02-8803-69-SI
REV. NO. 0

FINAL DRAFT
SITE INSPECTION REPORT
CENTRAL RAILROAD OF NEW JERSEY
ELIZABETH, NEW JERSEY

PREPARED UNDER
TECHNICAL DIRECTIVE DOCUMENT NO. 02-8803-69
CONTRACT NO. 68-01-7346

FOR THE

ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

MAY 24, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY:

Diane Trube

DIANE TRUBE
PROJECT MANAGER

REVIEWED/APPROVED BY:

Diane Heim

DAVID HEIM
SITE MANAGER

Ronald M Naman

RONALD M. NAMAN
FIT OFFICE MANAGER

SITE NAME:	Central Railroad of New Jersey Trumbull Street	**EPA ID NO.:**	NJD981557895
ADDRESS:	Elizabeth, New Jersey	**LATITUDE:**	40° 39' 28"N
		LONGITUDE:	074° 10' 56"W
		LOT:	1380
		BLOCK:	1

1.0 SITE SUMMARY

The Central Railroad of New Jersey Site is located in an industrial section of Elizabeth, Union County, New Jersey. The population residing within 1 mile of the site is 20,380, and 155,534 people live within 3 miles. The 85-acre site is an inactive train yard which serviced passenger and freight train engines and cars from 1901 until 1988. Central Railroad of New Jersey, CONRAIL, and New Jersey Transit have operated at the site, which is owned by CONRAIL. The site is the most recently active remaining portion of the larger CONRAIL Elizabethport Yard, which consisted of several hundred acres. The other portions of the site have been leased to various tenants, including the Armin Poly-Film Co. and Kawasaki Kisen, Kaisha, Ltd. (K-Line), a trucking firm. The site is not secured, and there is evidence of uncontrolled dumping on site, such as drums, tires, and other debris.

The New Jersey Department of Environmental Protection (NJDEP) has conducted a number of investigations of this site. It has reported that the ground was saturated with oil in many areas, and drums, of unknown contents, were stored and disposed of haphazardly about the site. A large quantity of oil was observed in a gallery below the powerhouse on site.

CONRAIL has contracted with O.H. Materials, Inc. to perform a site assessment and determine what remedial steps are necessary for CONRAIL to lease this portion of its property.

NUS Corporation Region 2 FIT conducted an on-site reconnaissance on November 14, 1988, and a site inspection on December 8, 1988. Results of sampling indicate the presence of a number of semi-volatile organic compounds in soils in concentrations of up to 33,000 ug/kg. These results are discussed in more detail in Section 4.0 of this report.

Ref. Nos. 1, 7, 8, 12 , 13, 14, 15, 16, 17, 23

2.0 SITE INSPECTION NARRATIVE

2.1 EXISTING ANALYTICAL DATA

On September 2, 1987, the Bureau of Planning and Assessment of the NJDEP conducted a sampling event at the CONRAIL Elizabethport Yard. This sampling included nine samples from the area with which this report is concerned. Three of these were groundwater samples, and six were soil samples. Above-normal concentrations of 8 inorganic Target Compound List (TCL) substances were detected, and 24 organic TCL substances were found. The highest concentrations of these compounds which were detected on site are shown in Figure 1. Higher concentrations of TCL substances detected tended to be in locations nearest the railroad tracks and repair areas, rather than downgradient in groundwater or in soils near fuel or waste tanks.

Ref. Nos. 18, 19

TABLE 1

HIGHEST CONCENTRATIONS OF TCL SUBSTANCES DETECTED BY NJDEP AT THE CENTRAL RAILROAD OF NEW JERSEY SITE IN ELIZABETH, NEW JERSEY.

A. Inorganics

Substance	Concentration	Units
Antimony	180	ug/L
Arsenic	478.2	mg/kg
Cadmium	8.5	mg/kg
Copper	751.6	mg/kg
Lead	12624.2	mg/kg
Selenium	116.1	mg/kg
Silver	167	ug/L
Thallium	50	ug/L
Zinc	11,930	mg/kg

B. Organics

Substances	Concentration	Units
Benzene	26	ug/kg
Benzo(a) anthracene	2500	ug/kg
Benzo(b)fluoranthene	5800	ug/kg
Benzo(k)fluoranthene	2600	ug/kg
Benzo(g, h, i)perylene	870	ug/kg
Benzo(a)pyrene	3300	ug/kg
Bis(2-ethylhexyl)phthalate	3000	ug/kg
Chrysene	4000	ug/kg
4, 4'-DDT	715	ug/kg
3, 3'-Dichlorobenzidine	7200	ug/kg
4,6-Dinitro-2-methylphenol	22,000	ug/kg
2,6-Dinitrotoluene	27,000	ug/kg
Fluoranthene	25,000	ug/kg
Fluorene	32,000	ug/kg
Indeno(1, 2, 3-cd)pyrene	780	ug/kg
Isophorone	780	ug/kg

FIGURE 1 (continued)

B. Organics

Substance	Concentration	Units
Naphthalene	69,000	ug/kg
N-nitrosodiphenylamine	200,000	ug/kg
Pentachlorophenol	8000	ug/kg
Phenanthrene	64,000	ug/kg
Pyrene	18,000	ug/kg
Tetrachloroethylene	14	ug/kg
1,1,1-Trichloroethane	6.8	ug/kg
Toluene	570	ug/kg

2.2 WASTE SOURCE DESCRIPTION

The Central Railroad of New Jersey Site was used for the repair and cleaning of railroad cars and engines from 1901 until 1988. Any wastes would have been generated from spillage of fuel, lubricants, or cleaning solutions used on the cars. The 85-acre site has five buildings, and a rail overpass, which is a kind of ramp. A number of train tracks cross the site. There appears to have been a lot of spillage near the tracks, as the soil surface is discolored. There are four 10,000-gallon aboveground storage tanks, surrounded by a dike, and one 40,000-gallon fuel oil tank which is not diked. At the time of the NUS Corporation Region 2 FIT site inspection, contents of these tanks were unknown. The tanks which are inside the dike are labeled to contain lubricating oils, diesel fuel, and wastewater. There is evidence of unauthorized dumping on the site, such as over 60 drums in various states of integrity, and many plastic bags of wastes.

Ref. Nos. 8, 12, 16, 17

2.3 GROUNDWATER ROUTE

Rocks of the Brunswick Formation underlie this part of Union County. It is predominantly a soft red shale, with a strike of north 30° east. Groundwater flows in the joints and fractures of the formation which run mostly in a direction parallel to the strike. This bedrock is found at a depth of approximately 90 feet below the site.

The Brunswick Formation is the most important aquifer in Union County, and both artesian and unconfined water table conditions exist. Above the Brunswick Formation lies a ground moraine of unstratified drift. It consists of a heterogenous mixture of clay, silt, sand, gravel, cobbles, and boulders deposited by glaciers. This layer is estimated to have an average hydraulic conductivity of 10^{-7} cm/sec. The drift and the Brunswick Formation are hydraulically connected, and the Brunswick is recharged by percolation of water through the ground moraine. At the time of the NUS Corporation Region 2 FIT site inspection, the water table was 3 feet below ground surface, and there was ponded water in a low-lying area on the southern portion of the site.

The major purveyors of drinking water in the vicinity of the site are the City of Elizabeth, Elizabethtown Water Company, the City of Newark, and the City of New York. The City of Elizabeth does not operate any public supply wells, but purchases water from the City of Newark and the Elizabethtown Water Company. The City of Newark derives its water from a system of reservoirs in Passaic and Sussex Counties. The Elizabethtown Water Company serves a large part of Union County, providing a mixture of surface water and groundwater. It operates wells which tap into the Brunswick Formation, but are located greater than 3 miles from the Central Railroad of New Jersey Site. Drinking water on Staten Island is provided by the City of New York, which operates a system of reservoirs upstate.

There are four industrial wells within 3 miles of the site, all of which draw water from the Brunswick Formation. These are operated by the Exxon Corporation, Decorator Plastics Co., and Hayward Manufacturing, Inc. The nearest of these, Hayward Manufacturing, is located 1. 3 miles north of the site. The mean annual precipitation is 44 inches in this area, and the mean annual lake evaporation is 32 inches, resulting in a net annual precipitation of 12 inches. During the NUS Region 2 FIT site inspection of December 8, 1988, five groundwater samples were collected. Analytical results of this sampling are discussed in Section 4.0 of this report.

Ref. Nos. 2, 3, 5, 6, 8, 9, 11, 20, 21

2.4 SURFACE WATER ROUTE

The 8.5-acre site is virtually flat, with a slope toward the south of 1 to 3 percent. There was some water ponded on the southern portion of the site at the time of the NUS Corporation Region 2 FIT site inspection conducted on December 8, 1988. A sample of this ponded water was collected. NJDEP reported a large quantity of oil in a gallery beneath the powerhouse on site. NUS Corporation Region 2 FIT personnel found the gallery flooded with water, which was sampled. Results of the analyses of these samples are discussed in Section 4.0 of this report.

Approximately 1500 feet southeast of the site is the Newark Bay, which is used for commercial shipping purposes. Between the site and Newark Bay is a parcel of land occupied by the trucking firm, K-Line. This land appears to be flat, and is entirely paved. K-Line also leases the area, also paved, directly to the north of the site. The site is bounded on the south by a manufacturing facility of the Singer Corporation. There appears to be no overland pathway for contaminants to migrate from the site to surface waters. The 1-year, 24-hour rainfall is 3 inches. There are no endangered species critical habitats within 3 miles of the site.

Ref. Nos. 7, 8, 9, 13, 22

2.5 AIR ROUTE

There are no national historic sites within 1 mile of the site. No background readings were detected on an Organic Vapor Analyzer (OVA) or HNu photoionization detector (HNu) during the NUS Corporation Region 2 FIT site inspection of December 8, 1988. Above-background readings were detected at two locations on site. At the monitoring well near the sanding tower, the OVA read 20 ppm, and the HNu 10 ppm above background at the outlet of a pump used to evacuate the well. When the well was sampled, the OVA read 4 ppm above background at the top of the well casing.

At the location of the duplicate samples NY68-S2 and NY68-S3, the OVA registered 5 ppm above background at the soil surface when the soil was disturbed. At no time during the site inspection were there readings above background in the breathing zone.

Ref. Nos. 4, 8

2.6 ACTUAL HAZARDOUS CONDITIONS

No other actual hazardous conditions pertaining to human or environmental contamination have been documented. Specifically:

- Contamination has not been documented either in a food chain leading to humans or in organisms directly consumed by humans.
- There have been no documented incidents of damage to flora (e.g., stressed vegetation) or fauna (e.g., fish kill) that can be attributed to hazardous materials at the facility.
- There is no documented contamination of a sewer or storm drain.
- There is no direct evidence of release of a substance of concern from the facility to the groundwater.
- There is no threat of explosion or fire hazard on site.

Ref. Nos. 8, 12, 16.

3.0 MAPS AND PHOTOS

CENTRAL RAILROAD OF NEW JERSEY
ELIZABETH , NEW JERSEY

Figure 1: Site Location Map
Figure 2: Site Map
Figure 3: Sample Location Map
Exhibit A: Photograph Log

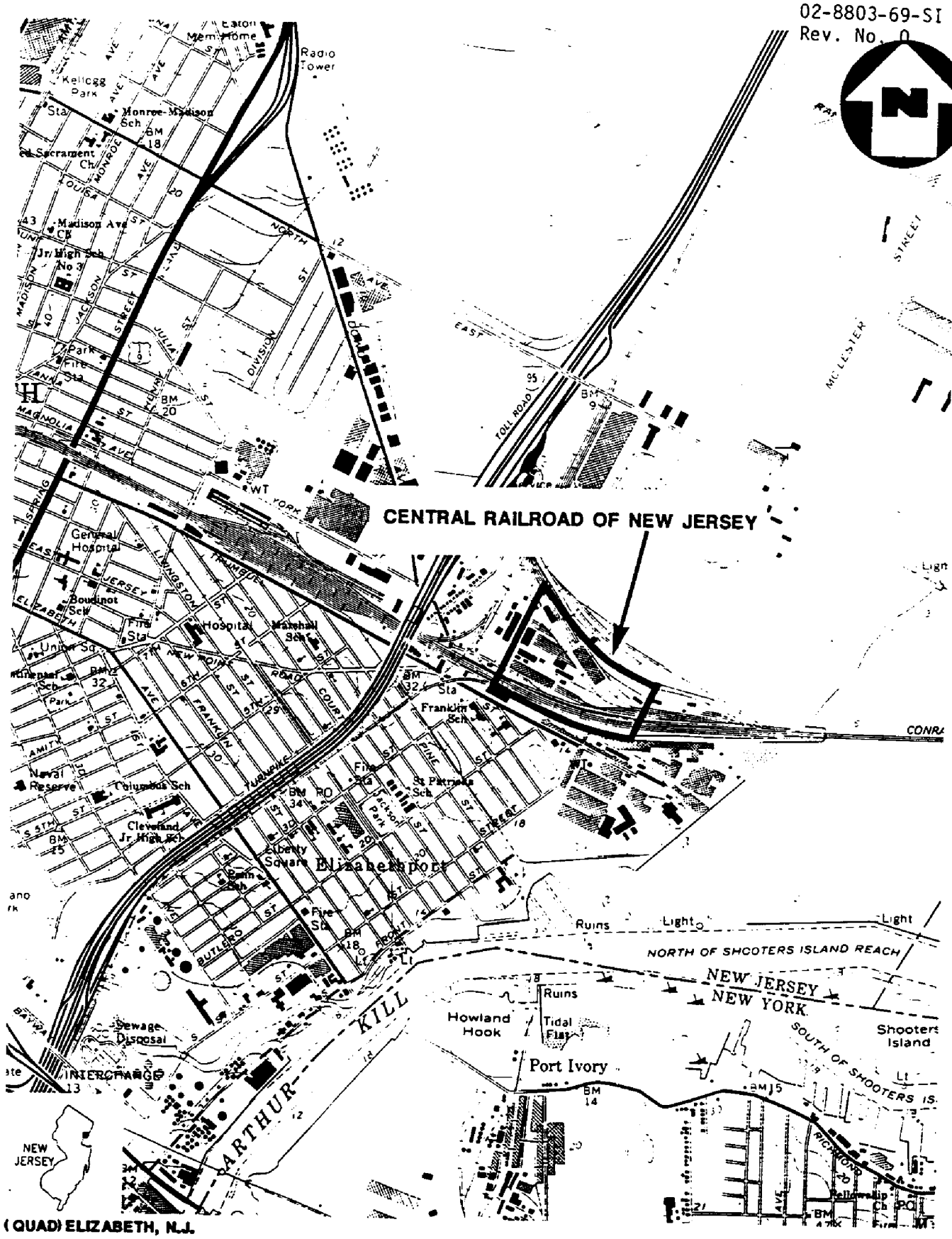

FIGURE 1

SITE LOCATION MAP

CENTRAL RAILROAD OF NEW JERSEY, ELIZABETH, N.J.

SCALE 1" = 2000'

NUS CORPORATION

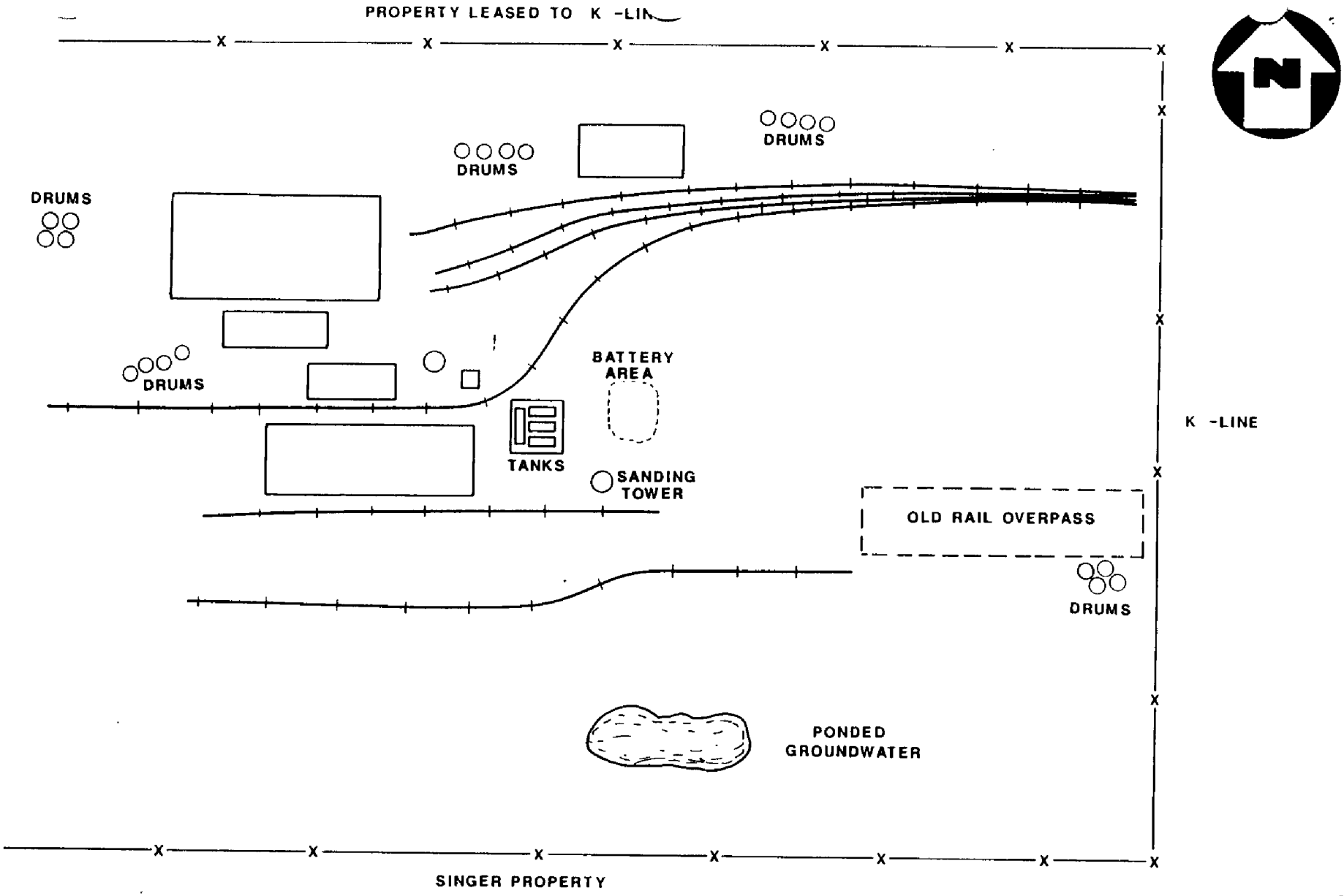

FIGURE 2

SITE MAP

CENTRAL RAILROAD OF N.J., ELIZABETH, N.J.

(NOT TO SCALE)

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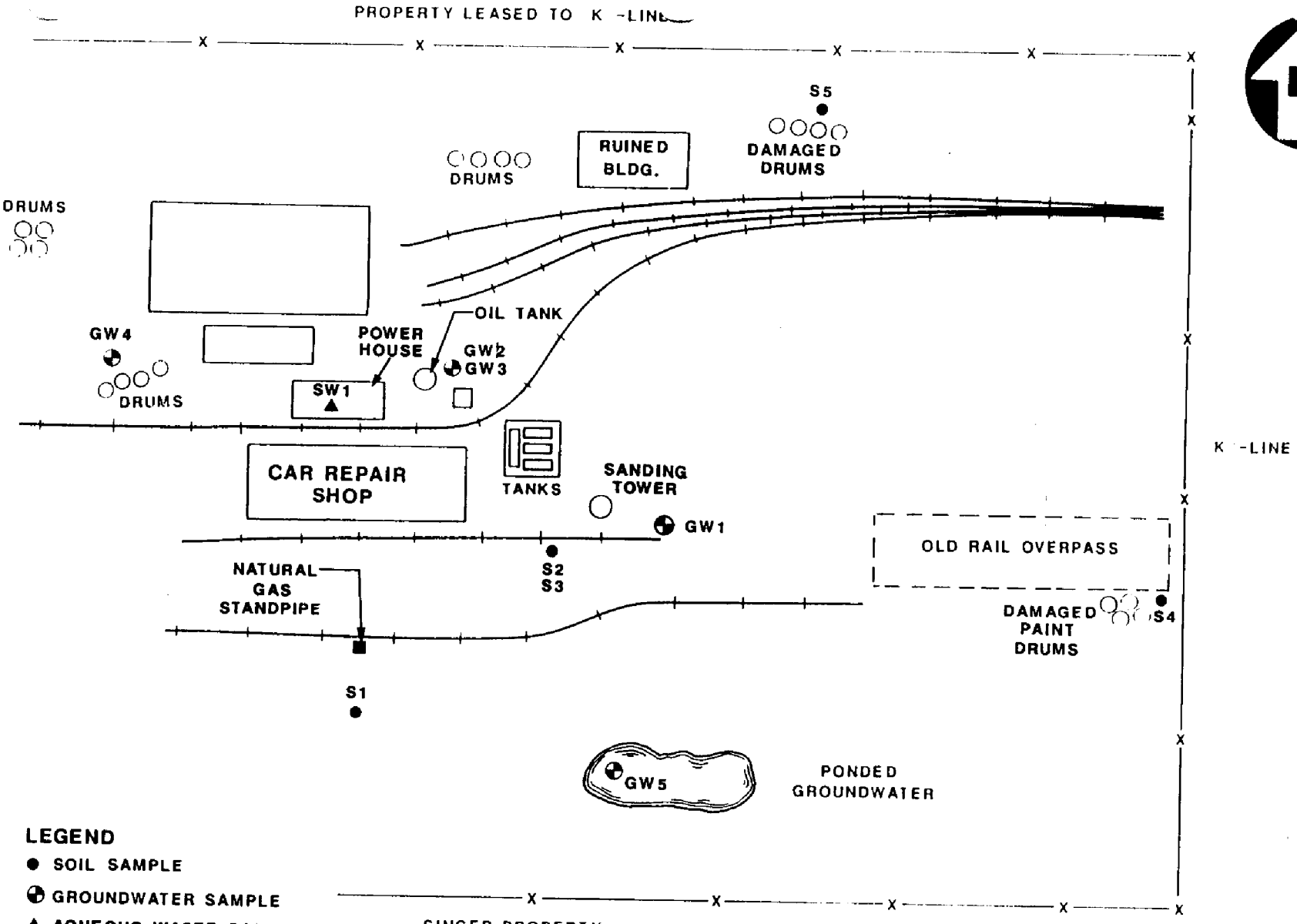

LEGEND

- ● SOIL SAMPLE
- ◓ GROUNDWATER SAMPLE
- ▲ AQUEOUS WASTE SAMPLE

* ALL SAMPLES PRECEDED BY NJ68

FIGURE 3

SAMPLE LOCATION MAP

CENTRAL RAILROAD OF N.J., ELIZABETH, N.J.

