 10 | 10 |
| Soil Exposure:Resident | Toxicity | 1.00E+02 | 10 | 6 |
| Soil Exposure: Nearby | Toxicity | 0.00E+00 | 0 | 0 |
| Air | Toxicity/Mobility | 0.00E+00 | 10 | 0 |

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

GROUND WATER MIGRATION PATHWAY SCORESHEET
Penetrex Processing Inc. - 12/14/93

| GROUND WATER MIGRATION PATHWAY Factor Categories & Factors | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release to an Aquifer<br>Aquifer: Lloyd | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Containment | 10 | 10 |
| 2b. Net Precipitation | 10 | 3 |
| 2c. Depth to Aquifer | 5 | 5 |
| 2d. Travel Time | 35 | 35 |
| 2e. Potential to Release [lines 2a(2b+2c+2d)] | 500 | 430 |
| 3. Likelihood of Release | 550 | 430 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility | * | 1.00E+02 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 6 |
| Targets | | |
| 7. Nearest Well | 50 | 1.80E+01 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 2.18E+03 |
| 8d. Population (lines 8a+8b+8c) | ** | 2.18E+03 |
| 9. Resources | 5 | 0.00E+00 |
| 10. Wellhead Protection Area | 20 | 0.00E+00 |
| 11. Targets (lines 7+8d+9+10) | ** | 2.20E+03 |
| 12. Targets (including overlaying aquifers) | ** | 2.20E+03 |
| 13. Aquifer Score | 100 | 68.67 |
| GROUND WATER MIGRATION PATHWAY SCORE (Sgw) | 100 | 68.67 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER PATHWAY AQUIFER SUMMARY
Penetrex Processing Inc. - 12/14/93

| No. | Aquifer ID | Type | Overlaying No. | Inter-Connected with | Likelihood of Release | Targets |
|---|---|---|---|---|---|---|
| 1 | upper glacial | Non K | 0 | 0 | 550 | 2.50E+01 |
| 2 | Port Washington | Non K | 0 | 0 | 430 | 0.00E+00 |
| 3 | Lloyd | Non K | 0 | 0 | 430 | 2.20E+03 |

Containment

| No. | Source ID | HWQ Value | Containment Value |
|---|---|---|---|
| 1 | soil | 1.03E+01 | 10 |

Containment Factor 10

Documentation for Ground Water Containment, Source soil:

Hazardous substances have migrated to groundwater beneath the site. Chlorinated organic compounds were identified in groundwater at concentrations above NYSDEC standards. Groundwater beneath the site is tidally influenced and mixes with waters of Hempstead Harbor.

Reference: 1

Net Precipitation

Net Precipitation (inches) N.A.

GROUND WATER PATHWAY LIKELIHOOD OF RELEASE upper glacial AQUIFER
Penetrex Processing Inc. - 12/14/93

Aquifer: upper glacial

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

OBSERVED RELEASE

| No. | Well ID | Well Type | Distance (miles) | Level of Contamination |
|---|---|---|---|---|
| 1 | PX-MW-1 | Monitoring Well | 0.010 | Level I |
| 2 | PX-MW-2 and -5 | Monitoring Well | 0.010 | Level I |
| 3 | PX-MW-3 | Monitoring Well | 0.010 | Level I |

| Well No. | Hazardous Substance | Concent. | MCL | Cancer | RFD | Units |
|---|---|---|---|---|---|---|
| 1 | Dichloroethylene, cis-1,2- | 1.2E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 1 | Dichloroethylene, trans-1,2- | 1.2E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 1 | Tetrachloroethene | 4.6E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 1 | Trichloroethane, 1,1,1- | 2.7E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 1 | Trichloroethylene | 1.8E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |
| 2 | Dichloroethylene, cis-1,2- | 1.6E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 2 | Dichloroethylene, trans-1,2- | 1.6E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 2 | Tetrachloroethene | 6.1E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 2 | Trichloroethane, 1,1,1- | 4.4E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 2 | Trichloroethylene | 2.1E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |
| 3 | Dichloroethylene, cis-1,2- | 1.4E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 3 | Dichloroethylene, trans-1,2- | 1.4E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 3 | Tetrachloroethene | 9.2E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 3 | Trichloroethane, 1,1,1- | 9.1E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 3 | Trichloroethylene | 5.9E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |

Observed Release Factor 550

POTENTIAL TO RELEASE

Containment

| | | |
|---|---|---|
| Containment Factor | 10 | |

Net Precipitation

| | | |
|---|---|---|
| Net Precipitation Factor | 3 | |

Depth to Aquifer

| | | |
|---|---|---|
| A. Depth of Hazardous Substances | 3.25 | feet |

Documentation for Depth of Hazardous Substances:

Concentrations of trichloroethylene, tetrachloroethylene and 1,1-dichloroethane exceeded NYSDEC recommended soil cleanup objectives to protect groundwater quality in sample DW-3 at a depth of 3.25 feet.

Reference: 1 and 7

| | | |
|---|---|---|
| B. Depth to Aquifer from Surface | 10.00 | feet |

Documentation for Depth to Aquifer from Surface :

See Figure 4-5 of the LMS Phase II report and boring logs of Blasland & Bouck August 1989 Phase II.

Reference: 1,6,7

| | | |
|---|---|---|
| C. Depth to Aquifer (B - A) | 6.75 | feet |

| | |
|---|---|
| Depth to Aquifer Factor | 5 |

Travel Time

| | |
|---|---|
| Are All Layers Karst? | NO |

Documentation for Karst Layers:

Presence of karst aquifer was not observed during the SI or previous investigations.

Reference: 1,6,7

| | | |
|---|---|---|
| Thickness of Layer(s) with Lowest Conductivity | 8.00 | feet |

Documentation for Thickness of Layers with Lowest Conductivity:

Reference: 6

| | |
|---|---|
| Hydraulic Conductivity (cm/sec) | 1.0E-04 |

Documentation for Hydraulic Conductivity:

Hydraulic conductivity determined during Phase II investigation of May and August 1989.

Reference: 6

| | |
|---|---|
| Travel Time Factor | 35 |

==========

Potential to Release Factor 430

Aquifer: Port Washington

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

OBSERVED RELEASE

| No. | Well ID | Well Type | Distance (miles) | Level of Contamination |
|---|---|---|---|---|

- N/A and/or data not specified

Observed Release Factor 0

POTENTIAL TO RELEASE

Containment

| | | |
|---|---|---|
| Containment Factor | 10 | |

Net Precipitation

| | | |
|---|---|---|
| Net Precipitation Factor | 3 | |

Depth to Aquifer

| | | |
|---|---|---|
| A. Depth of Hazardous Substances | 0.00 | feet |
| B. Depth to Aquifer from Surface | 0.00 | feet |
| C. Depth to Aquifer (B - A) | 0.00 | feet |
| Depth to Aquifer Factor | 5 | |

Travel Time

| | | |
|---|---|---|
| Are All Layers Karst? | NO | |
| Thickness of Layer(s) with Lowest Conductivity | 0.00 | feet |
| Hydraulic Conductivity (cm/sec) | 0.0E-00 | |
| Travel Time Factor | 35 | |

==========

Potential to Release Factor 430

GROUND WATER PATHWAY LIKELIHOOD OF RELEASE Lloyd AQUIFER
Penetrex Processing Inc. - 12/14/93

Aquifer: Lloyd

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

OBSERVED RELEASE

| No. | Well ID | Well Type | Distance (miles) | Level of Contamination |
|---|---|---|---|---|