(NOT TO SCALE)

NUS CORPORATION

02-8803-69-SI
Rev. No. 0

TIERRA-B-017468

4.0 SITE INSPECTION SAMPLE RESULTS

NUS Corporation Region 2 FIT personnel conducted a site inspection on December 8, 1988, during which five soil samples and six aqueous samples were collected. These samples were subsequently analyzed to determine whether any Target Compound List (TCL) substances were present on site and to assess whether any possibly present TCL substances could migrate off site. Sample locations are shown in Figure 3, Section 3.0.

Inorganic analysis revealed that all parameters detected in soil samples were within ranges of concentrations to be expected in natural soils. There were no inorganic substances detected in aqueous samples above normal concentrations. All inorganic parameters measured were widespread throughout the site, and many were detected in a background soil sample, NJ68-S1.

Organic analysis revealed the presence of trans-1, 2-dichloroethylene at a concentration of 15 ug/L in sample NJ68-SW1, collected from the flooded basement of the powerhouse. The sample NJ68-GW1, collected from a monitoring well near the sanding tower, contained 10 ug/L of 2-methylnaphthalene. No other TCL compounds were detected in the aqueous samples collected. The soil samples collected during the site inspection contained 14 polyaromatic TCL compounds ranging from 16 ug/kg to 33,000 ug/kg. The results of the soil analyses are summarized in Table 2. The highest concentrations of organics occurred not in the oil-stained areas near the railroad tracks, but in the samples NJ68-S4 and NJ68-S5. These samples were collected near areas of apparently unauthorized dumping of drums and other garbage.
Ref. Nos. 8, 10

5.0 CONCLUSIONS AND RECOMMENDATIONS

The organic TCL substances detected in aqueous samples collected at the Central Railroad of New Jersey Site were detected in very low concentrations. There are only industrial uses of groundwater in the area. The groundwater that is used near the site is drawn from the Brunswick Formation, which lies 90 feet below ground surface in this region.

The site is not secured, and there is evidence of unauthorized persons on site, but it is located in an industrial section of Elizabeth which sees little traffic by the general public. All of the organic TCL compounds detected in the soils on site are aromatic hydrocarbons, which were probably present in the various fuel and lubricating oils used on site.

The owner of the site, CONRAIL, has contracted with O.H. Materials, Inc. to further characterize the site, and perform any remediation necessary to allow CONRAIL to lease the site.

In light of the lack of contamination migration targets, and the actions of the site owner, no further remedial action is recommended.

Ref. Nos. 2, 3, 5, 6, 8, 9, 10, 11, 23

Central Railroad of New Jersey
2-330 North Avenue East
Elizabeth/Union County
New Jersey

Central Railroad of New Jersey (CRRNJ) is located on a 85.4 acre parcel of land within Elizabeth City, Union County, New Jersey. The site is an active trainyard for most of the site. However, certain areas of the site are comprised of vacant, partially demolished buildings with abandoned drums strewn about the property.

CRRNJ is currently owned by Central Jersey Industries and is not associated with the Conrail Facility, adjacent to this site. The source and type of substances that are located on site are unknown. A windshield survey by DEP personnel on April 3, 1986 verified approximately 400-600 drums and 150-200 gas cylinders that are abandoned.

CRRNJ site has a very close proximity to a tidal area of Newark Bay and Great Ditch. The human population and the environment has a potential for exposure through contamination of the surface waters leading to Newark Bay.

The potential for human exposure and a release to the environment is present. This site should be categorized as a medium priority and in need of further investigation.

Submitted by:

Frank Faranca, HSMS IV

Hrs. Worked: 12

Preliminary Assessment

Central Railroad of New Jersey
2-330 North Avenue East
Elizabeth/Union County
New Jersey

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER:

II. SITE NAME AND LOCATION

01 SITE NAME	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Central Railroad of New Jersey	2-330 North Avenue East

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG. DIST
Elizabeth City	NJ	07201	Union	39	

09 COORDINATES LATITUDE	LONGITUDE	
40° 39' 28.0"	074° 10' 56.0"	LOT: 1380 BLOCK: 1 ACREAGE: 35.450 acres

10 DIRECTIONS TO SITE (Starting from nearest public road):

III. RESPONSIBLE PARTIES

01 OWNER (if known)	02 STREET (Business, mailing, residential)			
Central Railroad of New Jersey	2-330 North Avenue East			
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**	
Elizabeth City	NJ	07201	(201) 622-7711	Attorney for CRRNJ Francis O'Brien
07 OPERATOR (if known and different from owner)	**08 STREET** (Business, mailing, residential)			
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**	
			( )	

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (Month Day Year) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (Month Day Year) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☒ YES ☐ NO DATE 04 03 86 (Month Day Year)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☒ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☒ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
BEGINNING YEAR _____ ENDING YEAR _____ ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Substances are unknown.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Potential hazard unknown.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is assigned, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspection at your discretion) ☐ D. NONE (No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
David Beeman	DEP/Metro	(201) 669-3960

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Frank Faranca	DEP	DHHM/BSA	(609) 984-3013	09 01 86 (Month Day Year)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☐ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☐ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE

(Measures of waste quantities must be independent)

- TONS: 150
- CUBIC YARDS: 150
- NO. OF DRUMS: 600

03 WASTE CHARACTERISTICS (Check all that apply)

- ☐ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☐ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☒ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sampling results, reports)

Attachment B: Memo to File from Janine Tonelli
Attachment C: Field notes from Janine Tonelli

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Ground water contamination can potentially occur because of the unstable containment of waste on site.

(Attachmens B,C)

01 [X] B. SURFACE WATER CONTAMINATION | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Site is located near a tidal area of Newark Bay and Great Ditch. A potential for contamination does exist.

01 [X] C. CONTAMINATION OF AIR | 02 [X] OBSERVED (DATE: 4/3/86) | [ ] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Various chemical odors were detected during a preliminary site inspection.

(Attachments B,)

01 [X] D. FIRE/EXPLOSIVE CONDITIONS | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

150-200 abandoned gas cylinders were observed on site.

Attachments B,C)

[illegible] | [illegible]
03 [X] POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

A potential for direct contact is present because the limits of the site are not fenced in. Access is available through Parcel 113.

(Attachments B,C)

01 [X] F. CONTAMINATION OF SOIL | 02 [X] OBSERVED (DATE: 4/3/86) | [ ] POTENTIAL | [ ] ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

Soil was saturated with oil throughout the active part of the train yard.

(Attachment B)

01 [X] G. DRINKING WATER CONTAMINATION | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

A public supply well and a residential domestic well are located within 2.5 miles of the site. The potential for drinking water contamination does exist.

(Attachment G)

01 [X] H. WORKER EXPOSURE/INJURY | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

A potential for worker exposure is present because the rail yard is active.

01 [X] I. POPULATION EXPOSURE/INJURY | 02 [ ] OBSERVED (DATE: _____) | [X] POTENTIAL | [ ] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ | 04 NARRATIVE DESCRIPTION

A potential for population exposure exists through possible surface water contamination - (Newark Bay used for recreation) and observed contamination of the air.

(Attachments B,G)

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POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER:

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

01 ☒ K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION (Include species if known)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED

The proximity of this site to various surface waters could lead to a potential damaging situation for the aquatic fauna.

01 ☐ L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

01 ☒ M. UNSTABLE CONTAINMENT OF WASTES
(Spills, runoff, standing liquids, leaking drums)
02 ☒ OBSERVED (DATE: 4/3/86) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____
04 NARRATIVE DESCRIPTION

Abandoned, unlabelled and leaking drums were observed. (Attachments B,C)

01 ☐ N. DAMAGE TO OFFSITE PROPERTY
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION
02 ☒ OBSERVED (DATE: 4/3/86) ☐ POTENTIAL ☐ ALLEGED

Abandoned drums and cylinders were observed. (Attachments B,C)

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Attachment B - Memo to file from Janine Tonelli.
Attachment C - Field notes from Janine Tonelli
Attachment G - Well records

EPA FORM 2070-12 (7-81)

44912

MEMO

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO David Longstreet, Chief of Special Projects

FROM Vince Krisak DATE March 24, 1981

SUBJECT Conrail-Elizabeth Port

The Conrail-Elizabeth Port Terminal has been inspected on November 19 and 24, 1980, December 22, 1980 and February 6, 1981. On November 19, 1980 Bureau of Special Project personnel conducted an inspection of the facility for the benefit of the City of Elizabeth Health and Fire Departments Officials. Another inspection was conducted on February 6, 1981 with representatives from the New Jersey Solid Waste Administration, Cancer and Toxic Substances and Division of Water Resources. The purpose of the inspections was to have the various representatives determine the problem areas which would come under the jurisdiction of their respective divisions.

The Elizabeth Port facility is the largest terminal in the State of New Jersey. The facility encompasses an area of approximately 300 to 500 acres. There is an engine repair shop, car repair shop and a carpenter shop.

The car repair shop is 700 feet long by 100 feet wide and can service 23 locomotives. All materials used for the maintenance of the engines which include acids, solvents, detergents, degreasers, oil and hydraulic fluid are washed into defunct work basins and steam line tunnels. The steam line tunnels are flooded due to breaks in water lines. There is also a considerable amount of emulsified oil in the tunnels. The steam tunnels originate at the defunct power house and transverse the property to the various shops. There is several thousand feet of tunnels and all those that were observed contained a considerable amount of oil and water.

The area of the engine repair shop which is used to drain the oil and other liquids from the engines drain into a defunct drop table basin and is eventually pumped to the area where the engines are refueled and washed. A series of submersible pumps then transports the waste oil and water to a drainage ditch which empties into an unlined pit which is used as an oil water separater. The separater has risen past its banks on several occasions and has heavily contaminated the soil. The soil in the refueling area has also been heavily contaminated due to careless refueling practices. There have been no hydrogeological studies conducted in the yard to determine the extent of contamination. During the inspection of February 6, it was noted that a contractor was removing contaminated soil from the refueling area. In one section of the drainage ditch the contractor punctured the clay layer and water and oil was flowing into this area. There is also a sanitary sewer line approximately 30 feet in depth which transverses Conrail property.

The area surrounding the fuel oil storage tanks is heavily contaminated due to spills created while delivering fuel oil.

All of the areas where products are stored in 55 gallon drums are contaminated due to improper storage and leaking containers.

There is a marsh area about 300 yards from the separater pit which is heavily contaminated with oil. The origin of the oil may be from the separater pit.

The old oil house near the entrance to the yard stores gasoline, kerosene, lube oil and propane. The basement of the building contains a considerable amount of oil and water.

About three-fourths of the yard is used as an illegal landfill. The landfill consists of residential, commercial and industrial type waste. There are areas where drums of various chemicals and oils have been deposited. The drums range from full to empty and are in various stages of decomposition. Contaminated debris is strewn throughout the yard. Due to the immense proportions of the amounts of debris it is impossible to determine the cubic yards of material disposal in the yard.

The Flexi-Flow area of the yard is an area that is used for the transfer of chemicals. Rail tank cars are stored on two sections of tracks. Tank trucks are used to transfer various chemicals to and from the rail tank cars. A wide variety of hazardous toxic and non-toxic chemicals are transfered in this area. A considerable amount of various chemicals has been spilled in the Flexi-Flow area from overfills, leaking valves and gaskets and careless transfer procedures. Preliminary tests on the spilled substances revealed various concentration of hazardous substances. The drainage outfall for this section has not been determined but runoff has entered the Great Ditch which enters the Hudson River. There have been no hydrogeological studies to determine the extent of contamination to the groundwater.

The Elizabeth Port facility due to its immense size and usage has a variety of environmental problems which should be eliminated to reduce further contamination of the area.

Vince Krisak

VK:kas
Attachment - Attendance List

M E M O R A N D U M

July 28, 1980

To: File

From: Mr. David Longstreet, Chief Special Projects

Subject: Conrail, Elizabeth Port

A joint inspection was made of the subject facility on June 16, 1980. Those in attendance were:

David Longstreet, NJDEP
Frank Magenaro, Conrail
D.W. Jaklitsch, USCG

The Facility:

This is a very large facility, a few thousand acres in area (exact size not determined). Part of the property was sold or leased to various firms.

The facility contains a car shop, maintenance of way, Conrail service school, locomotive shop, Flex-I-Flow transfer, tank car transfer, signal department, and others. The Flex-I-Flow terminal is under Mr. Bill Coke, Terminal Superintendent. The Flex-I-Flow system transfers day cargo (mostly beaded and powdered forms of PVC by suction).

The stores area uses freight cars and freight trucks for storage. It was not possible to determine the contents in most of these units. However, one freight car did contain drums of Herbecide. Usually Conrail contracts weed killing to an outside firm.

Environmental Problems:

The refuelling area is saturated with oil. This oil has entered the marsh area adjacent to the yard.

The present oil water separator is an unlined hole in the ground. The collection system consists of unlined ditches. The discharge point was undetermined at the time of the inspection. This system is far below standard. It contributes to the problem by permitting oil to furtner saturate the ground and overflows during times of heavy rain.

The ground around the Flex-I-Flow area has piles of PVC (powdered and beaded) in many locations. The caps of the discharge ports are left off. The material then shifts through and onto the ground.

The ground around the tank car storage area is completely saturated with various chemicals. The exact nature of the material and depth of penetration is unknown. Conrail is running analysis on this material. The intent is to remove this saturated ground and dispose of it, according to Mr. Coke, Terminal Superintendent.

The facility has several waste dump areas. These contain household debris, drums, oily waste, etc. Much of the waste is generated because of car fires. The burnt cargo is dumped on the ground at a convenient spot and left. A large dump area was located near Sam Laffer & Associates building.

A locomotive No. 8408 is used as a power source for a repair shop. It is in place continuously. A large area under this locomotive is saturated with oil.

A large number of scrapped transformers (near a sand pile) was in one location. The disposal of the oil and the type of oil was not determined.

Recommendations:

1. The waste water system (oil/water separator) should be upgraded.

2. A groundwater survey should be made of two areas (chemical and oil). Report should be submitted to DEP.

3. Groundwater recovery system (including treatment) should be installed. This should be approved by DEP.

4. Hazardous waste should be tracked.

5. Dumps should be inspected for compliance with State Regulations.

6. Refuelling areas should be upgraded to prevent future spills.

7. Flex-I-Flow and tank car areas should have procedures estaolished to prevent loses of cargo and spills.

8. If saturated soil is removed, Hazardous Waste should track disposal.

9. All fuel storage areas should be designed to prevent spills.

DL/mb

SITE INSPECTION AND FILE REVIEW
ELIZABETHPORT YARD
CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

April 1996

Prepared for

Consolidated Rail Corporation
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SITE INSPECTION AND FILE REVIEW
ELIZABETHPORT YARD
CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

April 1996

Prepared by GERAGHTY & MILLER, INC.

Edward J. Layton
Scientist/Geologist

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Senior Scientist

Matthew J. Mulhall, P.G.
Associate

CONTENTS

CONTENTS (Continued)

FIGURES

APPENDICES

SITE INSPECTION AND FILE REVIEW
ELIZABETHPORT YARD
CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

INTRODUCTION

In March 1995, Geraghty & Miller was retained by Consolidated Rail Corporation (Conrail) to perform an environmental site inspection of and review documents available in Conrail files regarding the Elizabethport Yard in Elizabethport, Union County, New Jersey. A site location map is provided on Figure 1. The purpose of the site inspection was to evaluate past and present use of the subject property and its surroundings to assess the potential for adverse environmental impacts that could be the result of Conrail's historic operations at the site and to identify, to the extent practical, environmental issues associated with the property. Specifically, the objective of the site inspection was to identify conditions that might indicate a past release of hazardous substances or petroleum products into the ground, groundwater or surface water of the property. The site inspection was completed in response to the execution of a Memorandum of Agreement (MOA) between Conrail and the New Jersey Department of Environmental Protection (NJDEP) for NJDEP oversight of investigative activities at the Elizabethport Yard.

At the request of Conrail, Geraghty & Miller has prepared this letter report for NJDEP review and approval summarizing site background, previous environmental activities completed at the site, the observations of the March 15 and April 26, 1995 site inspections, and proposed additional activities.

SITE BACKGROUND

SITE DESCRIPTION

The Elizabethport Yard is located near the intersection of Trumball and Third Streets in Elizabeth, Union County, New Jersey. The flat-lying site is situated near the west shore of Newark Bay on an approximately 50-acre tract of land. The surface topography has been modified by the placement of approximately three feet of backfill along the northern property

boundary but generally slopes in an easterly direction toward Newark Bay. The mean elevation is approximately 10 to 15 feet above mean sea level (msl).

As shown on the photographs provided in Appendix A, the portions of the property not covered by buildings or material stock of the lessees is overgrown with tall grass and trees rooted in soil comprised largely of cinder and spoil fill. Tires, demolition debris, appliances, wood, and scrap metal have been dumped on the property without authorization and debris piles are interspersed throughout the vegetation.

The concrete slab foundations and footings of demolished buildings that were formerly used for railroad-related operations are also located on the property. Site buildings demolished in 1993 include the power house, car repair shop, paint shop, materials shipping and receiving building, and several small buildings that were used for offices, electrical shops, and fabrication shops. The footprints of the former building locations are shown on Figure 2.

As shown on Figure 2, two buildings remain on the property on the south side of Third Street. The former diesel/machine shop building remains on site and was leased to BGB Transport Company (BGB), a supplier of steel support products, at the time of the inspections. The building located adjacent to and north of the former diesel/machine shop is leased to Armin Poly Film Corporation (Armin), a manufacturer of polyethylene sheeting. Armin installed silos to the east of their lease building reportedly to store raw materials for their manufacturing process. The parcel of land located immediately east of the former diesel shop is leased to National Distribution Services (National), a wholesale lumber supplier. National has staged an office trailer on their leased property. A vacant concrete support structure for an elevated railway ("flyover") is located on the far east side of the subject property. No other buildings or structures are located on the property on the south side of Third Street.

Buildings located north of Third Street, across the street from Armin, were formerly leased by the American Plywood Corporation (Amer-Ply), a lumber supplier. Matlack, Inc. (Matlack), a trucking company, is located west of the former Amer-Ply lease holding. The

portions of the property located on the north side of Third Street were occupied at the time of the site inspection and, therefore, were not included in the site inspection conducted by Geraghty & Miller.

The site is serviced by public sewer and water. During Conrail's ownership and operation at the site, all sanitary waste reportedly went to the city sewer system. Records available in Conrail files did not indicate the presence of a septic or stormwater system.

SITE HISTORY

Based on a date inscribed on the front of the diesel/machine shop building, the Central New Jersey Railroad operated at the site as early as 1901. Since that time, the site has primarily been operated as a railroad facility, first by Central Jersey Railroad (CNJ) and then by Conrail. The property was conveyed to Conrail by CNJ in March 1976. Conrail conducted business activity at the subject site from April 1976 to April 1982. New Jersey Transit leased property from Conrail and operated at the site from January 1983 to November 1987.

Passenger and freight rail service activities conducted on-site included storage, repair, and maintenance of locomotives and passenger cars, transfer of materials to and from rolling stock, freight classification and sorting, and fabrication of parts for locomotive and passenger car repair. Conrail operations at the facility primarily consisted of locomotive repair, parts fabrication, and power generation for a portion of the rail yard. In 1979, the sorting yard and passenger rail service were discontinued and the elevated railway to the "flyover" was demolished.

New Jersey Transit operations at the facility were concentrated around the engine house and car repair shop. As reported by OHM Remediation Services Corporation (OHM) of Trenton, New Jersey (1989), New Jersey Transit used the facility primarily for the repair of locomotive passenger cars and the refurbishing of old passenger car rolling stock.

As noted above, several buildings and open parcels of land located on the subject property have been leased by Conrail. Companies leasing property from Conrail at the time of the site inspection included BGB, National, Armin, and Amer-Ply. Previous lease holders included a cement manufacturer, a lumber distributor, and a compressed gas company. Portions of the property leased by these three former tenants are currently occupied by the Rail-Bridge Terminals (K-Line), a shipping container storage and transport company, and were not included in the site inspection.

ENVIRONMENTAL SETTING

SURROUNDING LAND USE

The subject property is located within a developed commercial/industrial area. A review of fire insurance maps suggests that the area in the vicinity of the site has been used largely for commerce and industry since the early 1900's.

As shown in Figure 2, the site is bordered to the north by Central Jersey Industries (including the former Kapkowski Landfill) and the parcel of Conrail property leased to K-Line. The K-Line lease property also bounds the subject property to the east. The Newark Bay is located to the east of the K-Line lease holding. The former Singer Company facility (currently occupied by Genesis Lighting, Inc.) is situated along the southern property boundary. Residences are located south of the former Singer Company building, across Trumball Street. The New Jersey Turnpike forms the western boundary of the site, adjacent to the Matlack lease property. Commercial and industrial facilities are located on the west side of the New Jersey Turnpike, along Dowd Avenue.

GEOLOGIC SETTING

Union County is situated partly on the Triassic Lowlands of the Piedmont Physiographic Province, and partly on the Triassic Lowlands of the Inner Coastal Plain Physiographic Province.

Both provinces consist primarily of low land and gently rolling hills. The site is underlain by weathering products of the Triassic age Brunswick Formation. This formation is characterized by sandstone, siltstone and shale. Bedrock is overlain by unconsolidated, poorly sorted glacial till and stratified drift covered by a veneer of fill material.

O'Brien & Gere (1987) reported that approximately 20 feet of unconsolidated sediments overlie the red shale of the Brunswick Formation in the vicinity of the site. Surface materials are comprised of a mixture of gravel, sand, and cinder fill material. The thickness of the fill material varies from 5 to 15 feet. An approximately 5-feet thick layer of organic-rich silt underlies the fill material. An approximately 5-feet thick layer of glacial deposits consisting of sand, silt and clay overlies the bedrock.

Given the little surface relief across the site, it is inferred that surface drainage is towards Newark Bay and/or the Great Ditch. However, it is likely that the majority of the 46 inches of annual precipitation recharges the shallow groundwater system by infiltration and percolation.