- N/A and/or data not specified

Observed Release Factor 0

POTENTIAL TO RELEASE

Containment

| | | |
|---|---|---|
| Containment Factor | 10 | |

Net Precipitation

| | | |
|---|---|---|
| Net Precipitation Factor | 3 | |

Depth to Aquifer

| | | |
|---|---|---|
| A. Depth of Hazardous Substances | 0.00 | feet |
| B. Depth to Aquifer from Surface | 0.00 | feet |
| C. Depth to Aquifer (B - A) | 0.00 | feet |
| Depth to Aquifer Factor | 5 | |

Travel Time

| | | |
|---|---|---|
| Are All Layers Karst? | NO | |
| Thickness of Layer(s) with Lowest Conductivity | 0.00 | feet |
| Hydraulic Conductivity (cm/sec) | 0.0E-00 | |
| Travel Time Factor | 35 | |

==========

| | |
|---|---|
| Potential to Release Factor | 430 |

GROUND WATER PATHWAY WASTE CHARACTERISTICS
Penetrex Processing Inc. - 12/14/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value | Mobility Value | Toxicity/ Mobility Value |
|---|---|---|---|
| Dichloroethane, 1,1- | 10 | 1.00E+00 | 1.00E+01 |
| Dichloroethylene, cis-1,2- | 100 | 1.00E+00 | 1.00E+02 |
| Dichloroethylene, trans-1,2- | 100 | 1.00E+00 | 1.00E+02 |
| Tetrachloroethene | 100 | 1.00E-02 | 1.00E+00 |
| Trichloroethane, 1,1,1- | 10 | 1.00E-02 | 1.00E-01 |
| Trichloroethylene | 10 | 1.00E-02 | 1.00E-01 |

Hazardous Substances Found in an Observed Release

| Well No. | Observed Release Hazardous Substance | Toxicity Value | Mobility Value | Toxicity/ Mobility Value |
|---|---|---|---|---|

- N/A and/or data not specified

| | |
|---|---|
| Toxicity/Mobility Value from Source Hazardous Substances: | 1.00E+02 |
| Toxicity/Mobility Value from Observed Release Hazardous Substances: | 1.00E+02 |
| Toxicity/Mobility Factor: | 1.00E+02 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 6 |

Population by Well

| No. | Well ID | Sample Type | Distance (miles) | Level of Contamination | Population |
|---|---|---|---|---|---|

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

## Potential Contamination by Distance Category

| Distance Category (miles) | Population | Value |
|---|---|---|
| > 0 to 1/4 | 0.0 | 0.00E+00 |
| > 1/4 to 1/2 | 0.0 | 0.00E+00 |
| > 1/2 to 1 | 0.0 | 0.00E+00 |
| > 1 to 2 | 0.0 | 0.00E+00 |
| > 2 to 3 | 0.0 | 0.00E+00 |
| > 3 to 4 | 0.0 | 0.00E+00 |

Potential Contamination Factor: 0.000

## Nearest Well

Level of Contamination: N.A.

Nearest Well Factor: 0.00E+00

Documentation for Nearest Well:

Well No. 5201, operated by the Jericho Water District, is located 2200 ft east of the site on Motts Cove Road in Roslyn Harbor. According to the Water District this well is used only during the summer when water supply demand is higher. The District also reports that the well is 34 feet deep, is located in the Lloyd aquifer, and provides clean water. Groundwater beneath the site is located in the upper glacial aquifer The next closest well is located 0.75 mile north of the site at the Noth Shore Country Club. Currently this well is used only for irrigation. Potential contamination is not scored because water supply wells are located in a different

Reference: 9 and 24

## Resources

Resource Use: YES

Resource Factor: 5.00E+00

Documentation for Resources:

Water in aquifer is usable for drinking water.

Reference: 8,9,10,11,12,13

Wellhead Protection Area

Ground water observed release for site lies within the wellhead area

Wellhead Protection Area Factor: 2.00E+01

Documentation for Wellhead Protection Area:

Jericho water well No. 5201 is located in the Lloyd aquifer, approximately 2200 feet east of the site.

Reference: 15

Population by Well

| No. | Well ID | Sample Type | Distance (miles) | Level of Contamination | Population |
|---|---|---|---|---|---|

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

## Potential Contamination by Distance Category

| Distance Category (miles) | Population | Value |
|---|---|---|
| > 0 to 1/4 | 0.0 | 0.00E+00 |
| > 1/4 to 1/2 | 0.0 | 0.00E+00 |
| > 1/2 to 1 | 0.0 | 0.00E+00 |
| > 1 to 2 | 0.0 | 0.00E+00 |
| > 2 to 3 | 0.0 | 0.00E+00 |
| > 3 to 4 | 0.0 | 0.00E+00 |

Ptential Contamination Factor: 0.000

## Nearest Well

Level of Contamination: N.A.

Nearest Well Factor: 0.00E+00

## Resources

Resource Use: NO

Resource Factor: 0.00E+00

## Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

Population by Well

| No. | Well ID | Sample Type | Distance (miles) | Level of Contamination | Population |
|---|---|---|---|---|---|

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

Potential Contamination by Distance Category

| Distance Category (miles) | Population | Value |
|---|---|---|
| > 0 to 1/4 | 3930.0 | 5.21E+02 |
| > 1/4 to 1/2 | 1339.0 | 1.01E+02 |
| > 1/2 to 1 | 3050.0 | 1.67E+02 |
| > 1 to 2 | 17115.0 | 2.94E+02 |
| > 2 to 3 | 37894.0 | 6.78E+02 |
| > 3 to 4 | 42733.0 | 4.17E+02 |

Potential Contamination Factor: 2178.000

Documentation for Target Population > 0 to 1/4 mile Distance Category:

Reference: 22

Documentation for Target Population > 1/4 to 1/2 mile Distance Category:

Reference: 22

Documentationfor Target Population > 1/2 to 1 mile Distance Category:

Reference: 22

Documentation for Target Population > 1 to 2 miles Distance Category:

Reference: 22

Documentation for Target Population > 2 to 3 miles Distance Category:

Reference: 22

Documentation for Target Population > 3 to 4 miles Distance Category:

Reference: 22

Nearest Well

Level of Contamination: Potential
Distance in miles: 0.40

Nearest Well Factor: 1.80E+01

Documentation for Nearest Well:

Jericho Water District Well No. 5201, a standby well, located east of the site draws water from the Lloyd Aquifer.

Reference: 9 and 24

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT<br>Factor Categories & Factors<br>DRINKING WATER THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release to Aquifer<br>Aquifer: upper glacial | | |
| 1. Observed Release | 550 | 550 |
| 2. Potential to Release | | |
| 2a. Containment | 10 | 10 |
| 2b. Net Precipitation | 10 | 3 |
| 2c. Depth to Aquifer | 5 | 5 |
| 2d. Travel Time | 35 | 35 |
| 2e. Potential to Release [lines 2a(2b+2c+2d)] | 500 | 430 |
| 3. Likelihood of Release | 550 | 550 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility/Persistence | * | 4.00E+01 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 3 |
| Targets | | |
| 7. Nearest Intake | 50 | 0.00E+00 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 0.00E+00 |
| 8d. Population (lines 8a+8b+8c) | ** | 0.00E+00 |
| 9. Resources | 5 | 0.00E+00 |
| 10. Targets (lines 7+8d+9) | ** | 0.00E+00 |
| 11. DRINKING WATER THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT<br>Factor Categories & Factors<br>HUMAN FOOD CHAIN THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 12. Likelihood of Release (same as line 3) | 550 | 550 |
| Waste Characteristics | | |
| 13. Toxicity/Mobility/Persistence/Bioacc. | * | 2.00E+03 |
| 14. Hazardous Waste Quantity | * | 10 |
| 15. Waste Characteristics | 1000 | 10 |
| Targets | | |
| 16. Food Chain Individual | 50 | 0.00E+00 |
| 17. Population | | |
| 17a. Level I Concentrations | ** | 0.00E+00 |
| 17b. Level II Concentrations | ** | 0.00E+00 |
| 17c. Pot. Human Food Chain Contamination | ** | 1.55E-02 |
| 17d. Population (lines 17a+17b+17c) | ** | 1.55E-02 |
| 18. Targets (lines 16+17d) | ** | 1.55E-02 |
| 19. HUMAN FOOD CHAIN THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| GROUND WATER TO SURFACE WATER MIGRATION COMPONENT<br>Factor Categories & Factors<br>ENVIRONMENTAL THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 20. Likelihood of Release (same as line 3) | 550 | 550 |
| Waste Characteristics | | |
| 21. Ecosystem Tox./Mobility/Persist./Bioacc. | * | 2.00E+03 |
| 22. Hazardous Waste Quantity | * | 10 |
| 23. Waste Characteristics | 1000 | 10 |
| Targets | | |
| 24. Sensitive Environments | | |
| 24a. Level I Concentrations | ** | 0.00E+00 |
| 24b. Level II Concentrations | ** | 0.00E+00 |
| 24c. Potential Contamination | ** | 1.75E-03 |
| 24d. Sensitive Environments (lines 24a+24b+24c) | ** | 1.75E-03 |
| 25. Targets (line 24d) | ** | 1.75E-03 |
| 26. ENVIRONMENTAL THREAT SCORE | 60 | 0.00 |
| 27. WATERSHED SCORE | 100 | 0.00 |
| 28. SW: GW to SW COMPONENT SCORE (Sgs) | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER PATHWAY GW TO SW CONTAINMENT SUMMARY
Penetrex Processing Inc. - 11/08/93

Containment

| No. | Source ID | HWQ Value | Containment Value |
|---|---|---|---|
| 1 | soil | 1.03E+01 | 10 |
| | Containment Factor | | 10 |

Documentation for Ground Water Containment, Source soil:

Hazardous substances have migrated to groundwater beneath the site. Chlorinated organic compounds were identified in groundwater at concentrations above NYSDEC standards. Groundwater beneath the site is tidally influenced and mixes with waters of Hempstead Harbor.

Reference: 1

Net Precipitation

| | |
|---|---|
| Net Precipitation (inches) | 0.00 |

SURFACE WATER PATHWAY GW TO SW COMPONENT LIKELIHOOD OF RELEASE

Penetrex Processing Inc. - 11/08/93

Aquifer: upper glacial

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

OBSERVED RELEASE

| No. | Well ID | Well Type | Distance (miles) | Level of Contamination |
|---|---|---|---|---|
| 1 | PX-MW-1 | Monitoring Well | 0.010 | Level I |
| 2 | PX-MW-2 and -5 | Monitoring Well | 0.010 | Level I |
| 3 | PX-MW-3 | Monitoring Well | 0.010 | Level I |

| Well No. | Hazardous Substance | Concent. | MCL | Cancer | RFD | Units |
|---|---|---|---|---|---|---|
| 1 | Dichloroethylene, cis-1,2- | 1.2E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 1 | Dichloroethylene, trans-1,2- | 1.2E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 1 | Tetrachloroethene | 4.6E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 1 | Trichloroethane, 1,1,1- | 2.7E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 1 | Trichloroethylene | 1.8E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |
| 2 | Dichloroethylene, cis-1,2- | 1.6E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 2 | Dichloroethylene, trans-1,2- | 1.6E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 2 | Tetrachloroethene | 6.1E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 2 | Trichloroethane, 1,1,1- | 4.4E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 2 | Trichloroethylene | 2.1E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |
| 3 | Dichloroethylene, cis-1,2- | 1.4E+03 | 7.0E+01 | 0.0E+00 | 3.5E+02 | ppb |
| 3 | Dichloroethylene, trans-1,2- | 1.4E+03 | 1.0E+02 | 0.0E+00 | 7.0E+02 | ppb |
| 3 | Tetrachloroethene | 9.2E+02 | 5.0E+00 | 6.7E-01 | 3.5E+02 | ppb |
| 3 | Trichloroethane, 1,1,1- | 9.1E+02 | 2.0E+02 | 0.0E+00 | 3.2E+03 | ppb |
| 3 | Trichloroethylene | 5.9E+02 | 5.0E+00 | 3.2E+00 | 0.0E+00 | ppb |

Observed Release Factor 550

POTENTIAL TO RELEASE

Ground Water to Surface Water Angle

| | | |
|---|---|---|
| Probable Point of Entry | 0.05 | miles |
| Angle Theta | 165 | |

Containment

| | |
|---|---|
| Containment Factor | 10 |

Net Precipitation

| | |
|---|---|
| Net Precipitation Factor | 3 |

Depth to Aquifer

| | | |
|---|---|---|
| A. Depth of Hazardous Substances | 3.25 | feet |

Documentation for Depth of Hazardous Substances:

Concentrations of trichloroethylene, tetrachloroethylene and 1,1-dichloroethane exceeded NYSDEC recommended soil cleanup objectives to protect groundwater quality in sample DW-3 at a depth of 3.25 feet.

Reference: 1 and 7

| | | |
|---|---|---|
| B. Depth to Aquifer from Surface | 10.00 | feet |

Documentation for Depth to Aquifer from Surface :

See Figure 4-5 of the LMS Phase II report and boring logs of Blasland & Bouck August 1989 Phase II.

Reference: 1,6,7

| | | |
|---|---|---|
| C. Depth to Aquifer (B - A) | 6.75 | feet |
| Depth to Aquifer Factor | 5 | |

Travel Time

| | |
|---|---|
| Are All Layers Karst? | NO |

Documentation for Karst Layers:

Presence of karst aquifer was not observed during the SI or previous investigations.

Reference: 1,6,7

| | | |
|---|---|---|
| Thickness of Layer(s) with Lowest Conductivity | 8.00 | feet |

Documentation for Thickness of Layers with Lowest Conductivity:

Reference: 6

| | |
|---|---|
| Hydraulic Conductivity (cm/sec) | 1.0E-04 |

SURFACE WATER PATHWAY GW TO SW COMPONENT LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 11/08/93

Documentation for Hydraulic Conductivity:

Hydraulic conductivity determined during Phase II investigation of May and August 1989.