Based on information provided by OHM (1989), groundwater is encountered within ten feet of the surface. Groundwater elevations at the site fluctuate and are influenced by tides in Newark Bay. Groundwater in the unconsolidated materials likely discharges to the Newark Bay; however, some groundwater may discharge to the Great Ditch located to the north of the K-Line lease property.

Based on information provided in the EMA report (1995) for the Amer-Ply facility, the Elizabeth City Water Department supplies water to the Elizabethport area. The Elizabeth City Water Department reports that there are no nearby municipal supply wells, and that they are not aware of any residential groundwater users in the immediate vicinity of the subject property.

PREVIOUS SITE WORK

Documents available in Conrail files indicate that environmental investigation and remediation activities have been completed at the Elizabethport Yard. As outlined below, these activities included the removal of over 29 aboveground storage tanks (ASTs) and an underground storage tank (UST), asbestos abatement activities associated with building demolition, surface and subsurface soil sample collection and remediation, groundwater sample collection, and groundwater gauging and field permeability tests (slug tests).

O'BRIEN & GERE ENGINEERS, INC.

In August 1987, O'Brien & Gere Engineers, Inc. (O'Brien & Gere) of Edison, New Jersey was retained by a prospective property tenant to complete an environmental site assessment and establish baseline environmental conditions for a portion of the Elizabethport Yard. O'Brien & Gere's site assessment report primarily discussed environmental conditions on the portion of the Elizabethport Yard leased by K-Line; however, portions of the subject property were assessed by O'Brien & Gere during their 1987 site investigation.

In conjunction with their November 1987 site inspection, O'Brien & Gere completed the following activities in relation to the subject property: reviewed NJDEP files regarding the site, reviewed City of Elizabeth files regarding soil samples collected near Kapkowski Landfill as part of a proposed pipeline construction project, collected four surface soil samples, installed and collected subsurface soil samples from two soil borings, installed, gauged, and collected groundwater samples from two monitoring wells, conducted in-situ permeability tests on the monitoring wells, and performed a site-wide drum inventory. Based on these activities, O'Brien & Gere reported the following information in their 1987 report entitled "Environmental Site Assessment, Conrail Facility".

- NJDEP Metro Field Office files indicate that three site inspections were conducted by the NJDEP between July 1980 and February 1981. The findings of these inspections suggest that

petroleum products were released in the basement of the car repair shop, to soil in the hazardous materials storage area, beneath railroad locomotives, and in steam tunnels connecting the power house to the diesel/machine shop. As detailed in the following section of this report, the areas identified by O'Brien & Gere were remediated by OHM Risk/Environmental Assessment and Control Technologies, Inc. (REACT) of Philadelphia, Pennsylvania between 1990 and 1993.

- Results of an investigation commissioned by the City of Elizabeth to assess soil quality in an area to be excavated during the construction of a proposed sewer pipeline indicated varying concentrations of volatile organic compounds (VOCs), base-neutral extractable compounds (BNs), acid extractable compounds, pesticides, and polychlorinated biphenols (PCBs) were present in soil samples collected near the former location of Kapkowski Landfill, which lies adjacent to the K-Line lease property.

- Concentrations of total petroleum hydrocarbons (TPH) in the two of the four surface soil samples collected by O'Brien & Gere on the subject property exceeded 10,000 milligrams per kilogram (mg/kg), which is the NJDEP's proposed residential direct contact soil cleanup criteria (NJAC 7:26D). The two surface soil areas containing TPH concentrations in excess of 10,000 mg/kg were reportedly remediated by OHM and REACT between 1990 and 1993.

- The subsurface soil samples collected by O'Brien & Gere on the subject property did not contain concentrations of VOCs or PCBs. Concentrations of TPH in the subsurface soil samples did not exceed 10,000 mg/kg.

- Concentrations of VOCs, BNs, pesticides, and PCBs were not detected in the groundwater samples collected from the monitoring wells installed on the subject property by O'Brien & Gere. Locations of the monitoring wells installed by O'Brien & Gere are shown on Figure 2.

- Based on field permeability tests, the shallow water-bearing zone had a mean hydraulic conductivity of 0.00046 centimeters per second. Groundwater flow was determined to be to the northeast. The hydraulic gradient across the site was calculated to be 0.002.

O'Brien & Gere concluded that TPH concentrations in soil did not effect the local groundwater quality. O'Brien & Gere further concluded that groundwater within the upper water-bearing zone appears to discharge to the Newark Bay and is not used as a potable water source; therefore, the environmental risk posed by dissolved-phase constituents in groundwater is considered minimal.

In March, 1995, Conrail retained O'Brien & Gere to complete an environmental assessment on parcel of land leased by K-Line. Groundwater samples were collected from two monitoring wells installed adjacent to the subject property. Concentrations of VOCs, BNs, pesticides, or PCBs in groundwater samples collected from the monitoring wells did not exceed the NJDEP Class IIA groundwater criteria.

OHM REMEDIATION SERVICES CORPORATION

In addition to the work completed by O'Brien & Gere, OHM was contracted by Conrail to perform environmental services at the site at various times between 1989 and 1992. In the Fall of 1989, OHM conducted a site investigation of the Elizabethport Yard. Information contained in OHM's December 1989 site investigation report entitled "Report for the Site Investigation at the Conrail Elizabethport Yard" is summarized below.

- OHM collected composite soil samples along existing rail tracks south and east of the diesel/machine shop, the tank berm east of the diesel/machine shop, and the power house pump station. Grab soil samples were collected around the 120,000-gallon AST adjacent to the power house, the former hazardous waste handling area, and the power house pump station. The soil samples were analyzed for TPH and/or priority pollutants.

The soil samples collected adjacent to the engine house, the tank berm east of the diesel/machine shop, the power house pump station, the hazardous waste handling area, and the 120,000-gallon aboveground storage tank (AST) contained levels of TPH in excess of 10,000 mg/kg. Soils in the former hazardous waste handling area contained VOCs, BNs, and metals in the surface and subsurface. As described below, OHM excavated soil from these areas during 1990 and 1991.

- OHM identified ten monitoring wells located on the subject property. OHM collected a groundwater sample from the monitoring well located immediately downgradient of the former hazardous waste storage area. This sample was analyzed for priority pollutants. The groundwater sample collected by OHM did not contain VOCs, PCBs, or pesticides. Base-neutral extractable compounds were present at a total concentration of 25 parts per billion (ppb). This data indicates that the constituents present in the soil samples collected in the hazardous materials storage area did not impact groundwater.

- Six of the monitoring wells were gauged for liquid levels. Separate-phase petroleum product was not present in the monitoring wells gauged by OHM.

- OHM collected samples of water ponded in the basements of the power house and diesel/machine shop. The water ponded in the basements of these buildings contained petroleum hydrocarbons. As described below, OHM and REACT evacuated the oil and water from the basements of these buildings to facilitate asbestos abatement activities completed prior to building demolition.

As documented in correspondence to Conrail from OHM dated August 6, 1993, the following additional site activities were completed by OHM.

- In July of 1992, the 120,000-gallon AST released No. 4 fuel oil as a result of vandalism. OHM responded to the release. The spill was estimated to be 5,000 gallons. A total of 5,000

gallons of fluids (oil and water) was recovered via vacuum trucks; approximately 80 percent of this fluid was reported to be fuel oil. An estimated 60 cubic yards of soil containing residual petroleum was excavated for off-site disposal.

- In August 1992, OHM was requested by Conrail to recover floating separate-phase product in an excavation made during a water main repair adjacent to the power house. The product was No. 6 fuel oil. Approximately 1,500 gallons of product were evacuated from the excavation. The source of the oil was investigated, but could not be identified. At the conclusion of the product recovery activities, recharge into the pit appeared to be only water. Liquid recovered was transported off site for disposal.

- In December 1992, Conrail retained OHM to remove petroleum-containing water from the pit areas of the car repair shop and the power house basement. Floating petroleum product was removed by vacuum and disposed offsite. Based on the analysis of water samples collected by OHM, non-hazardous water and sediment was pumped out of the buildings and discharged on site.

- Between 1990 and 1992, OHM excavated for off-site disposal the previously-identified areas that contained soil with residual petroleum constituent concentrations in excess of the proposed NJDEP soil criteria.

CONSOLIDATED RAIL CORPORATION

On March 19, 1992, the NJDEP issued to Conrail a Request for Information (Request) regarding the Elizabethport Yard. The Request was reportedly issued in response to a documented release in the diesel/machine shop. Detailed information regarding the character and location of the release was not provided by the NJDEP in the Request and is not available in the files reviewed by Geraghty & Miller.

In response to the NJDEP's Request, Conrail forwarded a Freedom of Information Act (FOIA) request to the NJDEP. The April 10, 1992 Conrail correspondence, requested information in the NJDEP files regarding the Elizabethport Yard and the NUS Corporation preliminary assessment of the subject property conducted at the request of the USEPA Region II. No information is available in the files reviewed by Geraghty & Miller regarding the NJDEP's response to the FOIA request or the status of the NUS Corporation preliminary assessment of the Elizabethport Yard.

In correspondence dated June 11, 1992, Conrail provided to the NJDEP the information outlined in the Request. Documents provided to the NJDEP by Conrail in response to the Request contained the following information.

- In April and May of 1980, at the request of Conrail, Parratt-Wolff, Inc. of East Syracuse, New York installed 44 soil borings near the current location of Matlack. The geotechnical borings were installed to assess the soil characteristics beneath the proposed location of a pollution abatement facility. The borings were installed to a depth of 16 feet below ground surface (bgs). Boring logs prepared by Parratt-Wolff indicate that the area of investigation is underlain by cinder and spoil fill layer and silty sands.

- In November 1982, Parratt-Wolff installed 14 observation wells (W-1 through W-14) throughout the subject property. The location of the wells are shown on Figure 2. The observation wells were constructed of 4-inch diameter polyvinyl chloride and extended to depths ranging from 6 to 23 feet bgs. Liquid-level elevations were measured in the wells in February and May 1983 and March 1984. Separate-phase product was measured in Observation Well W-10 during the three events. Product thickness in W-10 ranged from approximately three to six inches. Separate-phase product was not measured in the other 13 wells.

- In May 1987, Conrail representatives conducted an environmental inspection of the Elizabethport facility, which was leased by New Jersey Transit at the time, to identify areas

of concern requiring corrective action prior to expiration of the New Jersey Transit lease in December 1987. Conrail noted the following areas of potential environmental concern: batteries and drums stored east of the diesel/machine shop and oil-stained soil near the diesel/machine shop and power house.

- In July 1987, Conrail representatives conducted a second environmental audit. During the second audit, Conrail noted that the areas of potential concern identified in the May 1987 audit had been or were in the process of being addressed by New Jersey Transit.

- In August 1987, a third environmental audit was conducted by Conrail. During the third audit, Conrail noted substantial progress by New Jersey Transit in addressing Conrail's concerns. However, Conrail noted that oil-stained soil remained east of the diesel/machine shop, at the drum storage area, and near the tank truck loading area. Also, Conrail noted that oil was present in the basement of the power house. No additional documents were available in Conrail files documenting the status of these areas of concern at the time of New Jersey Transit's lease expiration.

The September 1985 OHM document entitled "Soil and Groundwater Sampling Analysis, Elizabeth, NJ" was reportedly forwarded to the NJDEP by Conrail in response to the Request but was not available in Conrail files for review and summary in this report.

DAS ENVIRONMENTAL, INC.

In January 1993, DAS Environmental, Inc. (DAS) of Philadelphia, Pennsylvania was retained by Conrail to remove asbestos-containing materials (ACM) from site buildings in preparation for demolition activities. Between January and April 1993, DAS removed ACM from the site buildings. The asbestos was transported for disposal to PST Reclamation in Harwood, Maryland.

The site buildings were subsequently demolished by another contractor later in 1993. Unidentified BGB personnel reported that much of the demolition debris, which consisted largely of masonry materials from the brick buildings, was used as fill material on the northern boundary of the subject property, adjacent to the K-Line lease property.

RISK/ENVIRONMENTAL ASSESSMENT AND CONTROL TECHNOLOGIES

In April 1993, Conrail retained REACT to remove a 10,000-gallon waste oil UST located at the southeast corner of the diesel/machine shop. REACT collected six soil samples from the base of the excavation for laboratory analysis of TPH concentrations. Two of the six samples were also analyzed for PCB, VOC, and BN concentrations. As noted in the October 1993 REACT report entitled "UST Removal Project, Consolidated Rail Corporation, E Rail Terminal", concentrations of TPH, PCBs, VOCs, and BNs were less than the lowest proposed NJDEP soil criteria for the respective parameter.

In addition to removing the UST, REACT removed approximately 29 ASTs from the subject property in preparation for the building demolition activities completed in 1993. As summarized in the three separate REACT letters to Conrail, all of which are dated October 7, 1993, REACT cleaned, inerted, and dismantled the 29 ASTs. The ASTs were then transported to an off-site scrap yard for recycling. Materials removed from the tanks were disposed off site.

One of the REACT letters to Conrail dated October 7, 1993 reports that stained soil in the earthen dikes containing the ASTs, oil-stained soil around the railroad tracks, and oil-stained soil in the concrete waste water treatment tank dike area were excavated for off-site disposal.

In 1993, REACT also evacuated water and oil from tunnels that connected the diesel/machine shop, the store house, and the power house. The tunnels were evacuated in preparation for building demolition activities. REACT skimmed the oil from the water and contained the oil and oil-saturated materials pending off-site disposal.

ENVIRONMENTAL MANAGEMENT ASSOCIATES, INC.

In April 1995, Conrail retained Environmental Management Associates, Inc. (EMA) of Farmingdale, New Jersey to oversee the removal of two USTs on the property leased by the Amer-Ply. EMA's "UST Closure and Site Assessment Summary Report" dated June 29, 1995 summarized the removal of one 5,000-gallon heating oil UST and one 1,000-gallon diesel fuel UST. Based on the findings of their investigation, EMA recommended no further site activities be completed in regards to the removed USTs.

In correspondence dated August 16, 1995, the NJDEP provided comments to their review of EMA's report. In accordance with Conrail's correspondence to the NJDEP dated August 24, 1995, Conrail will address the NJDEP concerns regarding the USTs removed from the Amer-Ply lease property in conjunction with the MOA. Accordingly, specific responses to the NJDEP comment letter dated August 16, 1995 are included in Appendix B of this report.

SITE INSPECTION

Geraghty & Miller's observations during the site inspections are summarized below. Photographs (A through J) taken during the site inspection are provided in Attachment A. The orientation of the photographs are shown in Figure 4.

AREA I

Area I is enclosed in an 8-feet high chain link fence on three sides. The east end of Area I is open. Entrance gates to Area I are located at the southwest corner of the diesel/machine shop and on the middle of the north side adjacent to Area III. Prior to current operations in Area I, the area was reportedly graded and covered with gravel trap rock. Debris graded from Area I was piled on the east side of the leased property. The debris pile separates Area I from Area II. Railroad tracks enter Area I from the east, between the debris pile and Area III.

At the time of the site inspection, Area I was leased by National. National operations at the site include transport and storage of lumber and are coordinated from an office trailer located adjacent to the gate near the southeast corner of the diesel/machine shop. Lumber is transported onto the site via freight traffic entering the leased property along the rail spur. A forklift is used to load lumber to and from the rail cars.

Observations made by Geraghty & Miller during the inspection of Area I include the following.

- Two 275-gallon ASTs are located adjacent to the National office trailer. The tanks reportedly contain diesel fuel to power the forklift. At the time of the site inspection, the tanks did not have secondary containment and oil staining was observed on the gravel beneath the tanks.

- As shown in Photograph A, a large debris pile was located on the east side of Area I. The debris pile consisted of metal banding, utility poles, railroad ties, a door from a railroad cars, and construction/demolition debris.

- The surface soil in Area I was obscured by the gravel trap rock and lumber. Geraghty & Miller did not observe evidence of environmental impacts resulting from historic operations in Area I.

- One of the monitoring wells installed by O'Brien & Gere (MW-1) was observed by Geraghty & Miller during the site inspection. The integrity of the monitoring well appears to be maintained. The location of MW-1 is shown on Figure 2.

AREA II

Area II is located on the far east side of the subject property. This area is bounded by the perimeter fence marking the Singer property on the south side and the K-Line lease property on

the east and north sides. On the west side, Area II is separated from Area I by a debris pile and from Area III by the steel beams stored by BGB.

Currently, Area II is vacant and overgrown with tall grass and small trees. The only activities conducted in Area II are related to the dead end rail spur used to maneuver freight traffic into the National lease property located in Area I.

Observations made by Geraghty & Miller during the inspection of Area II are provided below.

- The strip of land between the perimeter fence marking the southern boundary of the site and the chain link fence encircling the National lease property was overgrown with tall grass and strewn with domestic trash. An empty oxygen cylinder and an empty acetylene cylinder were observed in this area.

- An area of tall grass and trees rooted in a cinder and fill soil is located near the debris pile marking the boundary between Area I and II. This area is shown in Photograph B. One of the monitoring wells installed by O'Brien & Gere (MW-2) is also shown in Photograph B. The integrity of the monitoring well appears to be maintained. The location of MW-2 is shown on Figure 2.

- The area between the track tunnels and the Singer property was littered with debris including empty cardboard boxes, styrofoam packing pellets, empty 5-gallon buckets of roofing tar, railroad ties, tin duct work, plastic pipe, a cinder pile, wood and concrete construction debris, and rubber tires. Photograph C provides a view of the area around the concrete tunnels. Geraghty & Miller did not inspect the interior of the concrete track tunnels.

- As shown in Photograph D, the area between the concrete tunnels and K-Line lease property to the north is overgrown with vegetation. This portion of Area II also contains the remnants of railroad track beds.

- An area of backfill was observed along the fence bounding Area II on the northern side. Photograph E was taken near the foundation of the sand blast shop and shows the fill area. This area arises approximately 3 feet above the remainder of Area II. The fill material appears to consist mainly of demolition debris including bricks and blocks. In addition tires, rolls of chain link fence, plastic pipe, rubber tires, utility poles, roofing shingles, and a hot water heater were observed interspersed among the fill material.

- Isolated portions of Area II were not available for inspection due to areas of shallow, ponded surface water runoff.

AREA III

Area III is bounded on the north by the fence line marking the K-line lease property, on the south by the fence marking the National lease property, and to the west and east by Areas II and IV, respectively. This area encompasses the former locations of the car repair shop and store house.

At the time of the site inspection, Area III was leased by BGB Transport and used for storage of steel support products. As shown in Photograph E, the northern portion of Area III has been backfilled with demolition debris and extends approximately 3 feet above the remainder of Area III. At the time of the inspections, Area III was covered by metal structures stored by BGB and tall grass rooted in cinder and fill soil (Photograph F). The portion of Area III near the former location of the store house is covered with red masonry brick dust from demolition activities.

During the site inspection, Geraghty & Miller observed the following in Area III.

- Approximately 15 gas cylinders were interspersed though out Area III. The gas cylinders reportedly contained fuel to power the torches to cut the steel.

- Two 5-gallon buckets labeled hydraulic oil were observed near the former location of the power house pump house.

- A debris piles was located along the east side of Area III. The debris piles contained miscellaneous construction debris, domestic trash, railroad ties, and scrap metal.

- Due to the red masonry brick dust resulting from the demolition activities and subsequent grading activities, Geraghty & Miller did not observe evidence of soil impacts resulting from the historic operations and/or the remedial activities conducted by OHM and REACT adjacent to the former location of the 120,000-gallon AST.

AREA IV

Area IV is located adjacent and to the north of the building leased by Armin. Area IV is bounded on the west side by Third Street, to the north by the chain link fence marking the K-Line lease property, and to the east by Area III. This area includes the former location of the paint shop.

Current operations in Area IV include car and truck parking by Armin employees, tractor trailer storage by Armin, and rail service to the site along the rail spur located on the north side of Area IV. As shown in Photograph G, the majority of this area is covered by tall grass rooted in cinder and fill soil.

Observations made by Geraghty & Miller during the inspection of Area IV are summarized below.

- As shown in Photograph H, a large debris pile was located in the center of Area IV. The debris pile consisted of an abandoned car, auto body parts, rubber tires, construction/demotion debris, domestic trash, two 275-gallon above ground storage tanks, an

empty 55-gallon drum labeled hydraulic oil, a 55-gallon drum labeled mineral spirits, railroad ties, and dead trees. In conjunction with the disposal of the USTs removed from the Amer-Ply property, REACT reportedly transported the two ASTs and two 55-gallon drums off-site for salvaging.

- The remnants of abandoned track beds are located near the debris pile. The track bed remnants consist of railroad ties partially embedded in the soil.

- A damaged front-end loader was observed near the former location of the paint shop. An approximately 5-feet diameter oil stain was observed on soil beneath the front end loader.

- As shown in Photograph I, oil staining was observed on the foundation of the power house. The depth of staining could not be ascertained. The power house contained a basement with a concrete floor. Therefore, it is not likely that the activities associated with the oil staining resulted in impacts to the underlying soil. Due to the presence of red masonry brick dust from the building demolition activities that covered the soils adjacent to the power house, Geraghty & Miller did not observe evidence of soil impacts associated with the historic operations and/or the remedial activities completed by OHM.

- As shown in the background of Photograph I, the fire suppression system pump house and the former location of an electric substation are located in Area IV. A Worthington™ vertical turbine pump was observed in the pump house. The vertical turbine pump likely connects to a production well used to supply water to the fire suppression system.

- Capacitors, transformers, or stained soils were not observed near the former location of the electrical substation.

- Geraghty & Miller observed a concrete footing measuring approximately 10 feet by 35 feet by 6 feet deep to the south of the electric substation. As shown in Photograph J, oil staining was observed on the concrete footing. In addition, four approximately 1-gallon fluorochloromethane cylinders were located in the area bounded by the concrete footing. Miscellaneous construction debris was interspersed among the ponded water in the base of

the footing. The footing appeared to have a concrete floor, and, therefore, the activities associated with the oil staining likely did not impact the underlying soils.

AREA V

Area V comprises the buildings and immediate surrounding property leased by BGB and Armin. At the time of the site inspections, the buildings were occupied and in operation. Thus, Area V was not inspected on March 15, 1995.

On April 26, 1995, limited access was provided by BGB Transport to the west end of the former diesel/machine shop and the surrounding grounds. The following observations were made during the inspection of Area V.

- Two 55-gallon drums were observed near the entrance to the west end of the diesel/machine shop. Small machine parts were positioned on the ground adjacent to the drums. Approximately two 2-feet diameter oil stains were observed on the soil adjacent to each drum.

- Three transformers and/or capacitors were observed mounted along the north wall on the outside of the diesel/machine shop.

- A compressor blowdown vent was mounted to the north wall on the outside of the diesel/machine shop. An approximately 1-foot diameter oil stain was observed on the soil beneath the compressor blowdown vent.

- Historic site plans indicate that transfer pits were present on the west side of Area V. Evidence of the transfer pits was not observed by Geraghty & Miller.

The buildings leased and the material storage silos used by Armin were not inspected by Geraghty & Miller.

AREA VI

Area VI is located to the south of the diesel/machine shop. This area is bounded on the east by the National boundary fence, to the south by the Singer property fence, to the west by the fence bordering Third Street, and to the north by the diesel/machine shop. The majority of this area is open ground used to store steel products. The portion of Area VI along the southern property boundary is covered by ponded surface water runoff. One active rail provides freight access to this area. Railroad traffic access to Area VI is gained along the rail spur that traverses the National lease holding (Area I) from the east. At the time of the site inspection, Area VI was leased by BGB and was used for the loading and storage of steel support structures.

Observations made by Geraghty & Miller during the site inspection include the following.

- Approximately four 1-foot diameter oil stains were observed along the dirt driveway on the south side of the diesel/machine shop. Hydraulic oil appeared to be leaking from the fork lift used to load the steel beams stored and transported by BGB.

- In addition to the minor oil staining observed along the driveway, approximately 15 gas cylinders were located throughout Area VI. The gas cylinders provide fuel to the torches used to cut the steel.

- Domestic trash, including two 5-gallon acrylic paint buckets, was strewn along the southern property boundary against the fence bounding the Singer property.

AREA NORTH OF THIRD STREET

This area includes the lease property between Third Street and the New Jersey Turnpike. During the site inspection, the area west of Third Street was occupied by Amer-Ply and Matlack.

Therefore, these areas of active operation were not included Geraghty & Miller's site inspection. However, a vacant field to the north of Amer-Ply lease holding was inspected by Geraghty & Miller. This vacant field was overgrown with tall grass rooted in cinder and fill soil.

Geraghty & Miller made the following observations in the vacant field located north of the Amer-Ply lease property.

- Railroad ties were piled in the vacant field.

- Three transformers/capacitors were observed mounted on utility poles to the rear of the Amer-Ply building.

As referenced above, EMA oversaw the completion of underground storage tank removal activities on the Amer-Ply lease property. The results of this investigation were summarized in EMA's June 1995 site investigation report. Specific responses to the NJDEP comment letter to the EMA report are contained in Appendix B.

RECOMMENDATIONS

Based on information contained in Conrail files and observations made by Geraghty & Miller during the March 16 and April 26, 1995 site inspections, Geraghty & Miller recommends that the following activities be completed at Conrail's Elizabethport Yard in Elizabethport, New Jersey.

AREA I

- Collect a surface and a subsurface soil sample from the stained area beneath the 275-gallon fuel oil AST. A hand auger will be used to collect the subsurface soil sample from a depth of three feet bgs. The soil samples will be submitted for laboratory analyses of TPH

concentrations with a contingency for the analysis of VOCs, if the TPH concentrations exceed 1,000 mg/kg.

AREA II

No activities are recommended for Area II.

AREA III

No activities are recommended in Area III.

AREA IV

- Collect a surface and subsurface sample from the stained soil beneath the front end loader. A hand auger will be used to collect the subsurface soil sample from a depth of three feet bgs. The soil samples will be submitted for laboratory analyses of TPH concentrations with a contingency for the analysis of polynuclear aromatic hydrocarbons, if the TPH concentrations exceed 100 mg/kg.

- Determine the source of water to the fire suppression system. If the fire suppression system was supplied water by a well, identify the construction details for the fire suppression system supply well. Remove the vertical turbine pump from the wellhead and properly abandon the supply well.

AREA V

- Collect a composite soil sample adjacent to each of the three transformers/capacitors located on the north side of the diesel/machine shop. The composite soil samples will be collected from the each side of the concrete pads underlying the transformers/capacitors. The soil samples will be submitted for laboratory analysis of PCB concentrations.

- Collect a grab sample from beneath the compressor blowdown vent. The soil sample will be submitted for laboratory analysis of TPH concentrations.

- Collect grab surface soil samples from the two oil-stained area beneath the 55-gallon drums located near the west entrance to the diesel/machine shop. The soil samples will be submitted for laboratory analysis of TPH concentrations.

AREA VI

No activities are recommended for Area VI.

AREA NORTH OF THIRD STREET

- As described below, address NJDEP concerns regarding groundwater quality in the vicinity of the Amer-Ply Building by conducting a well receptor search evaluation, and evaluate the potential for the biodegradation of groundwater in accordance with the analytical contaminant transport solution outlined in the NJDEP Classification Exception Area (CEA) guidance.

SITEWIDE

- Based on the file and well search information, conduct a search for the monitoring wells that were reportedly located by OHM during their 1989 site investigation. On-site monitoring wells located during the search will be redeveloped and/or abandoned in accordance with NJDEP protocols.

- In accordance with the analytical contaminant transport solution outlined in the NJDEP CEA guidance, evaluate the potential for the biodegradation of dissolved-phase constituents in groundwater prior to discharge to the local surface water bodies.

CONCLUSIONS

- The majority of the site is open, flat-lying land covered by tall grass rooted in cinder/fill soil. The portion of the site leased by National is covered by trap rock gravel and lumber. Portions of the site leased by BGB are covered by red brick dust from the demolition activities and steel I-beams. Soil conditions resulting from historic operations and evidence of remedial activities were not visible in these areas.

- Site investigations were completed at the Elizabethport Yard by O'Brien & Gere and OHM in 1987 and 1989, respectively. O'Brien & Gere and OHM reported that isolated releases of petroleum products had occurred during routine operation and maintenance activities. Areas of environmental concern identified by OHM in their 1989 site investigation report were remediated by OHM in 1990 and 1991. Additional remediation activities were completed by REACT in 1993.

- Several vacant buildings were demolished late 1993. Prior to the building demolition, DAS conducted asbestos abatement activities. Asbestos containing material has reportedly been removed from the site.

- Approximately 29 ASTs and one UST were removed from the site by REACT in 1993. Two USTs were removed from the site by REACT under the oversight of EMA in 1995. Evidence of UST or AST were not observed by Geraghty & Miller during the site inspection. These observations, in conjunction with the above-referenced data regarding the documented AST and UST removals, indicates that AST and UST are no longer present at the site.

- Liquid-level gauging data collected by Parratt-Wolff in 1983 and 1984 indicated that an apparent product thickness of less than 6 inches was measured in Observation Well W-10. Liquid-level gauging conducted by O'Brien & Gere and OHM in 1987 and 1989 indicate that the separate-phase product is not present on the groundwater at the site, and groundwater flow is to the east-northeast toward Newark Bay.

- Results for the laboratory analysis of groundwater samples collected by O'Brien & Gere and OHM indicate that VOCs and BNs are not present in groundwater. This data suggests that the petroleum products released to the site soil have not impacted groundwater.

- In their 1989 site investigation report, OHM reported that approximately 10 monitoring wells are present at the site. The monitoring wells were not located during the site inspection.

- The need for additional monitoring wells at the site will be assessed based on the results of the well search, receptor evaluation, and groundwater biodegradation evaluation.

- Isolated areas of petroleum-stained soil were observed by Geraghty & Miller near the west entrance to the diesel/machine shop, by the inoperable front end loader parked in Area IV, and underneath the AST adjacent to the office trailer in Area I.

- Geraghty & Miller observed three transformers/capacitors along the north side of the diesel/machine shop, and three transformers/capacitors on utility poles located north of the buildings leased by Amer-Ply.

- Geraghty & Miller observed miscellaneous debris piles in various locations throughout the site. The debris piles contained railroad ties, metal banding, utility poles, fencing, rubber tires, construction/demolition debris, and scrap metal.

- The interior of the buildings leased by BGB, Armin, and Amer-Ply were not inspected by Geraghty & Miller.

SITE INSPECTION DISCLAIMERS

There are no third party rights or benefits conferred under this report. Use of this report is strictly limited to Conrail. Conrail is the only party to whom Geraghty & Miller intends to confer any rights. Any reliance on the contents of this report by any third party is the sole responsibility of that party.

The evaluations and findings presented in this site inspection report are based exclusively on examination of selected site maps, information available in Conrail files at the time of the Geraghty & Miller file review, and observations made during the site inspection. A review of aerial photographs, NJDEP or United States Environmental Protection Agency (USEPA) records, local municipal records (e.g., building permits, Health Department documents), and interviews with Conrail or Central New Jersey Railroad employees were not included in this site inspection.

Geraghty & Miller warrants that the services performed were conducted in a competent and professional manner in accordance with sound consulting practices and procedures. Geraghty & Miller cannot warrant the actual site conditions described in this report beyond matters amenable to visual observation within the limits of the site inspection program.

REFERENCES

Consolidated Rail Corporation, June 1992, *Letter Response to the NJDEP Request for Information*, Philadelphia, Pennsylvania.

DAS Environmental, Inc., June 1993, *Waste Disposal Manifests for Asbestos Projects*, Philadelphia, Pennsylvania.

Environmental Management Associates, June 1995, *UST Closure & Site Assessment Summary Report*, Farmingdale, New Jersey.

O'Brien & Gere Engineers, Inc., November 1987, *Environmental Site Assessment, Conrail Facility*, Edison, New Jersey.

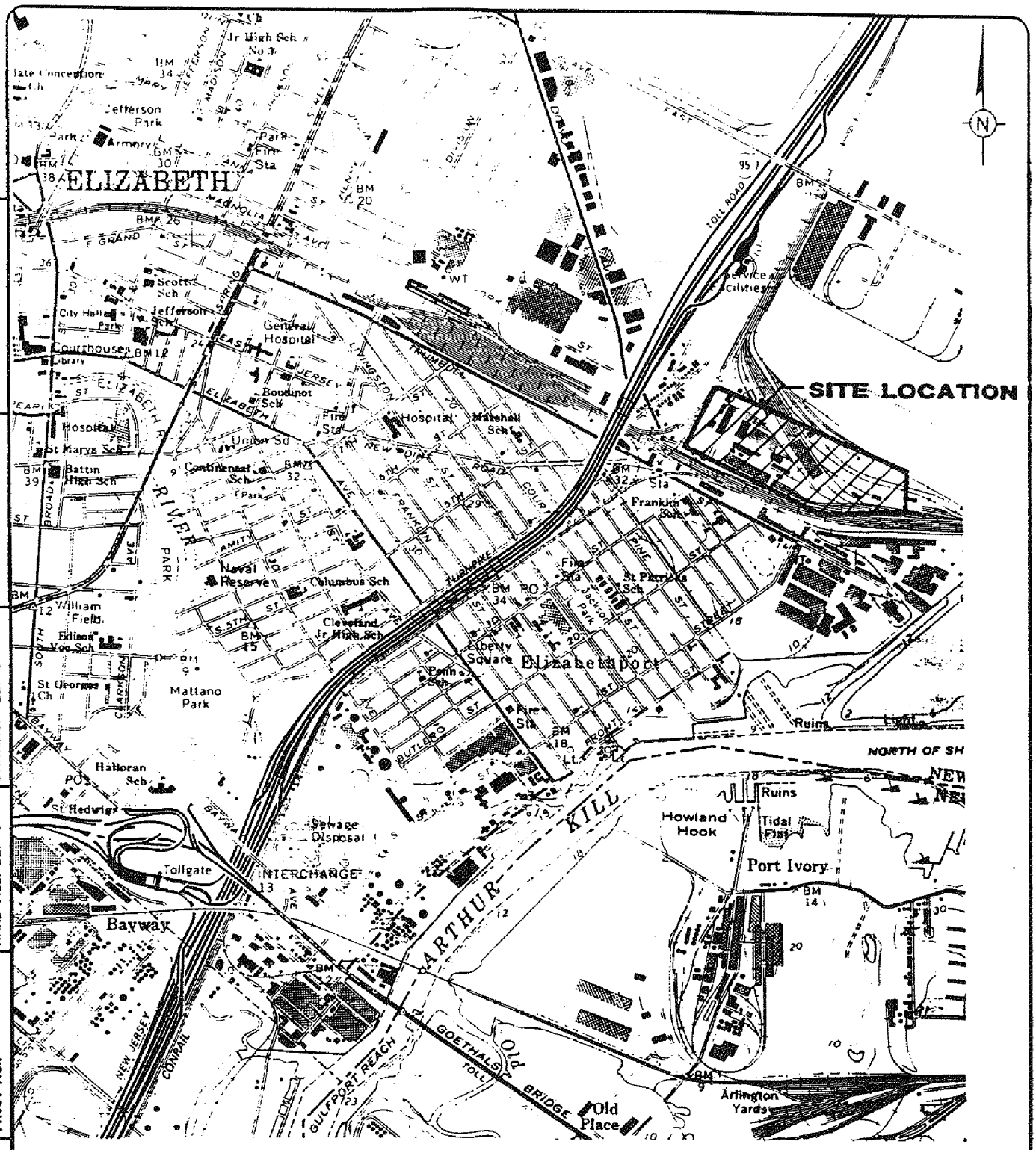
O'Brien & Gere Engineers, Inc., June 1995, *Environmental Site Assessment, K-Line Facility*, Edison, New Jersey.

OHM Remediation Services Corporation, December 1989, *Report for Site Investigation at the Conrail Elizabethport Yard*, Trenton, New Jersey.

OHM Remediation Services Corporation, August 1993, *Summary of OHM Projects Completed at Conrail's Elizabethport Railroad Yard*, Trenton, New Jersey.

Risk/Environmental Assessment and Control Technologies, Inc., October 1993, *Underground Storage Tank Removal Project, Consolidated Rail Corporation, E Rail Terminal*, Philadelphia, Pennsylvania.

FIGURES



SOURCE: USGS 7.5 MINUTE SERIES, ELIZABETH QUADRANGLE, N.J.— N.Y., 1981

DRAFTER: PADILLA | APPROVED: CARPENTIER | CHECKED: CARPENTIER | DRAWING: ELP-1 | HARD FILE: ELP-1 | PROJECT NO.: | DWG DATE: 07SEP95

GERAGHTY & MILLER, INC.
Environmental Services
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SITE LOCATION MAP

CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

FIGURE
1

DWG DATE: 1/10/96 | PRJCT NO.: MP024002 | HARD FILE: ELP-3 | DRAWING: ELP-3 | CHECKED: S. CARPENTER | APPROVED: S. CARPENTER | DRAFTER: E. LAYTON

LANDFILL

GREAT DITCH

N

CENTRAL JERSEY INDUSTRIES PROPERTY

PROPERTY LEASED TO K-LINE

NEWARK BAY

PIERHEAD LINE

BULKHEAD

CENTRAL JERSEY INDUSTRIES PROPERTY

PROPERTY LINE

THIRD STREET EXTENSION

TRACK TUNNELS UNDER FLYOVER

SINGER PROPERTY

TRUMBALL STREET

W-1 W-2 W-3 W-4 W-5 W-6 W-7 W-8 W-9 W-10 W-11 W-12 W-13 W-14

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7

1. 2. 3. 4. 5. 5. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18.

SCALE

0 400 FEET

LOCATIONS AND DIMENSIONS OF PHYSICAL STRUCTURES ARE APPROXIMATE

LEGEND

- FENCE
- EXISTING BUILDING
- FORMER LOCATION OF DEMOLISHED BUILDING OR STRUCTURE
- W-7 MONITORING WELL LOCATION INSTALLED BY PARRATT-WOLFF, INC.
- MW-4 MONITORING WELL LOCATION INSTALLED BY O'BRIEN & GERE, INC.

LIST OF BUILDINGS

1. Diesel/Machine Shop (BGB Transport)
2. Blacksmith Shop (Armin Corporation)
3. Paint Shop
4. Wood Shop
5. Passenger Car Shop (American Plywood)
6. Car Repair Shop
7. Store House
8. Substation
9. Fire Suppression System Water Reservoir
10. Power House
11. 120,000-Gallon AST
12. Power House Pump House
13. Oxyweld Building
14. Pump House
15. Aboveground Storage Tanks
16. Transformers
17. Oil House
18. Sand Blast Shop

GERAGHTY & MILLER, INC.
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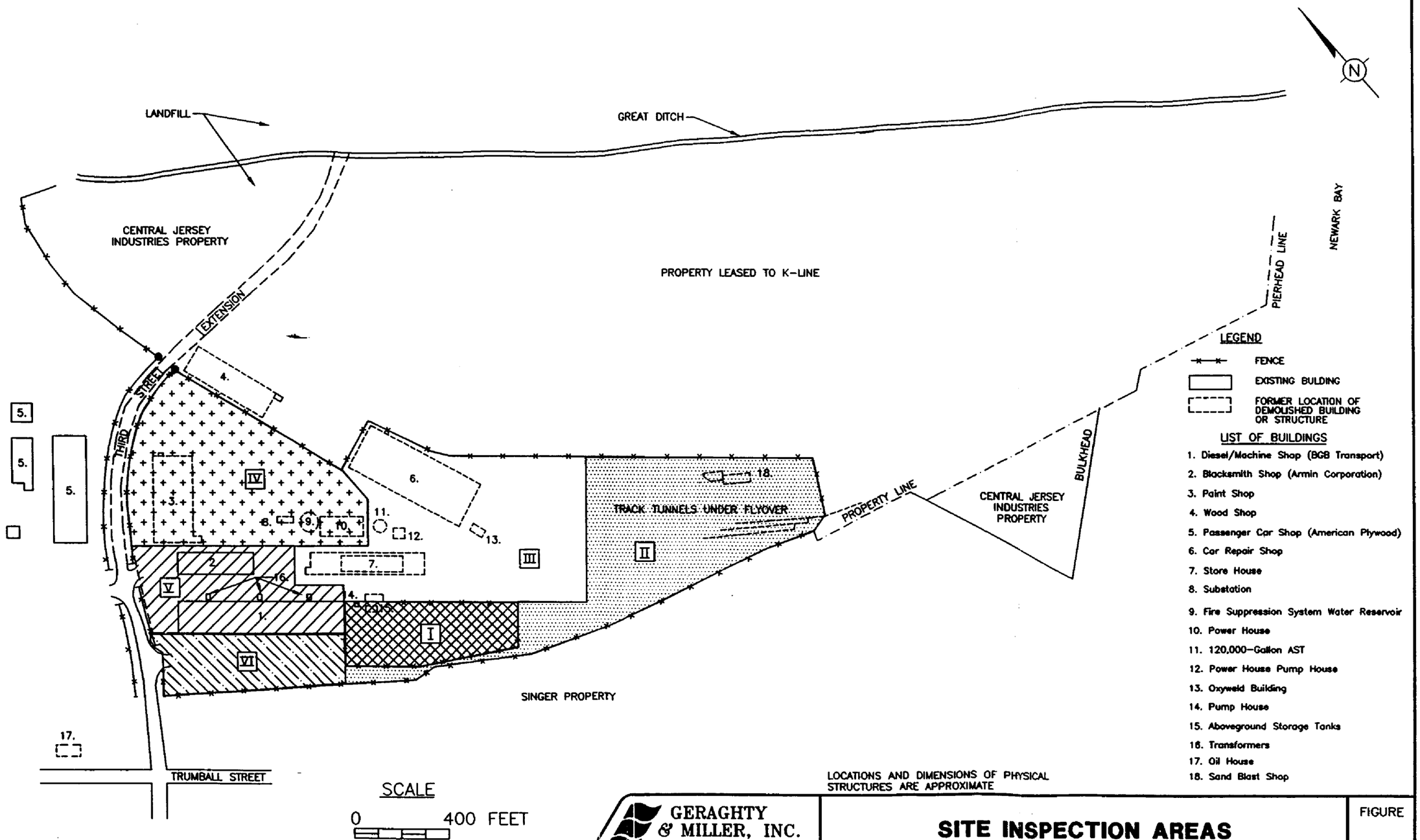
SITE PLAN

CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

FIGURE
2

TIERRA-B-017515

DRAFTER: E. LAYTON | APPROVED: S. CARPENTER | CHECKED: S. CARPENTER | DRAWING: ELP-4 | HARD FILE: ELP-4 | PRJCT NO.: NP024002 | DWG DATE: 1/10/96



LOCATIONS AND DIMENSIONS OF PHYSICAL STRUCTURES ARE APPROXIMATE

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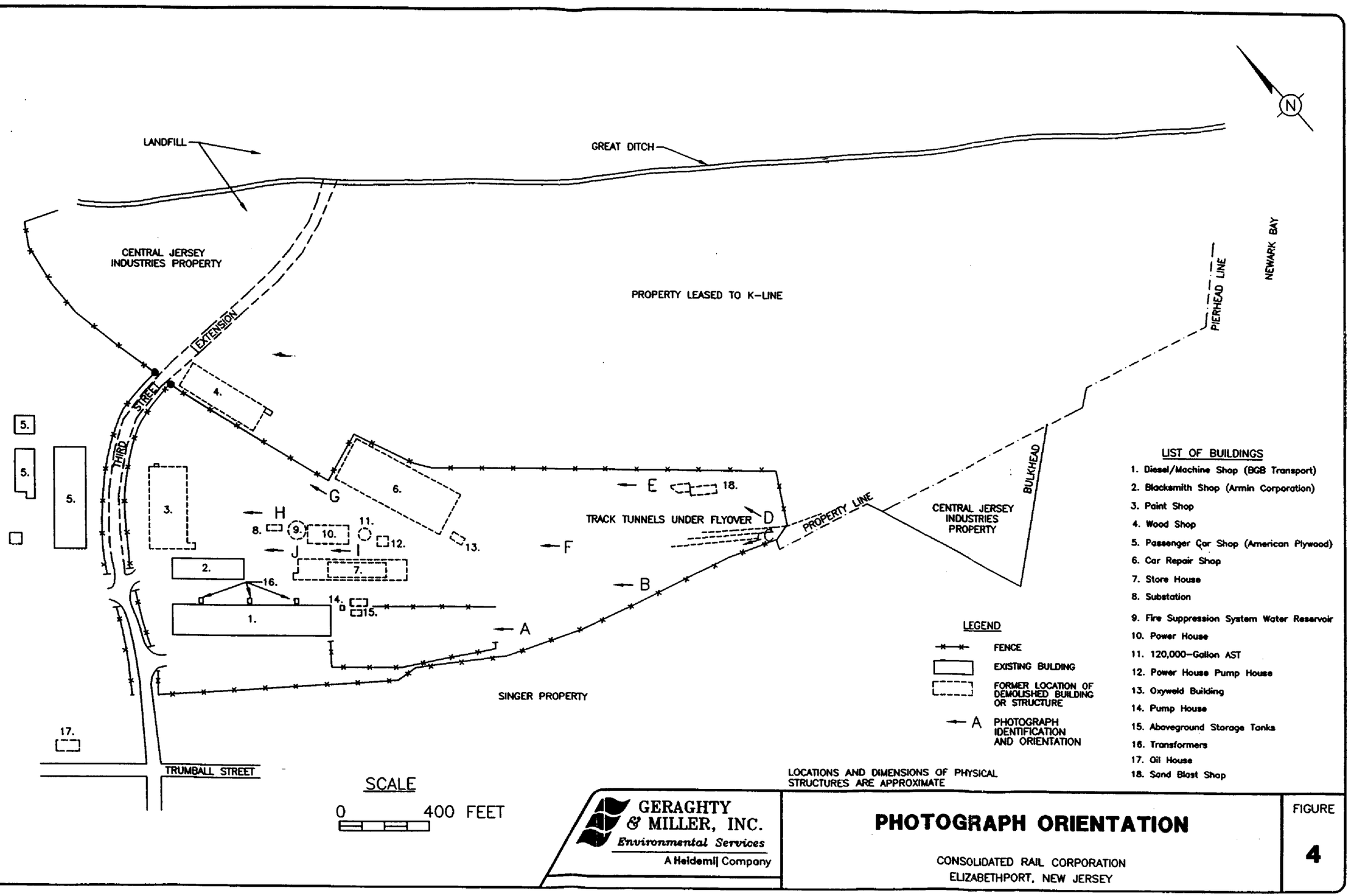
SITE INSPECTION AREAS

CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

FIGURE
3

TIERRA-B-017516

DRAFTER: E. LAYTON | APPROVED: S. CARPENTER | CHECKED: S. CARPENTER | DRAWING: ELP-5 | HARD FILE: ELP-5 | PROJECT NO.: NP024002 | DWG DATE: 1/10/96



LIST OF BUILDINGS

1. Diesel/Machine Shop (BGB Transport)
2. Blacksmith Shop (Armin Corporation)
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11. 120,000-Gallon AST
12. Power House Pump House
13. Oxyweld Building
14. Pump House
15. Aboveground Storage Tanks
16. Transformers
17. Oil House
18. Sand Blast Shop

LEGEND

- FENCE
- EXISTING BULDING
- FORMER LOCATION OF DEMOLISHED BUILDING OR STRUCTURE
- A PHOTOGRAPH IDENTIFICATION AND ORIENTATION

LOCATIONS AND DIMENSIONS OF PHYSICAL STRUCTURES ARE APPROXIMATE

GERAGHTY & MILLER, INC.
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PHOTOGRAPH ORIENTATION

CONSOLIDATED RAIL CORPORATION
ELIZABETHPORT, NEW JERSEY

FIGURE
4

TIERRA-B-017517

APPENDIX A

DRAFT
REPORT FOR SITE INVESTIGATION AT THE CONRAIL ELIZABETHPORT YARD ELIZABETHPORT, NEW JERSEY

Submitted To:

Consolidated Rail Corporation
Philadelphia, PA

Submitted by:

O.H. Materials Corp.