Reference: 6

| | |
|---|---|
| Travel Time Factor | 35 |

| | |
|---|---|
| Potential to Release Factor | 430 |

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 11/08/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Factor Value | Persist. Value | Mobility Value | Toxicity/ Mobililty/ Persistence |
|---|---|---|---|---|
| Dichloroethane, 1,1- | 10 | 4.00E-01 | 1.00E+00 | 4.00E+00 |
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 1.00E+00 | 4.00E+01 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 1.00E+00 | 4.00E+01 |
| Tetrachloroethene | 100 | 4.00E-01 | 1.00E-02 | 4.00E-01 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 1.00E-02 | 4.00E-02 |
| Trichloroethylene | 10 | 4.00E-01 | 1.00E-02 | 4.00E-02 |

Hazardous Substances Found in an Observed Release

| Observed Release Hazardous Substance | Toxicity Factor Value | Persist. Value | Toxicity/ Persistence |
|---|---|---|---|
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 4.00E+01 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 4.00E+01 |
| Tetrachloroethene | 100 | 4.00E-01 | 4.00E+01 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 4.00E+00 |
| Trichloroethylene | 10 | 4.00E-01 | 4.00E+00 |

SW PATHWAY: GW TO SW COMPONENT DRINKING WATER THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 11/08/93

| | |
|---|---|
| Toxicity/Mobility/Persistence Value from Source Hazardous Substances: | 4.00E+01 |
| Toxicity/Mobility/Persistence Value from Observed Release Hazardous Substances: | 4.00E+01 |
| Toxicity/Mobility/Persistence Factor: | 4.00E+01 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 3 |

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

| Intake | Distance Along the In-water Segment from the Probable Point of Entry (miles) | Population |
|---|---|---|

- N/A and/or data not specified

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

| Intake | Distance Along the In-water Segment from the Probable Point of Entry (miles) | Population |
|---|---|---|

- N/A and/or data not specified

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

Potential Contamination

| Intake ID | Average Annual Flow (cfs) | Population Served |
|---|---|---|
| - N/A and/or data not specified | | |

| Type of Surface Water Body | Total Population | Dilution-Weighted Population |
|---|---|---|
| - N/A and/or data not specified | | |

Dilution-Weighted Population Served by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: NO

Resource Value: 0.00E+00

Documentation for Resources:

Surface water is not used for drinking water, irrigation, etc.

Reference:

SW PATHWAY: GW TO SW COMPONENT HUMAM FOOD CHAIN THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 11/08/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value | Persist. Value | Mobility Value | Bio-accum. Value | Tox./Mobil./ Persistence/ Bioaccum. Value |
|---|---|---|---|---|---|
| Dichloroethane, 1,1- | 10 | 4.00E-01 | 1.00E+00 | 5.00E+00 | 2.00E+01 |
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 1.00E+00 | 5.00E+00 | 2.00E+02 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 1.00E+00 | 5.00E+01 | 2.00E+03 |
| Tetrachloroethene | 100 | 4.00E-01 | 1.00E-02 | 5.00E+01 | 2.00E+01 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 1.00E-02 | 5.00E+00 | 2.00E-01 |
| Trichloroethylene | 10 | 4.00E-01 | 1.00E-02 | 5.00E+01 | 2.00E+00 |

Hazardous Substances Found in an Observed Release

| Observed Release Hazardous Substance | Toxicity Value | Persist. Value | Bio-accum. Value | Toxicity/ Persistence Bioaccum. Value |
|---|---|---|---|---|
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 5.00E+00 | 2.00E+02 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 5.00E+01 | 2.00E+03 |
| Tetrachloroethene | 100 | 4.00E-01 | 5.00E+01 | 2.00E+03 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 5.00E+00 | 2.00E+01 |
| Trichloroethylene | 10 | 4.00E-01 | 5.00E+01 | 2.00E+02 |

| | |
|---|---|
| Toxicityobility/Persistence/Bioaccumulation Value from Source Hazardous Substances: | 2.00E+03 |
| Toxicity/Mobility/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances: | 2.00E+03 |
| Toxicity/Mobility/Persistence/Bioaccumulation Factor: | 2.00E+03 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 10 |

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

| Fishery | Annual Production (pounds) | Human Food Chain Population Value |
|---|---|---|

- N/A and/or data not specified

Sum of Human Food Chain Population Values: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

| Fishery | Annual Production (pounds) | Human Food Chain Population Value |
|---|---|---|

- N/A and/or data not specified

Sum of Human Food Chain Population Values: 0.00E+00

Level II Concentrations Factor: 0.00E+00

Potential Contamination

| Fishery | Annnual Production (pounds) | Type of Surface Water Body | Average Annual Flow (cfs) | Pop. Value (Pi) | Dilution Weight (Di) | Pi*Di |
|---|---|---|---|---|---|---|
| 2 Long Island Sound | 1000000.0 | Coastal | 0 | 3100.0 | 5.00E-05 | 1.55E-01 |

Sum of (Pi*Di): 1.55E-01

Potential Human Food Chain Contamination Factor: 1.55E-02

Food Chain Individual

Location of Nearest Fishery: Long Island Sound
Distance from the Probable Point of Entry: 5.00 miles
Type of Surface Water Body: Coastal Tidal Area
Dilution Weight: 0.0000500
Level of Contamination: Potential

Food Chain Individual Factor: 0.00

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 11/08/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Eco-toxicity Value | Persist. Value | Mob. Value | Bio-accum. Value | Ecotoxicity/ Mobility/ Persistence/ Bioaccum. Value |
|---|---|---|---|---|---|
| Dichloroethane, 1,1- | 0 | 4.00E-01 | 1.00E+00 | 5.00E+00 | 0.00E+00 |
| Dichloroethylene, cis-1,2- | 0 | 4.00E-01 | 1.00E+00 | 5.00E+00 | 0.00E+00 |
| Dichloroethylene, trans-1,2- | 1 | 4.00E-01 | 1.00E+00 | 5.00E+01 | 2.00E+01 |
| Tetrachloroethene | 100 | 4.00E-01 | 1.00E-02 | 5.00E+01 | 2.00E+01 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 1.00E-02 | 5.00E+00 | 2.00E-01 |
| Trichloroethylene | 10 | 4.00E-01 | 1.00E-02 | 5.00E+01 | 2.00E+00 |

Hazardous Substances Found in an Observed Release

| Observed Release Hazardous Substance | Eco-toxicity Value | Persist. Value | Bio-accum. Value | Ecotoxicity/ Persistence/ Bioaccum. Value |
|---|---|---|---|---|
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 5.00E+00 | 2.00E+02 |
| Dichloroethylene, trans-1,2- | 1 | 4.00E-01 | 5.00E+01 | 2.00E+01 |
| Tetrachloroethene | 100 | 4.00E-01 | 5.00E+01 | 2.00E+03 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 5.00E+00 | 2.00E+01 |
| Trichloroethylene | 10 | 4.00E-01 | 5.00E+01 | 2.00E+02 |

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 11/08/93

| | |
|---|---|
| Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Source Substances: | 2.00E+01 |
| Ecotoxicity/Mobility/Persistence/Bioaccummulation Value from Observed Hazardous Substances: | 2.00E+03 |
| Ecotoxicity/Mobility/Persistence/Bioaccummulation Factor: | 2.00E+03 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 10 |

Levl I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

| Sensitive Environment | Distance from Probable Point of Entry to Sensitive Env. (miles) | Sensitive Environment Value |
|---|---|---|
| - N/A and/or data not specified | | |

Sum of Sensitive Environments Values: 0

Wetlands

| Wetland | Distance from Probable Point of Entry to Wetland (miles) | Wetlands Frontage (miles) |
|---|---|---|
| - N/A and/or data not specified | | |

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level I Concentrations Factor: 0.00E+00

Level II Concentrations

| Sensitive Environment | Distance from Probable Point of Entry to Sensitive Env. (miles) | Sensitive Environment Value |
|---|---|---|
| - N/A and/or data not specified | | |
| Sum of Sensitive Environments Values: | | 0 |

Wetlands

| Wetland | Distance from Probable Point of Entry to Wetland (miles) | Wetlands Frontage (miles) |
|---|---|---|
| - N/A and/or data not specified | | |