Christopher C. Whallon
Manager, Geosciences

December 26, 1989
Project #7776

OHM Corporation

December 27, 1989

Mr. Craig Curry
Manager, Environmental Control
Consolidated Rail Corporation
Room 606
Six Penn Center
Philadelphia, PA 19103

Dear Mr. Curry:

RE: Draft Report for the Site Investigation Activities
at the Consolidated Rail Corporation (CONRAIL)
Facility in Elizabethport, New Jersey

Enclosed, please find for your review our report detailing subsurface activities at the above-referenced site. The report describes the investigative methodologies, results and recovery system installation performed at the site.

Any comments you may have will be incorporated in a revised report with additional copies being forwarded to you upon completion. Questions regarding the report can be directed to Jeff Weatherly or me at 609-987-0010.

Sincerely,

Michael S. Wilson
Project Engineer, NE Region

MSW/pah

Enclosure

pc: Bruce Allen
Jeff Weatherly
Project 7776

TABLE OF CONTENTS

1.0 INTRODUCTION

On October 6, 1988, O.H. Materials Corp. (OHM) submitted a proposal to perform an assessment of the Consolidated Rail Corporation (CONRAIL) in Elizabethport, New Jersey. The project scope was to identify potential environmental problems at the Elizabethport Yard and assess potential liabilities associated with the site. Potential problems onsite include the presence of asbestos, drums, transformers, tanks, cylinders, and oil-contaminated soils. On November 10, 1988, OHM performed a site visit and attended the on-site pre-bid meeting. The contract was awarded to OHM in June 1989.

The following sections describe the history of the Elizabethport Rail Yard and previous investigations performed at the site.

1.1 SITE HISTORY

The Elizabethport Rail Yard is situated on approximately 50 acres of low-lying land on the west shore of Newark Bay in Elizabethport, New Jersey. The facility is currently inactive, and was formerly operated by both CONRAIL and New Jersey Transit. On-site buildings include an engine house, power house, car repair shop, materials shipping and receiving building, and several small buildings that were used for offices, electrical shops, and fabrication shops.

Past activities at the site include storage, repair, and maintenance of locomotives and passenger cars, transfer of materials to and from rolling stock, and fabrication of parts for locomotive and passenger car repair.

1.2 PREVIOUS INVESTIGATIONS

As of this date, there is no information available regarding previous environmental investigations of the Elizabethport facility. However, approximately 10 ground-water monitoring wells were installed on the property. The well installations were probably an attempt to assess ground-water quality underneath the site.

The existing wells at the site have been observed for water level elevation; however, no analytical data is available to confirm any sampling previous to this assessment.

2.2.2 Site Drainage

The topographic low in the vicinity of the site suggests that the majority of the run-off and near-surface ground water channeled into this low area and then flowed along the northern border of the site to eventual discharge into Newark Bay. After urbanization of the area, most of the surface run-off was controlled by the city storm-sewer system.

2.2.3 Site Geology

The northwest third of Middlesex County lies in the Piedmont Province of the Appalachian Highlands. The major source of ground water for this area are the jointed and fractured rocks of the Triassic-aged Newark Group.

The southeastern two-thirds of the county lies in the Coastal Plain Province. Here the major water-bearing formations are the Cretaceous-aged, Potomac-Raritan-Magothy aquifer system. This system is composed of alternating layers of permeable sands and relatively impermeable clays, and has been hydrogeologically subdivided into lower, middle and upper aquifers. The most important aquifer in this system is the Old Bridge Sand Member of the Magothy Formation (upper aquifer). Of secondary importance is the Farrington Sand Member of the Raritan Formation (middle aquifer).

The Cretaceous units are, in many cases, overlain by alluvial deposits (silty to clean sands, gravels, and silty clays) of the Quaternary age. Within this area of the coastal plain, the Quaternary units (overburden aquifer) are intermittently coupled to the underlying Cretaceous systems (Section 2.2.4).

The Elizabethport Facility is located at the northeastern edge of the New Jersey Coastal Plain in an outcrop area of the Magothy Formation. The Merchantville-Woodbury, the confining bed for the upper aquifer, pinches out approximately 4 miles southeast of the site. Bedrock, the Triassic-aged Brunswick Formation of the Newark Group, lies at a depth of about 200 to 250 feet. The Magothy Formation is covered in some areas by thin deposits of Pleistocene-aged sand and gravel of the Cape May Formation, by Quaternary or Recent alluvium deposited on the floodplain of the Raritan River, and by beach and marsh deposits along the coast.

The Elizabethport Facility lies in the Piedmont province of the Appalachian Highlands. Bedrock beneath the site, sandstones and shales of the Triassic-aged Brunswick Formation of the Newark Group, is overlain by unconsolidated, poorly sorted Pleistocene-aged glacial till, and stratified drift.

2.2.4 Site Hydrogeology

The shales and sandstones of the Brunswick Formation are the main source of ground water in Union County. The Pleistocene deposits comprise one of the major local aquifers. Under favorable conditions, these deposits yield water in substantial quantities directly to wells and store precipitation and surface water for transmissal to underlying rocks. Where the deposits contain sand and gravel beds of significant extent and thickness, water yields are substantial.

2.2.5 Site Lithology/Soils

Bedrock beneath the site lies in depths of approximately 60 to 100 feet and is mantled by glacial till and stratified drift. Currently available subsurface information covers surface to a maximum depth of 22 feet in what is probably stratified drift deposits. This information indicates a lower confining bed of medium brown silty clay with traces of sand. This unit is overlain by 13 to 16 feet of black to medium-brown silty sand with traces of clay with coarser 2- to 4 foot thick beds of medium-brown silty sand and cobbles at the top of the unit. The surface unit contains a thin veneer of gravel overlying 4 to 9 feet of till composed of black medium-to-coarse grained sand with fine gravel, and a unit of loose black organic soil with medium-to-coarse grained sands and gravels.

3.0 SCOPE OF WORK

This section presents OHM's scope of work including the results of the site background search, field investigations performed, analytical results, analytical interpretations, and applicable regulatory implications that directly affect the current situation at the site.

3.1 SITE BACKGROUND SEARCH

The Elizabethport Rail Yard was formerly operated by both CONRAIL and New Jersey Transit as a storage and repair facility for freight and passenger locomotives, rolling stock, and passenger cars (Figure 2, Appendix A).

CONRAIL operations at the facility primarily consisted of locomotive repair, parts fabrication, and power generation for that portion of the rail yard. The number of spur tracks in the rail yard suggests that the yard was also used for storage, switching, and repair of active rolling stock.

New Jersey Transit operations at the facility appeared to be concentrated around the engine house and car repair shop. It appears New Jersey Transit used the facility primarily for the repair of locomotive passenger cars and the refurbishing of old passenger car rolling stock. Subsequent to operation of the facility by New Jersey Transit, CONRAIL leased part of the site to E-Rail Corporation and K-Line Trucking Company. The leased portion of the site was graded and paved by E-Rail. The leased area now sits 2 to 4 feet higher than the unleased portion.

Tires, demolition debris, appliances, wood, and scrap metal have been dumped on the unleased section of the property. Approximately 4,000 tires are currently located on the site, primarily adjacent to the engine house, shipping and receiving building, power house, and car-repair shop.

3.1.1 Permitting History and Records

Currently, information is not available regarding permits applied for, or granted to, CONRAIL concerning the Elizabethport facility.

3.1.2 Record of Interviews

In an attempt to gain additional information regarding previous operations at the site, OHM interviewed personnel in the engineering department of the still active portion of the Elizabethport Rail Yard and at the CONRAIL Real Estate office.

According to the personnel interviewed, an area northeast of the car-repair shop is currently proposed for the location of Kapowski Road by the City of Elizabeth.

Furthermore, most of the inactive buildings on the site are proposed for demolition and/or removal. The buildings proposed for demolition/removal include the signal tower at the east edge of the railyard, several old building foundations, the power house, and the materials shipping and receiving building. The 120,000-gallon storage tank adjacent to the power house is also proposed for removal, together with several aged supply sheds. The car-repair shop is also proposed for removal, but will remain temporarily during the demolition of the other buildings. Also, a building is proposed for construction across Third Street, west of the engine house.

3.2 FIELD INVESTIGATION

Field Investigation activities were conducted by OHM between October 10 and November 13, 1989. On-site activities included the collection of soil, water, and container (tank, drum) samples, container inventories, and sampling of pipe insulation for analysis. Field investigation activities are explained in more detail in the following section.

3.2.1 Investigation Rationale

OHM conducted field investigation activities, under direction by CONRAIL, to assess the potential environmental impact of the Elizabethport Railyard. Rationales for discrete investigative tasks were as follows:

- Pipe insulation samples were collected to identify the presence of asbestos.
- Surface soil samples were collected to determine the vertical and lateral extent of petroleum hydrocarbon (PHC) contamination, if any.
- Monitoring-well water samples were collected to ascertain whether any soil contamination, if present, had entered ground water beneath the site.
- Samples were collected from containers on site (drums, tanks) to determine the character and amount of the contents for future disposal, if warranted.
- Transformers and capacitors on-site were sampled to determine if polychlorinated biphenyls (PCBs) were present in the fluids.

3.2.2 Site Reconnaissance

Using the most recent maps available (supplied by CONRAIL Real Estate Division, Edison, New Jersey), full reconnaissance of the entire site was performed by OHM. Existing buildings were noted. Existing storage tanks were noted and the locations compared to a site map (Figure 6, Appendix A). Monitoring wells that could be located were noted and logged on a site map.

Sample locations were recorded on a separate site map. Previous locations of containers (before transfer and staging) were recorded on a site map for future reference.

3.2.3 Monitoring Well Evaluation

OHM located and logged water levels in existing monitoring wells that could be located and opened. A ground-water contour map is provided in Appendix A, Figure 5. A ground-water elevation table is provided in Appendix B, Table 11. A monitoring well location map is provided as Figure 3.

3.2.4 Topographic Survey

Although a survey of the site was not performed, OHM cross-checked current relative elevations of monitoring wells with existing USGS topographic data for the area. Since the assessment area was originally constructed using "cut-and-fill" techniques, and rail tracks were placed before, during, and after site development, accurate topographic survey data could not be generated due to missing topographic benchmarks.

3.2.5 Surface Soil Sampling

Surface and auger samples were collected in areas of suspected soil contamination or visually contaminated soil. Composite soil samples were collected along existing rail tracks south and east of the engine house, the tank berm east of the engine house, and the power house pump station. Grab samples were collected around the storage tank adjacent to the power house, the former hazardous-waste handling area, and the power house pump station. The samples were analyzed for total petroleum hydrocarbons (TPH) and priority pollutants. A total of 8 composite samples and 5 grab samples were collected for analysis (Figure 4).

3.2.6 Ground Water Sampling

OHM collected water samples from monitoring well (MW)-5, located immediately downgradient of the former hazardous-waste storage area to ascertain if past waste handling practices at the site had contaminated local ground water. The samples were analyzed for priority pollutants. Analytical results are provided in Table 2, Appendix B. An analytical summary is provided as Table 9.

Due to the absence of visible free product, odors, or measurable photoionization detector (PID) readings, none of the other monitoring wells were sampled during the field investigation.

3.2.7 Container Sampling

OHM collected samples from the storage tanks on site that contained material. A total of six tanks were sampled for compatibility analysis. Tanks numbered T05 and T06 were readily accessible without cutting. OHM confirmed that these tanks did not contain product and were not sampled. A complete listing of on-site tanks is provided in as Appendix C.

OHM collected and staged a total of forty-eight surface drums. These drums were sampled and analyzed for compatibility parameters. A field log for each drum was completed at the time of sampling. Each container was numbered with a unique number and these numbers were also placed on the sample jars, sample labels, and drum logs. Logs for each drum are provided in Appendix C.

3.2.8 Cylinder Inventory

OHM collected and staged eighteen cylinders. The cylinders were logged as to size, weight, type, volume, and legible markings. A complete listing of on-site cylinders is provided in Appendix C. Due to the unknown nature and deteriorated condition of many of the cylinders, OHM did not perform cylinder sampling.

3.2.9 Pipe Insulation Sampling

OHM collected samples of insulation from pipes adjacent to the engine house and adjacent to and inside the power house (Figure 4.1). Ten samples were collected and analyzed for the presence of friable asbestos using a polarizing microscope. Analytical results for these samples are presented in Section 4.3. Analytical results tables are provided in Appendix B, Table 4.

3.2.10 Transformer Sampling

OHM collected fluid samples from three transformer units adjacent to and west of the car repair shop and one capacitor inside the power house. These samples were analyzed for total PCBs. Analytical results for these samples are presented in Section 4.3. Analytical summary and results tables are provided in Appendix B, Table 5.

3.2.11 Water Sampling

OHM collected water samples from the front and rear sumps inside the engine house, the engine house basement, and the power house basement (Figure 4.1). These samples were analyzed for total petroleum hydrocarbons (TPH). Analytical results are provided in Table 3. An analytical summary is provided as Table 10.

3.3 ANALYTICAL RESULTS AND INTERPRETATIONS

This section will discuss all analytical results from sampling performed at the site, field screening techniques, and analytical methodologies used by the laboratory in determining the concentration of contaminants present, if any.

3.3.1 Analytical Methodologies

Contaminant concentrations, if any, were determined by two different general methods. During on-site sampling field screening with a PID was used to determine total organic vapor concentrations. Field screening was used as a guide for sampling personnel to determine the method of sampling, levels of protection to be used, and applicable decontamination procedures. Field screening also furnishes the laboratory with initial qualitative information regarding the sample. In this way, analytical procedures may be modified or substituted prior to analysis.

3.3.1.1 Field Screening

OHM personnel used field screening methods during sampling of the surface drums and tanks. Results of the field screening can be referred to on the log for each of the drums sampled. This data was useful in determining the proper level of protection for the sampling team, decontamination procedures and initial qualitative concentrations for reference by the laboratory. Please refer to Appendix C, Drum Inventory Logs and Tank Logs, for field screening information.

3.3.1.2 Laboratory Methods

The following laboratory methods were used for sample analysis:

- Total petroleum hydrocarbons (TPH)--Infrared spectroscopy (SW846, MTD 9071)
- Polychlorinated biphenyls (PCBs)--Gas chromatography (SW846, MTD 3540/8080)
- Inorganic metals (PP Metals)--Atomic Absorption (SW846, MTD 6010)
- Cyanides and phenolics (CN)--Distillation (SW846, MTD9010)
- Volatile Organics (VOA)--Gas chromatography (SW846, MTD 8240)
- Base Neutral/Acid Extractables (BNA)--Gas chromatography/mass spectroscopy (SW856, MTD 8270)
- Asbestos--Polarizing Microscopy

Compatibility Analyses:

- Physical state, color, clarity, water solubility (EPA RCRA)
- Air/water reactivity, pH, hexane solubility (EPA 600/4-84-038)
- Peroxide analysis, oxidizer test, cyanide screen, sulfide screen, bielstein test, flash point, PCB screen (EPA 600/4-84-038) and (SW846, MTD 1020)

3.3.2 Analytical Results

OHM collected samples of surface soil at the south side of the Engine house, north and east side of the Engine house, the former hazardous-waste handling area, north, south, east and west of the 120,000 gallon storage tank, south of the power house pump station, and the engine house storage tank berm. A total of 13 samples were collected for analysis. Analytical results are provided in Table 1. An analytical summary is provided as Tables 7 and 8.

3.3.2.1 Engine House - South Side

Analytical results from the composite soil sample collected from the south side of the engine house revealed TPH at a concentration of 45,800 milligrams per kilogram (mg/kg).

3.3.2.2 Engine House - East Side

Analytical results from the composite soil sample collected from the east side of the engine house revealed TPH at a concentration of 86,800 mg/kg.

3.3.2.3 Engine House - North Side

Analytical results from the composite soil sample collected from the north side of the engine house revealed TPH at a concentration of 166,000 mg/kg.

3.3.2.4 Former Hazardous-Waste Handling Area

OHM collected composite soil samples from 2 inches to 12 inches below grade, and a composite sample from the saturated soils above the shallow water table. Analytical results from the 2- to 12-inch sample revealed volatile organics at a concentration of 17.1 mg/kg, semi-volatiles at a concentration of 13.2 mg/kg, TPH at 26,070 mg/kg, and metals at a total concentration of 624 mg/kg. PCB's, pesticides, cyanide and phenols were not detected above their individual detection limits.

Analytical results for the composite soil sample above the water table revealed volatile organics at a concentration of 7.9 mg/kg, semi-volatiles at a concentration of 102 mg/kg, TPH at 26,070 mg/kg, and metals at a total concentration of 292 mg/kg. PCBs, pesticides, cyanide, and phenols were not detected above their individual detection limits.

3.3.2.5 Engine House Tank Berm

OHM collected one composite soil sample from selected locations along the engine house tank berm. Analytical results revealed TPH at a concentration of 86,700 mg/kg.

3.3.2.6 Power House Storage Tank

OHM collected surface soil grab samples from the north, south, east, and west sides of the 120,000-gallon storage tank adjacent to the power house.

Analytical results from the sample revealed TPH concentrations as follows: north side, 168,000 mg/kg; south side, 98,700 mg/kg; east side, 29,700 mg/kg; west side, 31,200 mg/kg.

3.3.2.7 Power House Pump Station

OHM collected one surface grab soil sample, one composite auger sample from 16 to 24 inches below grade, and one composite auger sample from 32 inches below grade to the top of the water table.

Analysis of the surface soil sample revealed TPH at a concentration of 15,700 mg/kg. The composite soil sample from 16 to 24 inches below grade showed TPH at a concentration of 22,600 mg/kg. The composite soil sample from 32 inches to the water table showed TPH at a concentration of 7,680 mg/kg. The decrease in contamination from 24 inches below grade to the water table may indicate dissolution and lateral migration of material once in contact with the water table.

3.3.2.8 Engine House Sumps

One composite water sample was collected from the front and rear first floor sumps inside the engine house. The sample had free product floating on top of what appeared to be rainwater. Only the water phase was analyzed. Analysis of the water phase of the sample revealed TPH at a concentration of 225 milligrams per liter (mg/l).

3.3.2.9 Engine House Basement

One water sample was collected from the basement of the engine house, which appeared to contain a significant amount of oil-like material. The sample had free product floating on top of what appeared to be rainwater. Only the water phase was analyzed. Analysis of the water phase revealed TPH at a concentration of 503 mg/l.

3.3.2.10 Power House Basement

One water sample was collected from the basement of the power house, which appeared to contain a significant volume of oil-like material. The sample was single-phase. Analysis of the sample revealed TPH at a concentration of 661,000 mg/l.

3.3.2.11 Monitoring Well No. 5

One water sample was collected from MW-5 for analysis. Analytical results for this well revealed TPH at a concentration of 1.7 mg/l, semi-volatiles at a concentration of 16 mg/l and metals at a total concentration of .38 mg/l. PCBs, pesticides, volatile organics, cyanide, and phenols were not detected above the individual detection limits.

3.3.2.12 Field Blank

Analysis of the field blank revealed no compounds above the detection limit.

3.3.2.13 Trip Blank

Analysis of the trip blank revealed no compounds above the detection limit.

3.3.2.14 Power House Pipes

Seven pipe insulation samples were collected from inside the power house and one sample was collected from a pipe outside the power house. The samples were analyzed for the presence of asbestos.

Analysis of the power house samples revealed at least 20 percent asbestos in all the samples. This asbestos was identified as either chrysotile or amosite.

3.3.2.15 Engine House Pipe

One pipe insulation sample was collected from the engine house warming pipe. Analysis of this sample was negative for the presence of asbestos.

3.3.2.16 Power House Tank

One pipe insulation sample was collected from the pipe leading from the 120,000-gallon tank into the power house pump station. Analysis of this sample revealed 35 percent amosite asbestos.

3.3.2.17 Transformer Results

OHM located and marked three off-line transformers and one capacitor for sampling. The transformers are presently located on the west side of the car-repair shop, adjacent to the building. The capacitor is presently located inside the power house.

OHM collected samples of fluid from each of the transformers adjacent to the car-repair shop and analyzed the fluid for the presence of polychlorinated biphenyls (PCBs).

Analysis of transformer samples T001, T002, and T003 revealed PCBs at concentrations of 161,000 micrograms per liter (ug/l), 163,000 ug/l, and 133,000 ug/l respectively.

OHM collected one fluid sample from the capacitor inside the power house. The fluid from the capacitor was analyzed for the presence of PCBs.

Analysis of the sample (No. T004) revealed no PCBs over the detection limit.

At present, these transformers are secured behind an, 8-feet high fence. Soils beneath the transformers are stained and discolored, most likely due to spillage of transformer fluid. Visual inspection of these soils revealed staining to an approximate depth of 1 foot. Although soils beneath the transformers were not sampled for analysis, it is reasonable to assume that the soil is contaminated with the same compounds found in the transformer fluid.

3.3.2.18 Container Results

OHM collected representative samples of material from 48 drums and 6 tanks on site. The samples were analyzed for wastestream characteristics to determine the appropriate disposal category for the material in each container.

Analysis of the drum samples classified 41 drums as organic liquid, 4 drums as base/neutral liquid and 3 drums as organic solid. Nine of the 48 drums were 2-phase. In all cases, the second (upper) phase was classified as base-neutral liquid. This layer is most likely rainwater since some of the drums were open or in poor condition at the time of sampling.

Analysis of the tank samples classified 2 tanks as base-neutral liquid, 1 tank as flammable organic liquid and 3 tanks as organic liquid. The three tanks classified as organic liquid were 2-phase. In all cases, the second (upper) phase was classified as base-neutral liquid. This layer is most likely rainwater since these three tanks were found open at the time of sampling.

3.4 REGULATORY IMPLICATIONS

This section will discuss current federal, state, and local regulations that apply to the Elizabethport Facility. This section takes into account that CONRAIL is a federally-subsidized railroad.

3.4.1 Applicable Federal Regulations

Current pertinent federal (U.S. EPA) regulations (CERCLA/SARA, RCRA, TSCA) may not apply to federally-subsidized corporations. In this case, federal regulations may not be applicable to the Elizabethport Facility, although federally-subsidized and Department of Defense (DOD) facilities have in the past been requested to comply with the intentions of the regulations.

3.4.2 Applicable State Regulations

Current state (NJDEP) regulations do not apply to the Elizabethport Facility unless the property is sold. Pertinent NJDEP regulations will apply to the Elizabethport Facility at the time the property deed is transferred out of CONRAIL ownership.

If the Elizabethport Facility is planned for sale, OHM recommends addressing the property to comply with NJDEP regulations. In this way, if the property is to be sold, and a Negative Declaration is obtained for NJDEP review and approval, and the property may then be transferred without further regulatory liability, under the specific provisions of the Negative Declaration.

3.4.3 Applicable Local Regulations

Current pertinent local (county) regulations do not apply to federally-subsidized corporations. In this case, local regulations are not applicable to the Elizabethport Facility. These regulations are usually enforced by the state agency.

4.0 CONCLUSIONS AND RECOMMENDATIONS

This section will discuss OHM's conclusions regarding the Elizabethport facility, recommendations for corrective actions that may be implemented at the facility, and a scope of work and estimated costs associated with the recommended remedial actions.

4.1 CONCLUSIONS

Based on visual reconnaissance of the site and analytical results from the multimedia sampling program, OHM has formed the following conclusions:

- Soils around the engine house, tank berm, pump station, hazardous-waste handling area and 120,000-gallon storage tank are contaminated with petroleum hydrocarbon compounds, at the surface at at-depth.
- Significant volumes of water collected in the basements of the power house, engine house, and the engine house sumps is contaminated with petroleum hydrocarbon compounds.
- Pipe insulation inside the power house and adjacent to the 120,000-gallon storage tank contains friable asbestos.
- Three transformers adjacent to the car-repair shop contain PCB-laden fluids. Soil adjacent to these transformers is grossly contaminated with transformer fluid.
- Forty-eight drums are currently staged on site which contain waste material.
- The 120,000-gallon tank and four other tanks on site have been determined to contain materials classified as organic liquid.
- Eighteen compressed gas cylinders are currently staged on site, an undetermined number have contents.
- Approximately twenty-five empty drums are currently staged on site.
- Four drums have recently appeared at the site, after completion of OHM's sampling program. These drums are staged and secured and await sampling and analysis.

- MW-5 contains low levels of petroleum hydrocarbons, semi-volatiles, and metals.

- Soils in the former hazardous-waste handling area contain volatile organics, base/neutral compounds and metals, both at the surface and at depth.

- An estimated 64 cubic feet (2.3 cubic yards) of soil beneath and adjacent to the car-repair shop transformers is visually contaminated, presumably with transformer fluid. This contamination has been found to extend vertically to a depth of 1 foot.

In most cases, reported contaminant concentrations exceed the current NJDEP Guidelines for evaluating possible Environmental Cleanup Responsibility Act (ECRA) cleanup requirements. Although state cleanup regulations do not apply to facilities owned by federally-subsidized corporations, these guidelines will apply if the property is sold.

4.2 RECOMMENDATIONS

In order to prepare the property for possible future sale, OHM recommends remedial actions at the site to comply with NJDEP guidelines, and to reduce future liability under state regulations. Possible remedial actions include, but are not limited to, remediation of contaminated soils, water, asbestos-containing materials, transformers, and containers on site. Remediation of these areas will aid in compliance with current state regulations and will prepare the property for possible future sale, if desired. OHM has prepared the following remedial scope of work for possible implementation at the Elizabethport facility.

4.2.1 Scope of Work for Remediation

The following scope of work addresses areas of potential liability under state regulations, and will prepare the facility for future sale, if desired. Each area to be addressed is discussed separately.

4.2.1.1 Engine House

OHM recommends excavation of visually-contaminated soils adjacent to, and on all sides of, the engine house, including the tank berm, to a depth estimated at 3 feet, or until contamination is no longer visible. This material will be transported off-site and disposed. It is estimated that approximately 4,000 cubic yards of soil will be excavated.

Oil and water collected in the engine house basement and sumps will be pumped out and processed through an oil/water separator to remove the free-phase product. The quality of the processed water shall be monitored to assure efficient removal of floating product. Processed water will be sampled and analyzed for petroleum hydrocarbons. If analytical data is satisfactory, the water will be discharged. Free product will be collected and sent off site to a local oil reclamation facility. Water and oil found in the power house basement is included in this task for treatment in conjunction with the engine house material. It is estimated that approximately 123,000 gallons of water will be treated.

4.2.1.2 Former Hazardous-Waste Handling Area

OHM proposes excavation by scraping the soils in this area to an estimated depth of 18 inches (to the shallow water table) to remove visible petroleum hydrocarbon contamination. It is estimated that approximately 4,000 cubic yards of soil will be excavated in this task.

4.2.1.3 Power House

OHM recommends excavation of soils around the 120,000-gallon storage tank and the power house pump station to an estimated depth of 4 feet to remove grossly contaminated soils. An estimated 4,000 cubic yards of soil will be removed and disposed off site.

4.2.1.4 Pipe Insulation

OHM recommends removal of all pipe insulation identified as containing asbestos from inside the power house and 120,000-gallon tank pipe. A workplan and cost estimate for the removal and disposal of this material will be submitted at the request of CONRAIL.

4.2.1.5 Car-Repair Shop

Approximately 400 gallons of transformer fluid remains inside the transformers adjacent to the car-repair shop. OHM proposes to drain, remove, and dispose of the fluids, transformers and associated contaminated soils (estimated at 2.3 cubic yards). A workplan and cost estimate for this task will be submitted at the request of CONRAIL.

4.2.1.6 Tanks and Drums

OHM proposes to bulk all compatible materials into tank trucks. Each wastestream will be transported off site and disposed. An estimated 170,000 gallons of material will be disposed. Empty drums will be deheaded, crushed, and transported off site for disposal.

4.2.2 Estimated Remedial Costs

This cost estimate is based upon the pre-approved rates for CONRAIL dated June 30, 1987. Options for transportation and disposal (T&D) are presented in unit cost, where possible. All OHM on-site operations are based on a time-and-materials estimate for personnel and equipment.

Service		Estimated Cost
Soil excavation (Estimated 13 days)		
Personnel		$ 46,208
Per Diem		11,520
Equipment		24,600
Expendables		1,248
	Subtotal	$ 83,576
Water Treatment (Estimated 13 days)		
Personnel		21,320
Per Diem		5,200
Equipment		33,788
Expendables		1,120
	Subtotal	$ 61,428
Drum /Tank Material Bulking (Estimated 16 days)		
Personnel		41,344
Per Diem		7,680
Equipment		27,552
Expendables		3,960
	Subtotal	$ 80,536
	Grand Total	$225,540

4.2.3 Transportation and Disposal Estimated Costs

Material	Service	Unit Price	Destination
Soil with PHC	Transportation	$ 78.00/ton	Pinewood, SC
Soil with PHC	Disposal	$ 78.00/ton	Pinewood, SC

Material	Service	Unit Price	Destination
Oil/Water Mixture (50%)	Transportation	$500.00/load	Clayton, NJ
Oil/Water Mixture (50%)	Disposal	$ 0.50/gallon +$ 40.00/load	Clayton, NJ
Drummed Waste			
Drummed Waste Organic Liquid/Solid	Transportation	$600.00/load +$ 0.15/mile	Emelle, AL
Drummed Waste Organic Liquid/Solid	Disposal	$ 0.25/lb	Emelle, AL

4.3 QUALIFICATIONS

OHM's cost estimate is based on the following conditions and qualifications:

- OHM and its subcontractors will be given complete site access by CONRAIL.
- During excavation activities, OHM will not be responsible for damage to poorly-marked or unmarked utilities.
- OHM will increase its Year-1 personnel rates by 8 percent, Year-1 equipment rates by 6 percent, and Year-1 expendable rates by 10 percent.
- Per Diem rates are increased to $80.00/day/person, versus the Year-1 rate of $75.00/day/person.
- Unit T&D prices for TPH-contaminated soil are based on an estimated volume of 15,000 cubic yards.
- Unit T&D prices for waste oil are based on a 50 percent oil/water mixture and $40.00 charge per load for verification.
- This estimate is valid for 30 days; acceptance thereafter is subject to approval by OHM.

APPENDIX A

MAPS

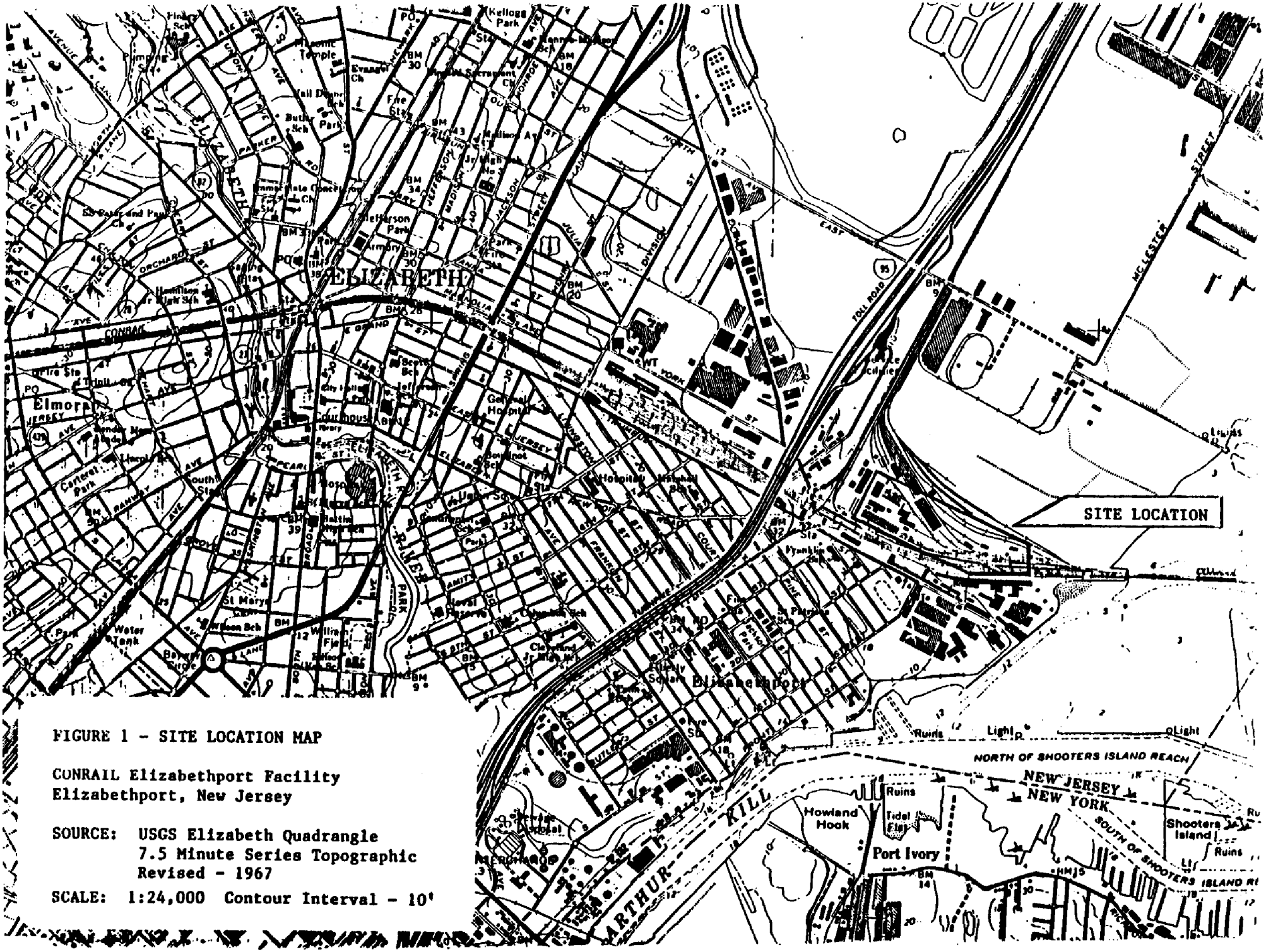


FIGURE 1 - SITE LOCATION MAP

CONRAIL Elizabethport Facility
Elizabethport, New Jersey

SOURCE: USGS Elizabeth Quadrangle
7.5 Minute Series Topographic
Revised - 1967

SCALE: 1:24,000 Contour Interval - 10'