Total Wetlands Frontage: 0.00 Miles Total Wetlands Value: 0

Sum of Sensitive Environments Value + Wetlands Value: 0.00E+00

Level II Concentrations Factor: 0.00E+00

## Potential Contamination

### Sensitive Environments

| Type of Surface Water Body | Sensitive Environment | Sensitive Environment Value |
|---|---|---|

### Wetlands

| Type of Surface Water Body | Sensitive Environment | Wetlands Frontage | Wetlands Value |
|---|---|---|---|

- N/A and/or data not specified

SW PATHWAY: GW TO SW COMPONENT ENVIRONMENTAL THREAT TARGETS

Penetrex Processing Inc. - 10/19/93

| Type of Surface Water Body | Sum of Sens. Environment Values(Sj) | Sum of Wetland Frontage Values(Wj) | Dilution Weight (Dj) | Dj(Wj+Sj) |
|---|---|---|---|---|
| - N/A and/or data not specified | | | | |

Sum of Dj(Wj+Sj): 0.00E+00

Sum of Dj(Wj+Sj)/10: 0.00E+00

==========

Potential Contamination Sensitive Environment Facto: 0.00E+00

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT<br>Factor Categories & Factors<br>DRINKING WATER THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release by Overland Flow | | |
| 2a. Containment | 10 | 9 |
| 2b. Runoff | 25 | 1 |
| 2c. Distance to Surface Water | 25 | 20 |
| 2d. Potential to Release by Overland Flow [lines 2a(2b+2c)] | 500 | 189 |
| 3. Potential to Release by Flood | | |
| 3a. Containment (Flood) | 10 | 10 |
| 3b. Flood Frequency | 50 | 50 |
| 3c. Potential to Release by Flood (lines 3a x 3b) | 500 | 500 |
| 4. Potential to Release (lines 2d+3c) | 500 | 500 |
| 5. Likelihood of Release | 550 | 500 |
| Waste Characteristics | | |
| 6. Toxicity/Persistence | * | 4.00E+01 |
| 7. Hazardous Waste Quantity | * | 10 |
| 8. Waste Characteristics | 100 | 3 |
| Targets | | |
| 9. Nearest Intake | 50 | 0.00E+00 |
| 10. Population | | |
| 10a. Level I Concentrations | ** | 0.00E+00 |
| 10b. Level II Concentrations | ** | 0.00E+00 |
| 10c. Potential Contamination | ** | 0.00E+00 |
| 10d. Population (lines 10a+10b+10c) | ** | 0.00E+00 |
| 11. Resources | 5 | 0.00E+00 |
| 12. Targets (lines 9+10d+11) | ** | 0.00E+00 |
| 13. DRINKING WATER THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT<br>Factor Categories & Factors<br>HUMAN FOOD CHAIN THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 14. Likelihood of Release (same as line 5) | 550 | 500 |
| Waste Characteristics | | |
| 15. Toxicity/Persistence/Bioaccumulation | * | 2.00E+03 |
| 16. Hazardous Waste Quantity | * | 10 |
| 17. Waste Characteristics | 1000 | 10 |
| Targets | | |
| 18. Food Chain Individual | 50 | 0.00E+00 |
| 19. Population | | |
| 19a. Level I Concentrations | ** | 0.00E+00 |
| 19b. Level II Concentrations | ** | 0.00E+00 |
| 19c. Pot. Human Food Chain Contamination | ** | 6.20E-02 |
| 19d. Population (lines 19a+19b+19c) | ** | 6.20E-02 |
| 20. Targets (lines 18+19d) | ** | 6.20E-02 |
| 21. HUMAN FOOD CHAIN THREAT SCORE | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Penetrex Processing Inc. - 12/14/93

| SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT<br>Factor Categories & Factors<br>ENVIRONMENTAL THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 22. Likelihood of Release (same as line 5) | 550 | 500 |
| Waste Characteristics | | |
| 23. Ecosystem Toxicity/Persistence/Bioacc.<br>24. Hazardous Waste Quantity<br>25. Waste Characteristics | *<br>*<br>1000 | 2.00E+03<br>10<br>10 |
| Targets | | |
| 26. Sensitive Environments<br>26a. Level I Concentrations<br>26b. Level II Concentrations<br>26c. Potential Contamination<br>26d. Sensitive Environments (lines 26a+26b+26c)<br>27. Targets (line 26d) | <br>**<br>**<br>**<br>**<br>** | <br>0.00E+00<br>0.00E+00<br>3.50E-03<br>3.50E-03<br>3.50E-03 |
| 28. ENVIRONMENTAL THREAT SCORE | 60 | 0.00 |
| 29. WATERSHED SCORE | 100 | 0.00 |
| 30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof) | 100 | 0.00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER PATHWAY SEGMENT SUMMARY
Penetrex Processing Inc. - 10/22/93

| No. | Segment ID | Segment Type | Water Type | Start Point (mi) | End Point (mi) | Average Flow (cfs) |
|---|---|---|---|---|---|---|
| 1 | Hempstead Harbor | Coastal Ti | Salt | 0.00 | 14.50 | N.A. |

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 10/22/93

OBSERVED RELEASE

| No. | Sample ID | Sample Type | Distance (miles) | Level of Contamination DW | HFC | Env |
|---|---|---|---|---|---|---|

- N/A and/or data not specified

==========

Observed Release Factor 0

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 10/22/93

POTENTIAL TO RELEASE

Potential to Release by Overland Flow

Containment

| No. | Source ID | HWQ Value | Containment Value |
|---|---|---|---|
| 1 | soil | 1.03E+01 | 9 |

Containment Factor: 9

Documentation for Overland Flow Containment, Source soil:

Containment value was selected because there is hazardous substance migration from contaminateed soil to groundwater and groundwater discharges to surface water.. Most of the site (and soil beneath it) is paved with asphalt. Contaminated soil is also contained within drywells where precipitation is collected on site. Migration of pollutants from soil to Hempstead Harbor or in any direction off site via the overland route is not likely .

Reference: 1

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 10/22/93

## Distance to Surface Water

| | |
|---|---|
| Distance to Surface Water: | 300.0 feet |
| Distance to Surface Water Factor: | 20 |

Documentation for Distance to Surface Water:

The following methods were used to determine the distance to surface water: site inspection, measurement from U.S.G.S. Topographic map and measurement from NYS Tidal Wetland map.

Reference: 1

## Runoff

| | |
|---|---|
| A. Drainage Area: | 0.0 acres |

Documentation for Drainage Area:

Route of drainage for region and for the site is Hempstead Harbor , and Long Island Sound. No acres assigned to this region. On-site drywells also collect precipitation. These drains discharge to groundwater.

Reference: 1

| | |
|---|---|
| B. 2-year, 24-hour Rainfall: | 3.5 inches |

Documentation for Rainfall:

Used rainfall frequency map to determine value.

Reference: 24

C. Soil Group: B
Medium-textured soils with moderate infiltration rates

Documentation for Soil Group:

Several soil types including fill material are present onsite.

Reference: 6

Runoff Factor: 1

==========

Potential to Release by Overland Flow Factor: 189

SURFACE WATER PATHWAY OVERLAND FLOW/FLOOD COMPONENT LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 10/22/93

Potential to Release by Flood

| No. | Source ID | HWQ Value | Flood Containment Value | Flood Frequency Value | Potential to Release by Flood |
|---|---|---|---|---|---|

- N/A and/or data not specified

==========

Potential to Release by Flood Factor: 0

Documentation for Flood Containment, Source soil:

Contaminated soil is covered over with asphalt pavement or is contained in dryweells.

Reference:

Documentation for Flood Frequency, Source soil:

No NEMA foodplain area designated for this area.