TIERRA-B-017542

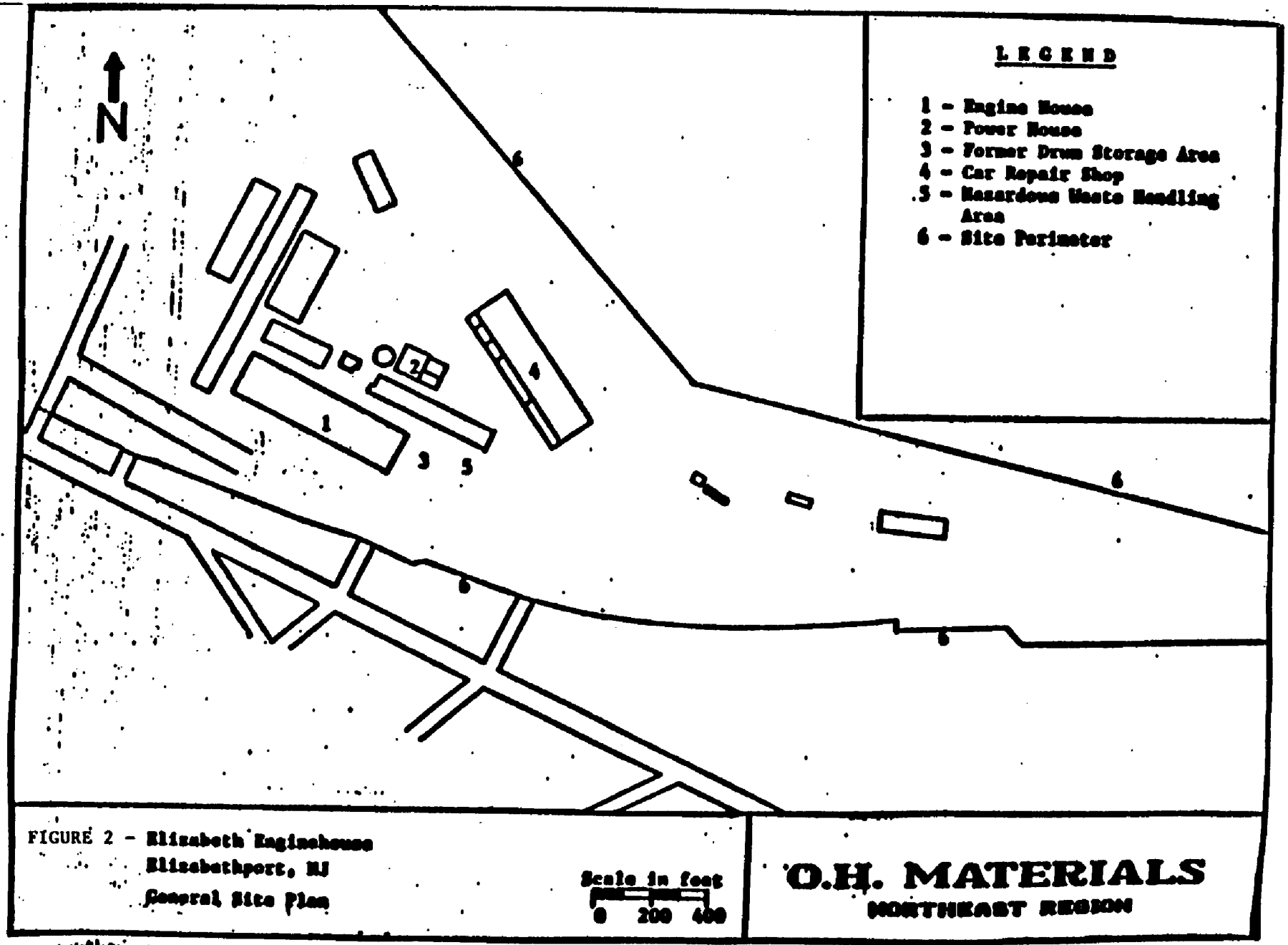


FIGURE 2 - Elizabeth Enginehouse
Elizabethport, NJ
General Site Plan

O.H. MATERIALS
NORTHEAST REGION

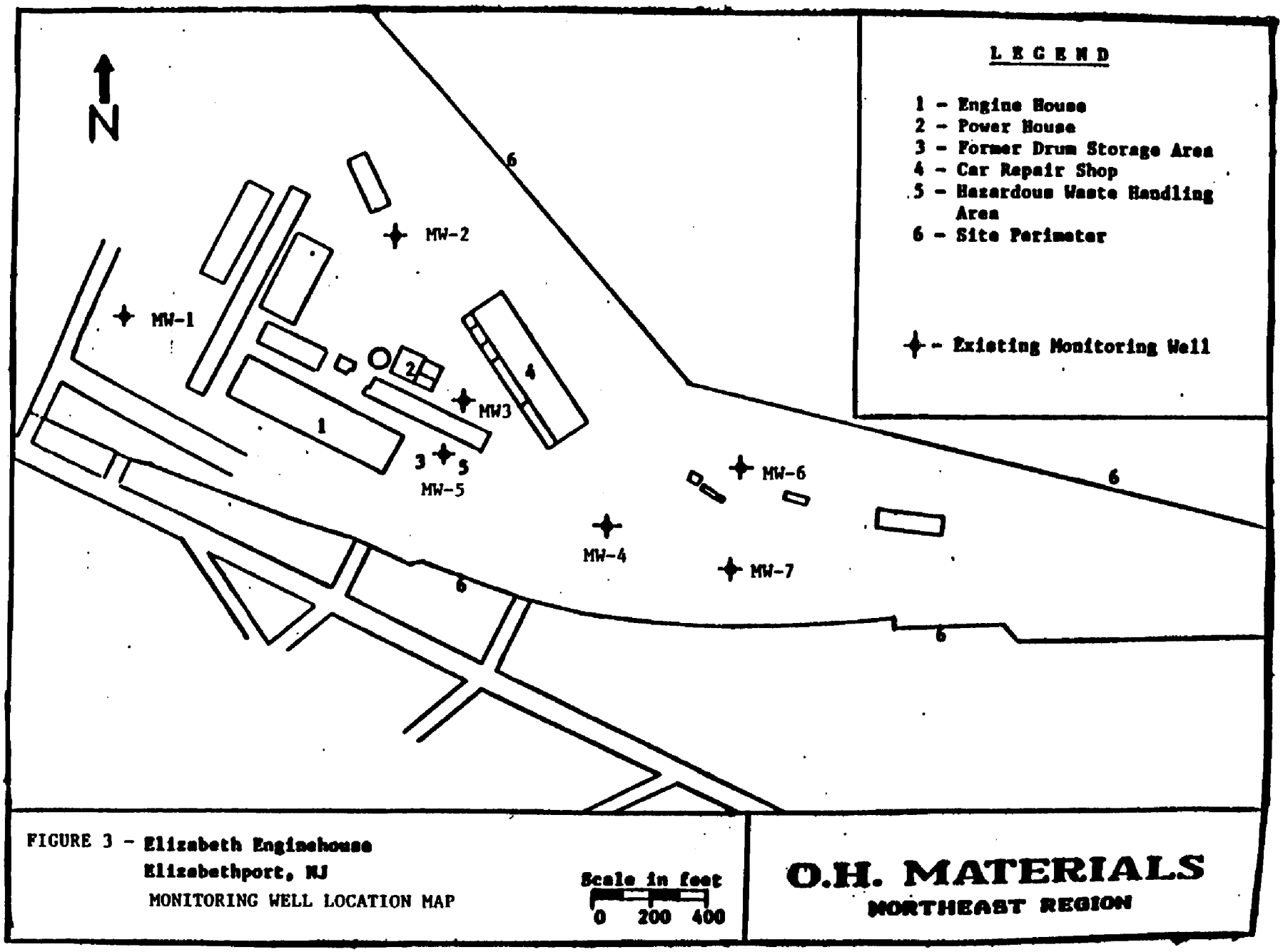
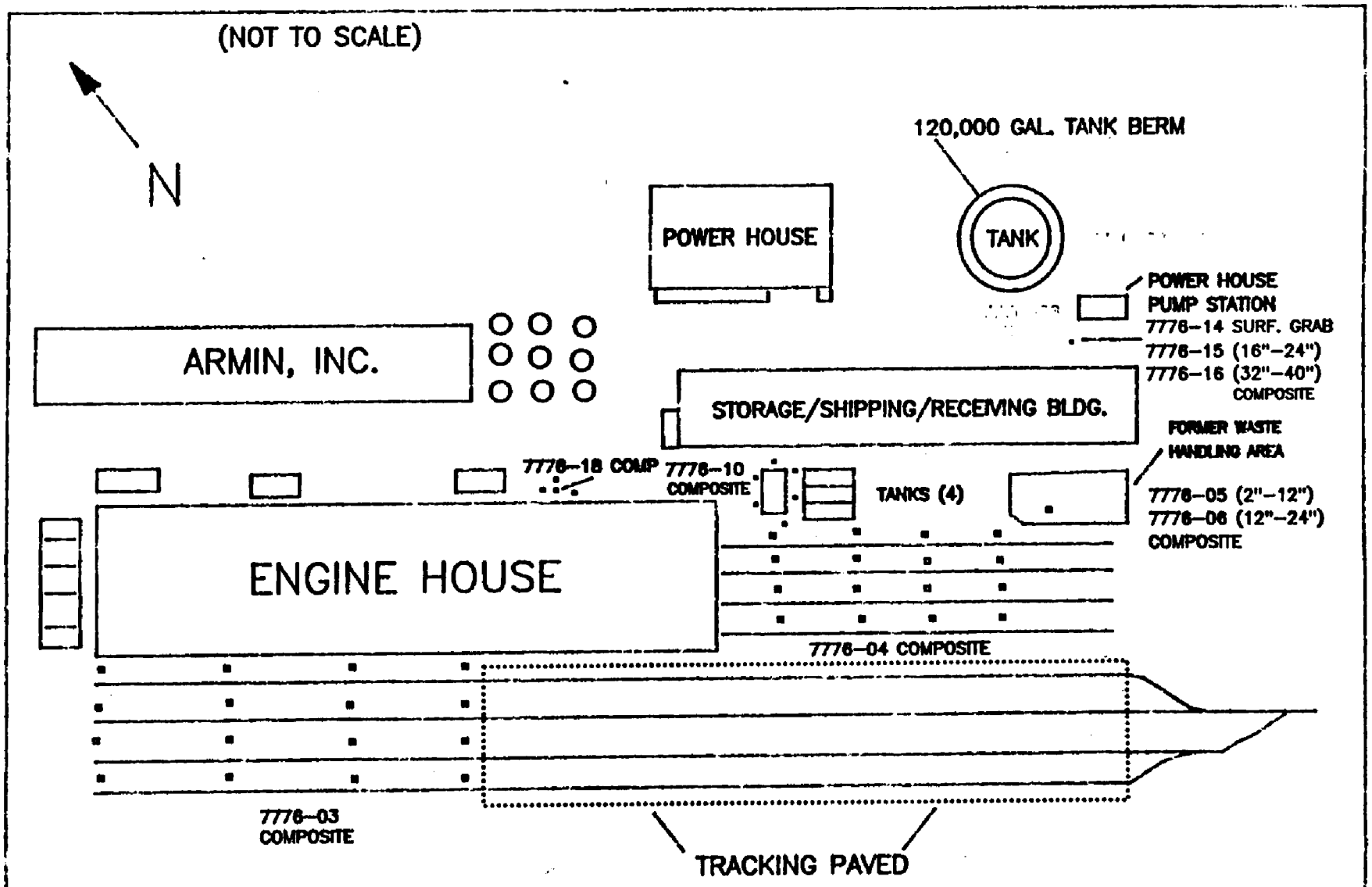
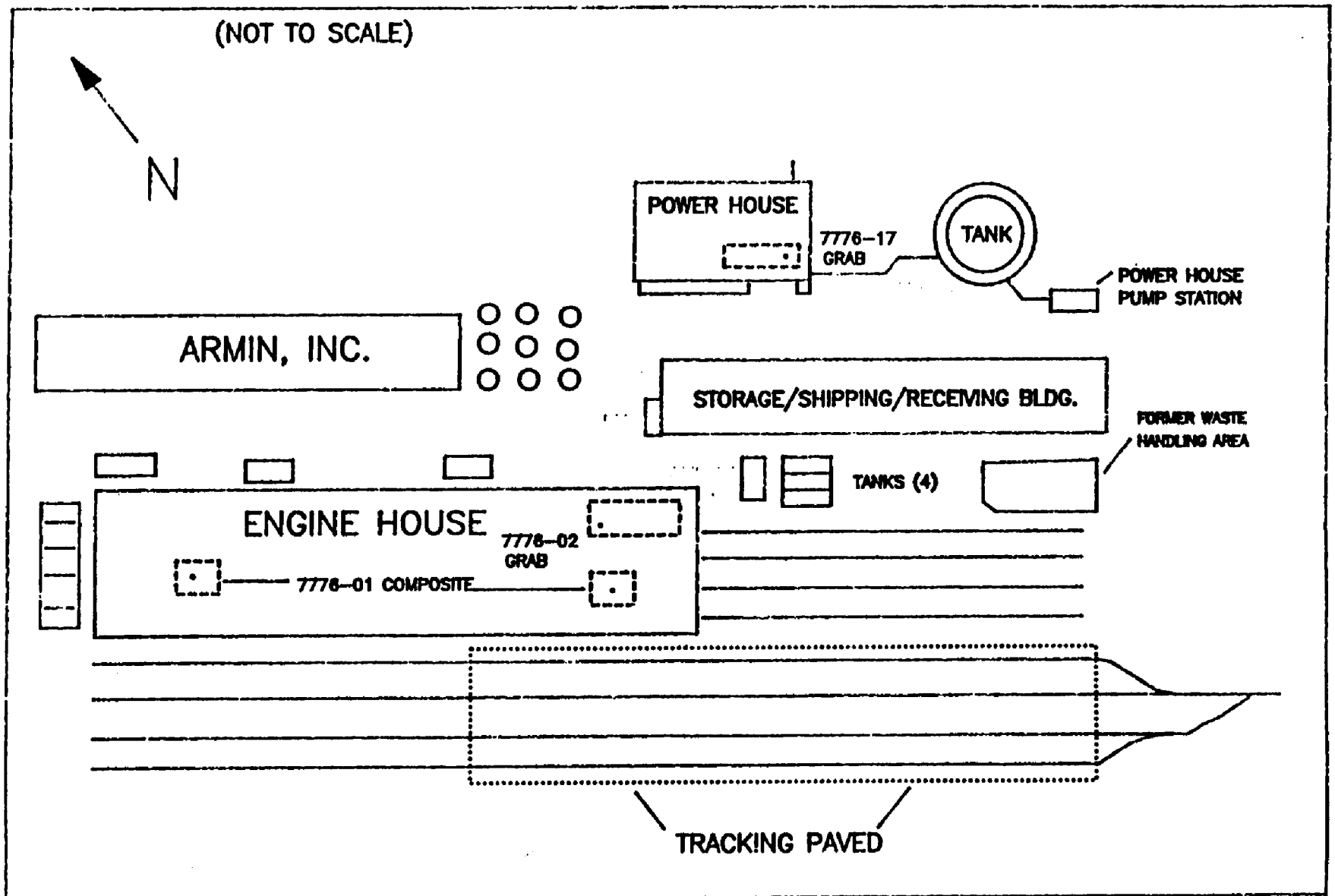


FIGURE 3 - Elizabeth Enginehouse
Elizabethport, NJ
MONITORING WELL LOCATION MAP

O.H. MATERIALS
NORTHEAST REGION



O.H.M. CORPORATION NORTHEAST REGION	CONRAIL ELIZABETHPORT FACILITY FIGURE 4 – SOIL SAMPLE LOCATION MAP



O.H.M. CORPORATION
NORTHEAST REGION

CONRAIL ELIZABETHPORT FACILITY

FIGURE 4.1 – WATER AND INSULATION SAMPLE LOCATION MAP

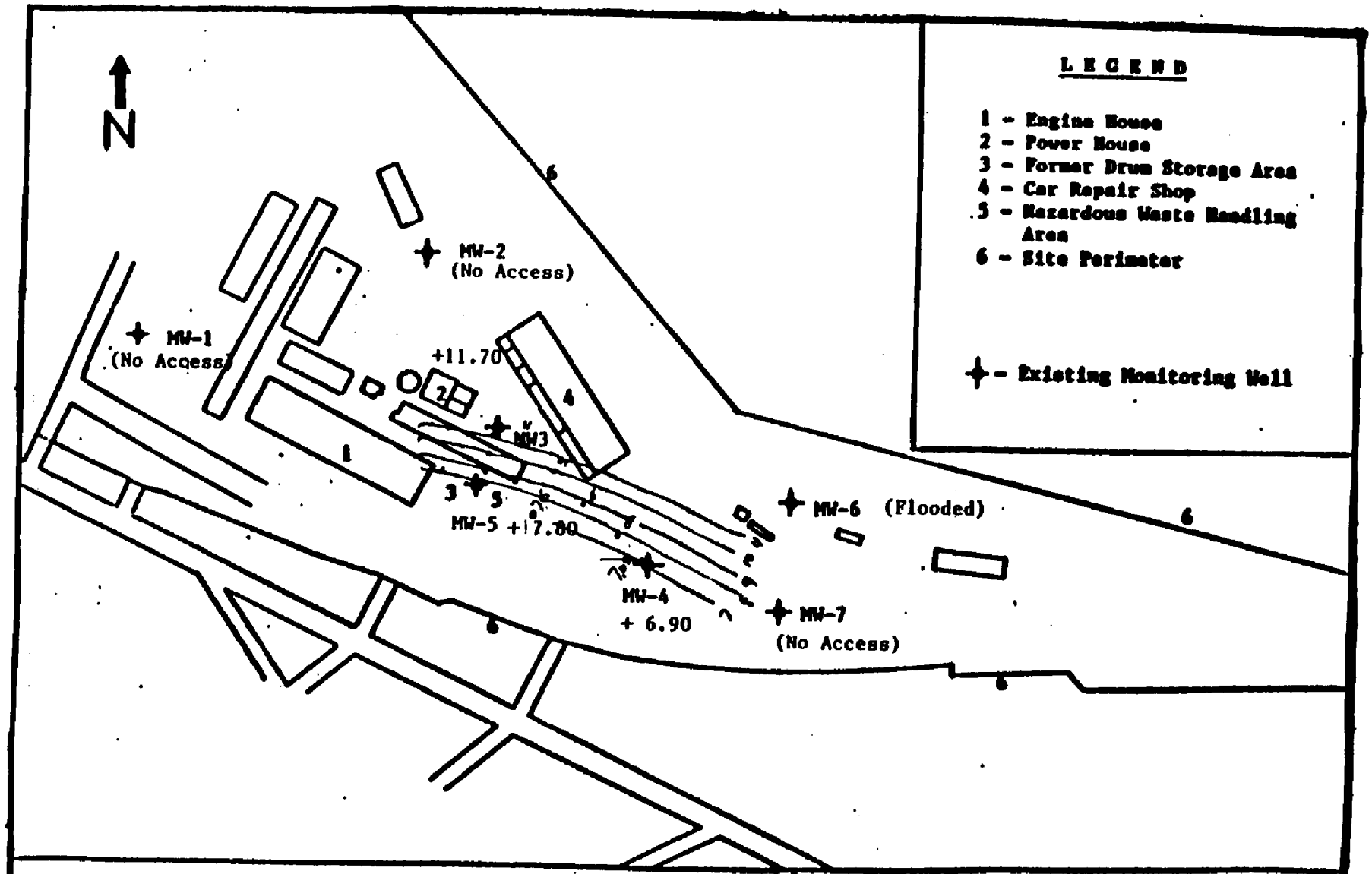


FIGURE 5 - Elizabeth Enginehouse
Elizabethport, NJ
GROUND WATER LEVEL MAP - 11/13/89

O.H. MATERIALS
NORTHEAST REGION

APPENDIX B

TABLES

TABLE 1

ANALYTICAL RESULTS
(SOILS)
10/22/89

COMPOUND	7776-03	7776-04	7776-05	7776-06	7776-08	7776-09	NJDEP CLEAN-UP GUIDELINES (SOIL)
METALS (ppm):							
Antimony	NA	NA	ND	ND	NA	NA	
Arsenic	NA	NA	16.5	4.12	NA	NA	20
Beryllium	NA	NA	ND	ND	NA	NA	
Cadmium	NA	NA	ND	2.15	NA	NA	3.0
Chromium	NA	NA	27	2.85	NA	NA	100
Copper	NA	NA	138	23.8	NA	NA	170
Lead	NA	NA	210	49.3	NA	NA	250-1000
Mercury	NA	NA	ND	ND	NA	NA	1.0
Nickel	NA	NA	33.2	6.15	NA	NA	100
Selenium	NA	NA	17.3	1.78	NA	NA	4.0
Silver	NA	NA	ND	ND	NA	NA	5.0
Thallium	NA	NA	ND	ND	NA	NA	
Zinc	NA	NA	182	202	NA	NA	350
Cyanide (Total)	NA	NA	ND	ND	NA	NA	
Phenols (Total)	NA	NA	ND	ND	NA	NA	
TOTAL PETROLEUM HYDROCARBONS: (ppm)	45,800	86,800	24,330	26,070	98,700	29,700	100
BASE/NEUTRALS (ppm):							
Total	NA	NA	13.2	101.5	NA	NA	10
VOLATILE ORGANICS (ppb):							
Total	NA	NA	17.1	7.8	NA	NA	1000
PESTICIDES (ppm):	NA	NA	ND	ND	NA	NA	
Total							
PCBs (ppm):	NA	NA	ND	ND	NA	NA	
Total							

ND = not detected
NA = not analyzed

TABLE 1
CONTINUED

ANALYTICAL RESULTS
(SOILS)
10/22/89

COMPOUND	7776-10	7776-11	7776-12	7776-14	7776-15	7776-16	7776-18	NJDEP CLEAN-UP GUIDELINES (SOIL)
METALS (ppm):								
Antimony	NA	NA	NA	NA	NA	NA	NA	
Arsenic	NA	NA	NA	NA	NA	NA	NA	20
Beryllium	NA	NA	NA	NA	NA	NA	NA	
Cadmium	NA	NA	NA	NA	NA	NA	NA	3.0
Chromium	NA	NA	NA	NA	NA	NA	NA	100
Copper	NA	NA	NA	NA	NA	NA	NA	170
Lead	NA	NA	NA	NA	NA	NA	NA	250-1000
Mercury	NA	NA	NA	NA	NA	NA	NA	1.0
Nickel	NA	NA	NA	NA	NA	NA	NA	100
Selenium	NA	NA	NA	NA	NA	NA	NA	4.0
Silver	NA	NA	NA	NA	NA	NA	NA	5.0
Thallium	NA	NA	NA	NA	NA	NA	NA	
Zinc	NA	NA	NA	NA	NA	NA	NA	350
Cyanide (Total)	NA	NA	NA	NA	NA	NA	NA	
Phenols (Total)	NA	NA	NA	NA	NA	NA	NA	
TOTAL PETROLEUM HYDROCARBONS: (ppm)	86,700	168,000	31,200	15,700	22,600	7,680	166,000	100
BASE/NEUTRALS (ppm):								
Total	NA	NA	NA	NA	NA	NA	NA	10
VOLATILE ORGANICS (ppb):								
Total	NA	NA	NA	NA	NA	NA	NA	1000
PESTICIDES (ppm):	NA	NA	NA	NA	NA	NA	NA	
Total								
PCBs (ppm):	NA	NA	NA	NA	NA	NA	NA	
Total								

ND = not detected
NA = not analysed

TABLE 2

ANALYTICAL RESULTS
(Monitoring Well 5)
(11/04/89)

COMPOUND	MW-5 (005)	FIELD BLANK (FBVOA)	TRIP BLANK (TBVOA)	NJDEP CLEAN-UP GUIDELINES (WATER-ppb)
METALS (ppb):				
Antimony	ND	NA	NA	
Arsenic	ND	NA	NA	50
Beryllium	ND	NA	NA	
Cadmium	ND	NA	NA	10
Chromium	60	NA	NA	50
Copper	ND	NA	NA	1000
Lead	60	NA	NA	50
Mercury	ND	NA	NA	2.0
Nickel	90	NA	NA	
Selenium	ND	NA	NA	10
Silver	ND	NA	NA	50
Thallium	ND	NA	NA	
Zinc	168	NA	NA	5000
Total Cyanide (ppb):	ND	NA	NA	
Total Phenols (ppb):	ND	NA	NA	
TOTAL PETROLEUM HYDROCARBONS: (ppb)	1,700	NA	NA	1000
BASE/NEUTRALS (ppb):				
Total	25	NA	NA	50
pH (Total pH Units):	NA	NA	NA	
VOLATILE ORGANICS (ppb):				
Total	ND	ND	ND	10
PCB (ppb):				
Total	ND	NA	NA	
PESTICIDES (ppb):				
Total	ND	NA	NA	

ND = not detected
NA = not analyzed

TABLE 3

ANALYTICAL RESULTS
(WATERS)
10/22/89

COMPOUND	7776-01 Engine House	7776-02 Engine House	7776-17 Power House	NJDEP CLEAN-UP GUIDELINES (WATER)
METALS (ppb):				
Antimony	NA	NA	NA	
Arsenic	NA	NA	NA	50
Beryllium	NA	NA	NA	
Cadmium	NA	NA	NA	10
Chromium	NA	NA	NA	50
Copper	NA	NA	NA	1000
Lead	NA	NA	NA	50
Mercury	NA	NA	NA	2.0
Nickel	NA	NA	NA	
Selenium	NA	NA	NA	10
Silver	NA	NA	NA	50
Thallium	NA	NA	NA	
Zinc	NA	NA	NA	5000
Cyanide (Total)	NA	NA	NA	200
Phenols (Total)	NA	NA	NA	
TOTAL PETROLEUM HYDROCARBONS: (ppm)	225	503	661,000 *	1.0
BASE/NEUTRALS (ppm):				
Total	NA	NA	NA	50
VOLATILE ORGANICS (ppb):				
Total	NA	NA	NA	10
PESTICIDES (ppm):	NA	NA	NA	
Total				
PCBs (ppm):	NA	NA	NA	.001
Total				

ND = not detected
NA = not analyzed
* = analyzed and reported as a solid based on sample viscosity

TABLE 4

ANALYTICAL RESULTS
(PIPE INSULATION)
10/12/89

SAMPLE #	LOCATION	% ASBESTOS
P-001	Outside Power House	95 %
P-002	Power House Platform	65 %
P-003	Power House Condensor Pipe	70 %
P-004	Power House Stack #2	70 %
P-005	Power House Boiler Pipe #2	50 %
P-006	Power House Stack #1	80 %
P-007	Power House Joiner Pipe #2	20 %
P-008	Power House Joiner Pipe #1	20 %
7776-07	Engine House Warming Pipe	ND
7776-13	Power House Tank Pipe	35 %

ND = Not detected

TABLE 5

ANALYTICAL RESULTS
(TRANSFORMERS)
10/11/89

SAMPLE #	LOCATION	PCB (Total-ppb)
T-001	Car Repair Shop	161,000
T-002	Car Repair Shop	163,000
T-003	Car Repair Shop	133,000
T-004	Inside Power House	ND

ND = not detected

TABLE 6

ANALYTICAL RESULTS
(COMPATIBILITY)
10/31/89

SAMPLE #	COMPATIBILITY CATEGORY
001	Organic Liquid
002	Organic Liquid
003	Organic Liquid
004	Base Neutral Liquid
005	Organic Liquid
006	Base Neutral Liquid
007	Organic Liquid
008	Organic Liquid
009	Organic Liquid
010	Organic Liquid
011	Organic Liquid
012	Organic Liquid
013	Organic Liquid
014	Organic Liquid
015	Organic Solid
016	Organic Solid
017	Base Neutral Liquid
018	Organic Liquid
019	Organic Solid
020	Organic Liquid
022	Organic Liquid
023	Organic Liquid
024	Organic Liquid
025	Organic Liquid
026	Organic Liquid
027	Organic Liquid
028	Organic Liquid
029	Organic Liquid
030	Organic Liquid
031	Organic Liquid
032	Organic Liquid
033	Organic Liquid
034	Organic Liquid
035	Organic Liquid
036	Organic Liquid
037	Organic Liquid
038	Organic Liquid
039	Organic Liquid
040	Organic Liquid
041	Organic Liquid
042	Base Neutral Liquid
043	Organic Liquid

TABLE 6 CONTINUED

ANALYTICAL RESULTS
(COMPATIBILITY)
10/31/89

SAMPLE #	COMPATIBILITY CATEGORY
044	Organic Liquid
045	Organic Liquid
046	Organic Liquid
047	Organic Liquid
048	Organic Liquid
T01	Base Neutral Liquid
T02	Base Neutral Liquid
T03	Organic Liquid
T04	Organic Liquid
T07	Organic Liquid
T08	Flammable Organic Liquid

APPROXIMATE VOLUMES BY CATEGORY:

Organic Liquid --	12,175 gallons
Base Neutral Liquid --	1,765 gallons
Flam. Organic Liquid --	500 gallons
Organic Solid/Sludge --	165 gallons