Reference:

SW PATHWAY: OVERLAND/FLOOD DRINKING WATER THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/22/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value | Persistence Value | Toxicity/ Persistence Value |
|---|---|---|---|
| Dichloroethane, 1,1- | 10 | 4.00E-01 | 4.00E+00 |
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 4.00E+01 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 4.00E+01 |
| Tetrachloroethene | 100 | 4.00E-01 | 4.00E+01 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 4.00E+00 |
| Trichloroethylene | 10 | 4.00E-01 | 4.00E+00 |

Hazardous Substances Found in an Observed Release

| Sample No. | Observed Release Hazardous Substance | Toxicity Value | Persistence Value | Toxicity/ Persistence Value |
|---|---|---|---|---|

- N/A and/or data not specified

SW PATHWAY: OVERLAND/FLOOD DRINKING WATER THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/22/93

| | |
|---|---|
| Toxicity/Persistence Value from Source Hazardous Substances: | 4.00E+01 |
| Toxicity/Persistence Value from Observed Release Hazardous Substances: | 0.00E+00 |
| Toxicity/Persistence Factor: | 4.00E+01 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 3 |

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

Level I Concentrations

| Intake | Distance Along the In-water Segment from the Probable Point of Entry (miles) | Population |
|---|---|---|

- N/A and/or data not specified

==========

Population Served by Level I Intakes: 0.0

Level I Population Factor: 0.00E+00

Level II Concentrations

| Intake | Distance Along the In-water Segment from the Probable Point of Entry (miles) | Population |
|---|---|---|

- N/A and/or data not specified

Population Served by Level II Intakes: 0.0

Level II Population Factor: 0.00E+00

SW PATHWAY: OVERLAND FLOW/FLOOD COMPONENT DRINKING WATER THREAT TARGETS
Penetrex Processing Inc. - 10/22/93

Potential Contamination

| Intake ID | Average Annual Flow (cfs) | Population Served |
|---|---|---|
| - N/A and/or data not specified | | |

| Type of Surface Water Body | Total Population | Dilution-Weighted Population |
|---|---|---|
| - N/A and/or data not specified | | |

Dilution-Weighted Population Served
by Potentially Contaminated Intakes: 0.0

Potential Contamination Factor: 0.0

Nearest Intake

Location of Nearest Drinking Water Intake: N.A.

Nearest Intake Factor: 0.00

Resources

Resource Use: NO

Resource Value: 0.00E+00

Documentation for Resources:

Surface water is not used for drinking water, irrigation, etc.

Reference:

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/22/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value | Persistence Value | Bio-accum. Value | Toxicity/ Persistence/ Bioaccum. Value |
|---|---|---|---|---|
| Dichloroethane, 1,1- | 10 | 4.00E-01 | 5.00E+00 | 2.00E+01 |
| Dichloroethylene, cis-1,2- | 100 | 4.00E-01 | 5.00E+00 | 2.00E+02 |
| Dichloroethylene, trans-1,2- | 100 | 4.00E-01 | 5.00E+01 | 2.00E+03 |
| Tetrachloroethene | 100 | 4.00E01 | 5.00E+01 | 2.00E+03 |
| Trichloroethane, 1,1,1- | 10 | 4.00E-01 | 5.00E+00 | 2.00E+01 |
| Trichloroethylene | 10 | 4.00E-01 | 5.00E+01 | 2.00E+02 |

Hazardous Substances Found in an Observed Release

| Sample No. | Observed Release Hazardous Substance | Toxicity Value | Persistence Value | Bio-accum. Value | Toxicity/ Persistence/ Bioaccum. Value |
|---|---|---|---|---|---|

- N/A and/or data not specified

SW PATHWAY: OVERLAND/FLOOD HUMAN FOOD CHAIN THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/22/93

| | |
|---|---|
| Toxicity/Persistence/Bioaccumulation Value from Source Hazardous Substances: | 2.00E+03 |
| Toxicity/Persistence/Bioaccumulation Value from Observed Release Hazardous Substances: | 0.00E+00 |
| Toxicity/Persistence/Bioaccumulation Factor: | 2.00E+03 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 10 |

Level I Concentrations

- N/A and/or data not specified

Level II Concentrations

- N/A and/or data not specified

Most Distant Level I Sample

- N/A and/or data not specified

Most Distant Level II Sample

- N/A and/or data not specified

AIR PATHWAY SCORESHEET
Penetrex Processing Inc. - 12/14/93

| AIR MIGRATION PATHWAY Factor Categories & Factors | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Gas Potential to Release | 500 | 0 |
| 2b. Particulate Potential to Release | 500 | 0 |
| 2c. Potential to Release | 500 | 0 |
| 3. Likelihood of Release | 550 | 0 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility | * | 0.00E+00 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 0 |
| Targets | | |
| 7. Nearest Individual | 50 | 2.00E+01 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 5.00E+01 |
| 8d. Population (lines 8a+8b+8c) | ** | 5.00E+01 |
| 9. Resources | 5 | 0.00E+00 |
| 10. Sensitive Environments | | |
| 10a. Actual Contamination | *** | 0.00E+00 |
| 10b. Potential Contamination | *** | 6.25E-01 |
| 10c. Sens. Environments(lines 10a+10b) | *** | 6.25E-01 |
| 11. Targets (lines 7+8d+9+10c) | ** | 7.06E+01 |
| AIR MIGRATION PATHWAY SCORE (Sa) | 100 | 0.00E+00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

SOIL EXPOSURE PATHWAY SCORESHEET
Penetrex Processing Inc. - 12/14/93

| SOIL EXPOSURE PATHWAY<br>Factor Categories & Factors<br>RESIDENT POPULATION THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Exposure | | |
| 1. Likelihood of Exposure | 550 | 550 |
| Waste Characteristics | | |
| 2. Toxicity | * | 1.00E+02 |
| 3. Hazardous Waste Quantity | * | 10 |
| 4. Waste Characteristics | 100 | 6 |
| Targets | | |
| 5. Resident Individual | 50 | 5.00E+01 |
| 6. Resident Population | | |
| 6a. Level I Concentrations | ** | 6.00E+01 |
| 6b. Level II Concentrations | ** | 0.00E+00 |
| 6c. Resident Population (lines 6a+6b) | ** | 6.00E+01 |
| 7. Workers | 15 | 5.00E+00 |
| 8. Resources | 5 | 0.00E+00 |
| 9. Terrestrial Sensitive Environments | *** | 0.00E+00 |
| 10. Targets (lines 5+6c+7+8+9) | ** | 1.15E+02 |
| 11. RESIDENT POPULATION THREAT SCORE | ** | 3.80E+05 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

SOIL EXPOSURE PATHWAY SCORESHEET
Penetrex Processing Inc. - 12/14/93

| SOIL EXPOSURE PATHWAY<br>Factor Categories & Factors<br>NEARBY POPULATION THREAT | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Exposure | | |
| 12. Attractiveness/Accessibility | 100 | 0.00E+00 |
| 13. Area of Contamination | 100 | 0.00E+00 |
| 14. Likelihood of Exposure | 500 | 0.00E+00 |
| Waste Characteristics | | |
| 15. Toxicity | * | 0.00E+00 |
| 16. Hazardous Waste Quantity | * | 0 |
| 17. Waste Characteristics | 100 | 0 |
| Targets | | |
| 18. Nearby Individual | 1 | 0.00E+00 |
| 19. Population Within 1 Mile | ** | 7.00E+00 |
| 20. Targets (lines 18+19) | ** | 7.00E+00 |
| 21. NEARBY POPULATION THREAT SCORE | ** | 0.00E+00 |
| SOIL EXPOSURE PATHWAY SCORE (Ss) | 100 | 4.60 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE
Penetrex Processing Inc. - 10/19/93

Likelihood of Exposure

| No. | Source ID | Level of Contamination |
|---|---|---|
| 1 | soil | Level I |
| 2 | | Level I |

Likelihood of Exposure Factor: 550

| Source No. | Hazardous Substance | Depth (ft.) | Concent. | Cancer | RFD | Units |
|---|---|---|---|---|---|---|
| 1 | Dichloroethane, 1,1- | > 2 | 1.3E+01 | 0.0E+00 | 0.0E+00 | ppm |
| 1 | Dichloroethylene, cis-1,2- | < 2 | 4.7E+00 | 0.0E+00 | 5.8E+03 | ppm |
| 1 | Dichloroethylene, trans-1,2- | < 2 | 4.7E+00 | 0.0E+00 | 1.2E+04 | ppm |
| 1 | Tetrachloroethene | < 2 | 8.3E+02 | 1.1E+01 | 5.8E+03 | ppm |
| 1 | Trichloroethylene | < 2 | 5.0E+01 | 5.3E+01 | 0.0E+00 | ppm |
| 2 | Dichloroethylene, cis-1,2- | < 2 | 1.3E+01 | 0.0E+00 | 5.8E+03 | ppm |
| 2 | Dichloroethylene, trans-1,2- | < 2 | 1.3E+01 | 0.0E+00 | 1.2E+04 | ppm |
| 2 | Tetrachloroethene | < 2 | 1.2E+03 | 1.1E+01 | 5.8E+03 | ppm |
| 2 | Trichloroethane, 1,1,1- | < 2 | 0.0E+00 | 0.0E+00 | 5.2E+04 | ppm |
| 2 | Trichloroethylene | < 2 | 0.0E+00 | 5.3E+01 | 0.0E+00 | ppm |

Documentation for Source soil, Contaminants:

Groundwater analyses identified the following chlorinated compounds:
1,2-dichloroethylene 3300 ug/l
1,1,1-trichloroethane 910 ug/l trichloroethylene 590 ug/l
tetrachloroethylene 920 ug/l

Reference: 1 and 7

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/19/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value |
|---|---|
| Dichloroethylene, cis-1,2- | 100 |
| Dichloroethylene, trans-1,2- | 100 |
| Tetrachloroethene | 100 |
| Trichloroethylene | 10 |

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS
Penetrex Processing Inc. - 10/19/93

Source: 2

Source Hazardous Waste Quantity Value: 0.00

| Hazardous Substance | Toxicity Value |
|---|---|
| Dichloroethylene, cis-1,2- | 100 |
| Dichloroethylene, trans-1,2- | 100 |
| Tetrachloroethene | 100 |
| Trichloroethane, 1,1,1- | 10 |
| Trichloroethylene | 10 |

SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS

Penetrex Processing Inc. - 10/19/93

| | |
|---|---|
| Toxicity Factor: | 1.00E+02 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 6 |

Targets

Level I Population: 6.0 Value: 60.00

Documentation for Level I Population:

Soil sample collected from on-site dry well identified concentrations of chlorinated compounds above NYSDEC soil cleanup objectives for the protection of groundwater. Groundwater has been impacted. Two private residences border the site and are within 200 ft of the dry wells. A total population of 6 was scored by assuming three individuals per household.

Reference: 1

Level II Population: 0.0 Value: 0.00

Workers: 6.0 Value: 5.00

Documentation for Workers:

There are currently two active businesses at the site, an automotive repair shop and a woodworking shop. Exact number of employees is unknown, (assumed three workers per business).

Reference: 1

Resident Individual: Level I Value: 50.00

Resources: NO Value: 0.00

Documentation for Resources:

No resources identified.

Reference: 1

| Terrestial Sensitive Environment | Value |
|---|---|
| - N/A and/or data not specified | |

Terrestrial Sensitive Environments Factor: 0.00

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT LIKELIHOOD OF EXPOSURE
Penetrex Processing Inc. - 10/19/93

Likelihood of Exposure

| No. | Source ID | Level of Contamination | Attractiveness/ Accessibility | Area of Contam. (sq. feet) |
|---|---|---|---|---|
| - N/A and/or data not specified | | | | |

Highest Attractiveness/Accessibility Value: 0
Sum of Eligible Areas Of Contamination (sq. feet): 0
Area of Contamination Value: 0

Likelihood of Exposure Factor Category: 0

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value |
|---|---|
| Dichloroethylene, cis-1,2- | 100 |
| Dichloroethylene, trans-1,2- | 100 |
| Tetrachloroethene | 100 |
| Trichloroethylene | 10 |

Source: 2

Source Hazardous Waste Quantity Value: 0.00

| Hazardous Substance | Toxicity Value |
|---|---|
| Dichloroethylene, cis-1,2- | 100 |
| Dichloroethylene, trans-1,2- | 100 |
| Tetrachloroethene | 100 |
| Trichloroethane, 1,1,1- | 10 |
| Trichloroethylene | 10 |

| | |
|---|---|
| Toxicity Factor: | 0.00E+00 |
| Sum of Source Hazardous Waste Quantity Values: | 0.00E+00 |
| Hazardous Waste Quantity Factor: | 0 |
| Waste Characteristics Factor Category: | 0 |

Targets

Level I Population: 393.0 Value: 0.00

doc here

Level II Population: 393.0 Value: 1.30

doc here

Workers: 3050.0 Value: 3.30

doc here

Documentation for Population > 0 to 1/4 mile Distance Category:

Population data estimated using LMS GIS.

Reference: 22

Documentation for Population > 1/4 to 1/2 mile Distance Category:

Reference: 22

Documentation for Population > 1/2 to 1 mile Distance Category:

Reference: 22

AIR PATHWAY SCORESHEET
Penetrex Processing Inc. - 10/22/93

| AIR MIGRATION PATHWAY Factor Categories & Factors | Maximum Value | Value Assigned |
|---|---|---|
| Likelihood of Release | | |
| 1. Observed Release | 550 | 0 |
| 2. Potential to Release | | |
| 2a. Gas Potential to Release | 500 | 0 |
| 2b. Particulate Potential to Release | 500 | 0 |
| 2c. Potential to Release | 500 | 0 |
| 3. Likelihood of Release | 550 | 0 |
| Waste Characteristics | | |
| 4. Toxicity/Mobility | * | 0.00E+00 |
| 5. Hazardous Waste Quantity | * | 10 |
| 6. Waste Characteristics | 100 | 0 |
| Targets | | |
| 7. Nearest Individual | 50 | 2.00E+01 |
| 8. Population | | |
| 8a. Level I Concentrations | ** | 0.00E+00 |
| 8b. Level II Concentrations | ** | 0.00E+00 |
| 8c. Potential Contamination | ** | 5.00E+01 |
| 8d. Population (lines 8a+8b+8c) | ** | 5.00E+01 |
| 9. Resources | 5 | 0.00E+00 |
| 10. Sensitive Environments | | |
| 10a. Actual Contamination | *** | 0.00E+00 |
| 10b. Potential Contamination | *** | 6.25E-01 |
| 10c. Sens. Environments(lines 10a+10b) | *** | 6.25E-01 |
| 11. Targets (lines 7+8d+9+10c) | ** | 7.06E+01 |
| AIR MIGRATION PATHWAY SCORE (Sa) | 100 | 0.00E+00 |

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

AIR PATHWAY LIKELIHOOD OF RELEASE

Penetrex Processing Inc. - 10/22/93

OBSERVED RELEASE

| No. | Sample ID | Distance (miles) | Level of Contamination |
|---|---|---|---|

- N/A and/or data not specified

Observed Release Factor: 0

Gas Migration Potential

GAS POTENTIAL TO RELEASE

| Source ID | Source Type | Gas Contain. Value (A) | Gas Source Type Value (B) | Gas Migrtn. Potent. Value (C) | Sum (B+C) | Gas Potential to Rel. Value A(B+C) |
|---|---|---|---|---|---|---|
| - N/A and/or data not specified | | | | | | |

Gas Potential to Release Factor: 0

Documentation for Gas Containment, Source soil:

Contaminated soil is paved over or contained in drywells with lids.

Reference:

Documentation for Source Type, Source soil:

Soil samples collected during Phase II investigations of May 1989 and November 1989 identified chlorinated compounds as follows:
Tetrachloroethylene 1200 mg\kg
Trichloroethylene 86 mg\kg
1,2-Dichloroethylene 26 mg\kg Source (area of observed contamination) is limited to immediate area of drywells because the majority of the site is covered with asphalt.

Reference: 1,6,7

Source: soil

| Gaseous Hazardous Substance | Hazardous Substance Gas Migration Potential Value |
|---|---|
| Dichloroethane, 1,1- | 17 |
| Dichloroethylene, cis-1,2- | 17 |
| Dichloroethylene, trans-1,2- | 17 |
| Tetrachloroethene | 17 |
| Trichloroethane, 1,1,1- | 17 |
| Trichloroethylene | 17 |

Average of Gas Migration Potential Value for 3 Hazardous Substances: 17.000

Gas Migration Potential Value From Table 6-7: 17

Source:

| Gaseous Hazardous Substance | Hazardous Substance Gas Migration Potential Value |
|---|---|
| Dichloroethylene, cis-1,2- | 17 |
| Dichloroethylene, trans-1,2- | 17 |
| Tetrachloroethene | 17 |
| Trichloroethane, 1,1,1- | 17 |
| Trichloroethylene | 17 |

Average of Gas Migration Potential Value for 3 Hazardous Substances: 17.000

Gas Migration Potential Value From Table 6-7: 17

AIR PATHWAY LIKELIHOOD OF RELEASE
Penetrex Processing Inc. - 10/22/93

Particulate Migration Potential

PARTICULATE POTENTIAL TO RELEASE

| Source ID | Source Type | Partic. Contain. Value (A) | Partic. Source Type Value (B) | Partic. Migrtn. Potent. Value (C) | Sum (B+C) | Partic. Potential to Rel. Value A(B+C) |
|---|---|---|---|---|---|---|
| - N/A and/or data not specified | | | | | | |

Particulate Potential to Release Factor: 0

Documentation for Particulate Containment, Source soil:

Asphalt cover resistant to gas migration.

Reference: 1

Documentation for Source Type, Source soil:

Soil samples collected during Phase II investigations of May 1989 and November 1989 identified chlorinated compounds as follows:
Tetrachloroethylene 1200 mg\kg
Trichloroethylene 86 mg\kg
1,2-Dichloroethylene 26 mg\kg Source (area of observed contamination) is limited to immediate area of drywells because the majority of the site is covered with asphalt.

Reference: 1,6,7

Documentation for Particulate Migration Potential:

Assigned the factor value using HRS Figure 6-2.

Reference: 2

Source: soil

Particulate Hazardous Substance

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Source:

Particulate Hazardous Substance

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AIR PATHWAY WASTE CHARACTERISTICS

Penetrex Processing Inc. - 10/22/93

Source: 1 soil

Source Hazardous Waste Quantity Value: 10.30

| Hazardous Substance | Toxicity Value | Gas Mobility Value | Particulate Mobility Value | Toxicity/ Mobility Value |
|---|---|---|---|---|
| Dichloroethane, 1,1- | 10 | NA | NA | 0.00E+00 |
| Dichloroethylene, cis-1,2- | 100 | NA | NA | 0.00E+00 |
| Dichloroethylene, trans-1,2- | 100 | NA | NA | 0.00E+00 |
| Tetrachloroethene | 100 | NA | NA | 0.00E+00 |
| Trichloroethane, 1,1,1- | 10 | NA | NA | 0.00E+00 |
| Trichloroethylene | 10 | NA | NA | 0.00E+00 |

Hazardous Substances Found in an Observed Release

| Sample ID | Observed Release Hazardous Substance | Particulate Toxicity/ Mobility Value | Gas Toxicity/ Mobility Value |
|---|---|---|---|

- N/A and/or data not specified

Documentation for Particulate Mobility:

Assigned value using HRS Figure 6-3.

Reference: 2

| | |
|---|---|
| Toxicity/Mobility Value from Source Hazardous Substances: | 0.00E+00 |
| Toxicity/Mobility Value from Observed Release Hazardous Substances: | 0.00E+00 |
| Toxicity/Mobility Factor: | 0.00E+00 |
| Sum of Source Hazardous Waste Quantity Values: | 1.03E+01 |
| Hazardous Waste Quantity Factor: | 10 |
| Waste Characteristics Factor Category: | 0 |

Actual Contamination

| No. | Sample ID | Distance (miles) | Level of Contamination |
|---|---|---|---|

- N/A and/or data not specified

Potential Contamination

| Distance Categories Subject to Potential Contamination | Population | Value |
|---|---|---|
| Onsite | 6.0 | 0.4000 |
| > 0 to 1/4 mile | 393.0 | 13.1000 |
| > 1/4 to 1/2 mile | 1339.0 | 8.8000 |
| > 1/2 to 1 mile | 3050.0 | 8.3000 |
| > 1 to 2 miles | 17115.0 | 8.3000 |
| > 2 to 3 miles | 17894.0 | 3.8000 |
| > 3 to 4 miles | 42733.0 | 7.3000 |
| | Potential Contaminantion Factor: | 50.0000 |

## Nearest Individual Factor

Level of Contamination: Potential
Distance in miles: 0 to 1/8

Nearest Individual Value: 20

Documentation for Nearest Individual:

Building on site is partially occupied with a automotive repair shop and a wood working shop.

Reference: 1

## Resources

Resource Use: NO

Resource Value: 0

Documentation for Resources:

No resources identified.

Reference:

Actual Contamination, Sensitive Environments

| Sensitive Environment | Distance (miles) | Sensitive Environment Value |
|---|---|---|
| - N/A and/or data not specified | | |

Actual Contamination, Wetlands

| Distance Category | Wetland Acreage | Wetland Acreage Value |
|---|---|---|
| - N/A and/or data not specified | | |

Sensitive Environments Actual Contamination Factor: 0.000
(Sum of Sensitive Environments + Wetlands Values)

Potential Contamination, Sensitive Environments

| Sensitive Environment | Distance (miles) | Sensitive Environment Value | Distance Weight | Weighted Value/10 |
|---|---|---|---|---|
| - N/A and/or data not specified | | | | |

Potential Contamination, Wetlands

| Distance Category | Wetland Acreage | Wetland Acreage Value | Distance Weight | Weighted Value/10 |
|---|---|---|---|---|
| > 0 to 1/4 mile | 10.0 | 25.0 | 0.2500 | 0.625 |

Total Wetland Acreage: 10.0

Sum of Wetland Weighted Acreage Values/10: 0.625

==========

Sensitive Environment Potential Contamination Factor: 0.625