NOTE: Does not include material in 120,000 gallon tank or drums to be sampled

TABLE 7

ANALYTICAL SUMMARY
(SOILS)
10/22/89

COMPOUND	7776-03	7776-04	7776-05	7776-06	7776-08	7776-09
METALS (ppm):						
Antimony			ND	ND		
Arsenic			16.5	4.12		
Beryllium			ND	ND		
Cadmium			ND	2.15		
Chromium			27	2.85		
Copper			138	23.8		
Lead			210	49.3		
Mercury			ND	ND		
Nickel			33.2	6.15		
Selenium			17.3	1.78		
Silver			ND	ND		
Thallium			ND	ND		
Zinc			182	202		
Cyanide (Total)			ND	ND		
Phenols (Total)			ND	ND		
TOTAL PETROLEUM HYDROCARBONS: (ppm)	45,800	86,800	24,330	26,070	98,700	29,700
BASE/NEUTRALS (ppm):						
Total			13.2	101.5		
VOLATILE ORGANICS (ppb):						
Total			17.1	7.8		
PESTICIDES (ppm):			ND	ND		
Total						
PCBs (ppm):			ND	ND		
Total						

ND = not detected

TABLE 8

ANALYTICAL SUMMARY
(SOILS)
10/22/89

COMPOUND	7776-10	7776-11	7776-12	7776-14	7776-15	7776-16	7776-18
TOTAL PETROLEUM HYDROCARBONS: (ppm)	86,700	168,000	31,200	15,700	22,600	7,680	166,000

TABLE 9

ANALYTICAL SUMMARY
(Monitoring Well 5)
(11/04/89)

COMPOUND	MW-5 (005)	FIELD BLANK (FBVOA)	TRIP BLANK (TBVOA)
METALS (ppb):			
Antimony	ND		
Arsenic	ND		
Beryllium	ND		
Cadmium	ND		
Chromium	60		
Copper	ND		
Lead	60		
Mercury	ND		
Nickel	90		
Selenium	ND		
Silver	ND		
Thallium	ND		
Zinc	168		
Total Cyanide (ppb):	ND		
Total Phenols (ppb):	ND		
TOTAL PETROLEUM HYDROCARBONS: (ppb)	1,700		
BASE/NEUTRALS (ppb):			
Total	25		
pH (Total pH Units):			
VOLATILE ORGANICS (ppb):			
Total	ND	ND	ND
PCB (ppb):			
Total	ND		
PESTICIDES (ppb):			
Total	ND		

ND = not detected

TABLE 10

ANALYTICAL SUMMARY
(WATERS)
10/22/89

COMPOUND	7776-01 Engine House	7776-02 Engine House	7776-17 Power House
TOTAL PETROLEUM HYDROCARBONS: (ppm)	225	503	661,000 *

* = analyzed and reported as a solid based on sample viscosity

TABLE 11

STATIC WATER ELEVATIONS, 11/89
ELIZABETHPORT FACILITY

WELL #	CASING ELEVATION	DEPTH TO WATER	WATER ELEV.
W-1	+ 17.0	N/A	N/A
W-2	+ 14.4	N/A	N/A
W-3	+ 17.1	+ 5.40	+ 11.70
W-4	+ 11.8	+ 4.90	+ 6.90
W-5	+ 14.9	+ 7.10	+ 7.80
W-6	------	------	-------
W-7	+ 8.6	N/A	N/A

N/A = NO ACCESS TO WELL HEAD

--- = AREA FLOODED

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
John J. Trela, Ph.D., Acting Director
401 East State St.
CN 028
Trenton, N.J. 08625
609 - 633 - 1408

M E M O R A N D U M

TO: Albert Pleva, Acting Section Chief
Bureau of Planning and Assessment

THROUGH: Neil Jiorle, Acting Section Chief
Bureau of Planning and Assessment

SEP 0 1 1987

FROM: Robert Beretsky, HSMS IV
Bureau of Planning and Assessment

SUBJECT: SAMPLING PLAN FOR THE CONRAIL ELIZABETHPORT FACILITY

PROPOSED SAMPLING DATE: 9/2/87

COMMENTS:
The Conrail Elizabethport facility consists of several thousand acres off of Trumbull St., in Elizabeth, Union County. The facility consists of areas both east and west of the New Jersey Turnpike, much of which is leased to various industries including NJ Transit, Matlack Trucking Company and Armin Poly-Film Company.

Inspections by NJDEP personnel revealed extremely poor housekeeping practices which resulted in heavy contamination of soil throughout the site. Drums of hazardous substances were being stored throughout the site without proper secondary containment. Large quantities of oil were observed in the basement of the shop building and in galleries which radiate underneath the site from the former powerhouse. An oil water separator, which consisted of a series of unlined pits, had also formerly operated at the site. It was reported this oil water separator often operated inproperly which allowed oil to overflow the banks of the pits and migrate into the surrounding wetlands. Stained soil was observed under pipes emanating from a tank storage area which is probably a result of leaky fittings. The tank storage area is diked. The soil around a large fuel oil tank, which is surrounded by an earthern berm, is saturated with oil as is a large portion of the berm. It was also noted that dead and stressed vegetation was observed in the Flexi-Flo area of the train yard where train cars, including tankers, are unloaded. The ground surface in this area was also stained as evidence on numerous spills. Transformers, one of which was leaking, were also observed being stored on the ground surface near the tracks off Trumbull St.

OBJECTIVES:
To charaterize the types of contamination present on the property and to complete the site inspection requirements as per EPA's SARA contract.

SECTION A:
Two field blanks to be analyzed for priority pollutants plus 40 plus petroleum hydrocarbons, and one trip blank to be analyzed for volatile organic chemicals will be provided by the lab. One field blank will be prepared by pouring nanopure distilled water over lab cleaned stainless steel trowels into sample bottles supplied by the lab. The second blank will be prepared in a similar manner except the water will be poured through a lab cleaned bailer.

SECTION B:
A total of nine soil samples, all to be analyzed for priority pollutants plus forty and petroleum hydrocarbons will be taken throughout the site. One background sample, also to be analyzed for priority pollutants plus forty and petroleum hydrocarbons will also be taken at an off site location to be determined on the day of sampling. The sampling locations and depths are as follows (see map):

1. The area of heavily contaminated soil directly east of the shop building-6"-12".
2. Underneath the piping originating from the tank storage area-6"-12".
3. The area near the drum storage pad east of the shop building-6"-12".
4. At the edge of the pit near the alleged oil water seperator-6"-12".
5. Suspicious area approximately 100 yards west of the firing range-5'-6'.
6. Within the bermed area of the large oil storage tank-6"-12".
7. Along the railroad tracks in the Flexi-Flo area-6"-12".
8. Area of dead vegetation near the Flexi-Flo-6"-12".
9. The area of transformer storage on the property west of the Turnpike-6"-12".
10. Background sample-6"-12".

SECTION C: AQUEOUS SAMPLES:
A total of 4 on site wells (#'s 3,4,5,7) will also be sampled and analyzed for priority pollutants plus forty and petroleum hydrocarbons. Information concerning these wells is as follows:

WELL #	DEPTH OF WELL	GROUNDWATER DEPTH
3	20'	14'
4	25'	15'
5	10'	3'
7	10'	1'

SECTION D: EQUIPMENT AND PROCEDURES:
Lab cleaned and dedicated stainless steel trowels will be used to collect soil samples. A lab cleaned bucket auger will be used to collect soil sample #5. Lab cleaned bailers will be used to collect groundwater samples from wells 3,4,5 and 7. Pumps will be used to evacuate 3 to 5 times the volume of these wells before sample collection is initiated.

Division of Waste Management sampling procedures and protocol will be followed at all times.

SECTION E: COST OF ANALYSIS:
NANCO COST

	ANALYSIS	COST	TOTAL
4 aqueous	PP + 40 and petroleum hydrocarbons	$1425.00 + $36.00	$5844.00
10 soils	PP + 40 and petroleum hydrocarbons	$1425.00 + $47.50	$14725.00
2 field blanks	PP + 40 and petroleum hydrocarbons	$1425.00 + $36.00	$2922.00
1 trip blank	VO's	$ 285.00	$285.00
			$23,776.00

Soil samples will be analyzed through Task III, Tier I and aqueous samples analyzed through Task II, Tier I.

SECTION F: SHIPPING AND HANDLING:
Samples will be COC sealed in coolers provided by NANCO labs and shipped via Fedreal Express (overnite) to NANCO labs. NANCO's Federal Express No. is 111-4408-7.

SECTION G: RECOMMENDATIONS:
All drums and associated contaminated soil should be removed and properly disposed since most of the drums are in poor condition and contain unknown materials. Oil and water should be removed from the basement of the shop building and the galleries beneath the site for reclaimation or disposal. This work should be conducted by Conrail and NJ Transit under direction of the NJDEP/Division of Hazardous Waste Management/Metro Field Office. A hydrogeological study should also be initiated to determine the extent of contamination in groundwater. Any hydrogeological study should be supervised by the Division of Water Resources/Geological Survey.

Further recommendations will be made based on review of the 9/2/87 sample analysis results.

HS203:mz
Attachment

R.C. —
Take a look and
talk to me about
them

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
John J. Trela, Ph.D., Acting Director
401 East State St.
CN 028
Trenton, N.J. 08625
609 - 633 - 1408

MEMORANDUM

TO: Neil Jiorle, Acting Section Chief
Bureau of Planning and Assessment

FROM: Robert Beretsky, HSMS IV
Bureau of Planning and Assessment

26 AUG 1987

SUBJECT: PRESAMPLING ASSESSMENT AT CONRAIL-ELIZABETHPORT YARD

On 7/15, 7/16 and 7/27/87, a presampling assessment was conducted at the Conrail-Elizabethport Yard in Elizabeth, Union County by Bureau of Planning and Assessment (BPA) personnel. On 7/15, Richard Gervasio, David Van Eck and Robert Beretsky of BPA were escorted throughout the site by Mr. J.C. Curry, Environmental Manager for Conrail; Mr. George Scioli, Real Estate Manager for Conrail; and Vilas Godbole and Tim Doolan, Environmental Engineers for NJ Transit.

The Elizabethport Yard, which consists of several thousand acres, was formerly owned by the Central Railroad of New Jersey. Conrail became owner of the Elizabethport Yard as a result of a transfer of the property when Central Railroad of New Jersey filed for bankruptcy. Conrail currently leases large portions of the property to various industries including NJ Transit, Matlack Trucking Company, and the Armin Poly Film Company. It should be noted that the Elizabethport Yard consists not only of the property east of the New Jersey Turnpike, but also the train yards west of the Turnpike along Trumbull Ave., as well as the Conrail Headquarters on Division St. (see map).

Numerous inspections have been conducted at the Elizabethport Yard by the NJDEP in the past. During the previous inspections the ground surface was reported to be saturated with oil in many areas and drums were haphazardly stored throughout the site. Large quantities of oil were also observed in the basement of the shop building and in galleries beneath the powerhouse. It was also documented that the oil water separator used at the site was inadequate as oil and water from the separator, which consisted of a series of unlined pits, was overflowing into the nearby wetlands. Wells were installed at the site, but were used only to determine water table levels.

Richard Gervasio, David Van Eck and Robert Beretsky arrived at the site at 1015 hours. The weather conditions at the time of the assessment were sunny with air temperature approximately 85°F and an occasional light breeze.

During the assessment an HNu photoionization detector set at span 2.0 and an OVA flame ionization detector set at span 3.0 were used to determine ambient air and soil gas conditions throughout the site. Background readings of 1.0 ppm as methane on the OVA and 0.6 ppm as benzene on the HNu were determined in the parking lot to the west of the shop building. All readings reported should read as ppm as benzene on the HNu and ppm as methane on the OVA.

Upon arrival we met with the Conrail and NJ Transit officials and began the inspection in the shop building. The shop building (area A on map), along with most of the active train yard, is leased to NJ Transit. NJ Transit plans to move from the Elizabethport Yard in the near future. This building consists of a shop and an engine repair area. The engine repair area (also known as the wheel pit area) occupies the southern portion of the shop building. Near the front of the engine repair area is a cement trough approximately 50' x 2' x 1'. According to Vilas Godbole, oil and metal grindings collected in this trough are placed in a rolloff for ultimate disposal. It is unknown where this waste is disposed. During the assessment approximately one inch of oil was observed in this trough.

We proceeded to a large wheelpit where an engine was currently being repaired. This pit was approximately 20' x 10' x 8' and allows engines to be serviced from underneath. The floor of this pit was covered with oil. A yellow fluid was also observed in this pit which Mr. Godbole stated was hydraulic fluid drained from the engine. Mr. Godbole also stated that oil from this pit was pumped to a storage tank at the rear of the building for ultimate disposal. A reading of greater than 100 on the OVA was recorded in the breathing zone above this pit. It should be noted a worker was in this pit at the time of the assessment.

We continued to another wheel pit area in the rear portion of the building. This area consisted of a series of concrete troughs approximately 30' x 2' x 2'. Approximately two inches of oil was present in the troughs during the assessment. Mr. Godbole stated oil from these troughs is pumped to the basement of the shop building and eventually to the outside storage tank. It was estimated that the floor of the basement was covered with approximately one foot of oil. It is unknown how large this basement area is.

We proceeded outside the shop building to the area (B on map) directly east of the building. The ground surface in this area, which was completely saturated with oil, consisted basically of gravel and compacted soil through which the soil probe could only penetrate a few inches. However, soil gas readings of over 800 on the OVA and 5 on the HNu were recorded in this area. Also in this area were three sumps (possibly recovery wells reported in previous inspections) which contained oil. Mr. Godbole stated these were used as skimmers and are currently inoperable. Two tank storage areas (C on map), one which contains three tanks and the other which contains one, were also located east of the shop. According to

Mr. Godbole, two of the tanks store lube oil, one contains fuel oil and one contains waste oil. Mr. Godbole also stated they are waiting to award a contract to remove the waste oil. Both of the tank storage areas are contained within cinderblock dikes. It is unknown what the ground surface in these storage areas consists of as approximately one foot of water was ponded within the dikes. Oil stained ground was observed underneath pipes outside the diked area. The pipes orginate from the tanks. It is unknown if the spills are a result of refilling/removal operations or leaky fittings on the pipes. Soil gas readings of greater than 1000 on the OVA and 13 on the HNu were detected directly underneath the piping.

We proceeded to an area (D on map) approximately 50 yards east of the shop building which was being used to store drums. Approximately 75 drums, many in poor condition, were being stored in this area. Although most of the drums were empty, many of the full drums were affixed with hazardous waste labels. All of these drums were stored on a large concrete pad which was cracked and contained no dikes or berms. All the drums were also exposed to the weather. Small rills were also present around the pad which indicates runoff has occurred. Soil gas readings in the area ranged from 10 to 30 on the OVA. An observation well was also noted near these storage areas.

As we continued the assessment east of the shop building, a truck from Eastern Chemical Waste Systems, the hazardous waste hauler for Conrail, arrived to remove the drums from this area. Ms. Karen Damanda of Eastern Chemical Waste was questioned as to the location of the waste shipments. According to Ms. Damanda, waste oils and asphalt, as well as diesel fuel/water mixtures were being sent to Chem Met Services of Michigan (EPA ID# MID096963194). Also, oil/isopropanol and paint sludge/isopropanol mixtures were being sent to Product Fuels of Arkansas, Inc. (EPA ID# ARD981057870). Ms. Damanda was questioned as to the last time wastes were manifested off of the Elizabethport Yard, but she did not have that information available. Ms. Damanda also stated they do not haul bulk oil wastes for Conrail. The writer again spoke with Ms. Damanda on 7/17 regarding information concerning when wastes were removed from the Elizabethport Yard. Ms. Damanda stated similar wastes were removed on 6/11/87 and PCB wastes were removed on 4/28/87.

We proceeded to an area (E on map) approximately 300 yards east of the shop building which Mr. Godbole stated was the former oil water separator. A small building and a pit filled with water were located in this area. The pit is estimated to be approximately 15' x 15' x 4'. A thin oil film was noted on the water in this pit. A partially buried tank was also observed near the building. A soil gas reading of 400 on the OVA was recorded near this tank. The soil around the pit was heavily contaminated with oil and soil gas readings from near the pit of over 300 on the OVA and 6 on the HNu were recorded. It was also noted that a drainage ditch, which was filled with water during the assessment, originates from the pit and continues west towards the shop building. It is unknown where the ditch terminates. An observation well was also noted along the east side of the pit. However, because of the small size of the pit, it is not believed this is the oil water separator mentioned in previous inspection reports unless a large portion has been filled in.

As we continued the inspection east of the shop, numerous piles of construction and household debris were scattered throughout the area. The Transit and Conrail officials were questioned as to the locations of dumps observed during previous inspections, but the officials stated they did not know about these dumps. They stated that the dumps reported may have referred to areas on the property where trespassers had disposed of solid waste, or to the property north of Conrail's which is currently owned by Central Jersey Industries and was formerly used as a city dump.

We then proceeded to an area northeast of the shop building (F on map). In this area was a building and a small fenced in lot. Pipes were emanating from the ground in the fenced lot and leading towards the building. It is believed this area may contain underground tanks which were formerly used for storage of flammable substances (propane, gasoline) since no smoking signs were observed in this area. No readings above background on the instruments were noted in this area.

We proceeded to the building directly north of the shop (G on map). According to Mr. Godbole, this building is used only for storage. A loading dock along the east and north sides of this building contained approximately 50 drums. Four partially full drums of unknown material were located on the east loading dock. These drums were rusted and in danger of leaking. Many of the drums along the loading dock on the north side of the building were also partially full and in poor condition. The contents of some of the drums, as labeled, includes petroleum naptha (CAS #6474-65-7) and isopropanol. Although the drums were stored on concrete, no dikes, berms or weather protection were present.

We continued north of this storage building to a large fuel oil storage tank (H on map) which is no longer in use. The soil around this tank is saturated with oil. The outside of the tank is also stained with oil as a result of many spills. The only secondary containment present around this tank is an earthern berm which is also saturated with oil. Soil gas readings inside this berm of over 1000 on the OVA were recorded. The soil around the pump for this tank, which is located outside the berm, is also heavily contaminated with oil. This is probably a result of leaking pipe fittings and spillage during refueling.

Next we proceeded to the former powerhouse building (I on map). This building is dilapidated and currently unused. The officials of Conrail and NJ Transit were questioned as to the location of the galleries beneath the powerhouse which were observed to contain large quantities of oil during previous inspections. The officials stated they did not know of these galleries. As we proceeded outside of this building, a concrete lined pit near the northeast corner of the building was observed. It is believed this pit is one of the galleries as it appeared to originate from beneath the power house. Based on our observations, it is estimated approximately 4 feet of oil and water are in the gallery. It is unknown where this gallery terminates or how large or how many other galleries may be present throughout the site. We continued to the western side of the powerhouse where Mr. Scioli stated was a large underground storage tank for water. This area was covered with concrete. Large tanks which connect with the powerhouse and probably the underground tank were also observed. Oily sludge was noted on the ground surface below these tanks. It is believed these tanks may have been used for steam production.

Vilas Godbole and Tim Doolan departed from the site at approximately 1200 hours.

Richard Gervasio, David Van Eck, Mr. Curry, Mr. Scioli and the writer then proceeded to the western portion of the property near the Armin Poly-Film Company (J on map). Mr. Scioli stated that Armin Poly-Film leases a portion of the property and plans to expand when NJ Transit vacates. Mr. Scioli also stated the company manufactures plastic bags at this site. It should be noted that a few drums were observed in a lot directly north of the Armin Poly-Film Company but it is unknown where these drums originated. According to Mr. Scioli the Amer-Ply Company also leases a portion of the property for warehousing and distribution of plywood.

We then proceeded to the Flexi-Flo area (K on map) which is used as a transfer area of materials from railcars to trucks. This area is currently leased to the Matlack Trucking Company. According to Mr. Scioli, no transfer of hazardous materials is allowed as per lease requirements. Numerous railcars were present at the time of the assessment, but it is unknown if these cars had already been unloaded. It should be noted that much of the vegetation along the tracks was dead or stressed. As we continued along the Flexi-Flo area, a culvert was observed between two of the tracks and is believed to lead to a storm drain. The ground surface in the Flex-Flo area was stained in many areas as evidence of past spills. Plastic pellets were also observed throughout this area. Approximately twenty large batteries were observed along the tracks and a black tarrish substance was observed near the batteries. It is believed this substance originated from the batteries. No readings above background were observed near the batteries. An unlocked observation well was also noted along the western portion of the Flexi-Flo. The water level in this well was approximately 6 feet below ground level. A reading of 300 on the OVA was recorded at the top of the casing to this well. It was also observed that a storm drain between two of the tracks was filled with water. The aforementioned culvert may lead to this storm drain. The soil probe was inserted into the drain and readings of over 1000 on the OVA were detected on the bubbles which emanated. We continued to the east side of the Flexi-Flo area where two observation wells were noted to be damaged. It appeared both wells were knocked over by trucks. A reading of 150 on the OVA was observed in the southern most well.

We next proceeded to an area approximately 50 yards east (L on map) of the Flexi-Flo. Directly in front of one of the buildings was a large area of dead vegetation approximately 100' x 20' in size. No soil gas readings above background were recorded in this area.

As we continued back towards the shop building, it was noted approximately 30 x 55 gallon drums, most of which were labeled as oil, were being stored inside a currently unoccupied section of a warehouse (M on map). Many of these drums were partially full. The northern most section of this warehouse is leased to the Armin Poly-Film Company. The unoccupied area of the warehouse is easily accessible as household wastes included matresses and paper products were scattered throughout the inside. The roof of this building also has numerous leaks. A few drums were also being stored on the ground outside this warehouse.

Before we departed from the site, a few large tanks were noted near the entrance near 3rd Ave (N on map). According to Mr. Curry these tanks were in the basement of a building which was recently demolished. It is unknown what these tanks may have contained. No readings were taken in this area as it appears to be under construction.

Richard Gervasio, David Van Eck and the writer departed from the site at 1330 hours.

On 7/16/87, Richard Gervasio, David Van Eck and Robert Beretsky met with Dave Beeman of the Hazardous Waste Management/Metro Field Office to continue the inspection of the Elizabethport Yard.

Mr. Beeman escorted us to a portion of the property which he had inspected previously. We proceeded along a dirt road northeast of the area inspected on 7/15. Two large storage tanks of unknown content were observed along this road but no readings were taken near the tanks. As we continued down the dirt road, two buildings, one on each side of the road, were observed. In front of the building on the north side of the road were numerous 55 gallon drums and approximately 150 compressed gas cylinders.

Background readings of 1 ppm as methane on the OVA and 1 ppm as benzene on the HNu were recorded on the dirt road directly east of the buildings. The weather conditions during the assessment were sunny with air temperature approximately 80°F and an occasional light breeze.

It was noted that recently two piles of sludge approximately 20' x 10' x 3' were disposed along the dirt road (area O on map). The sludge was very moist and appeared to contain oil. Readings from the piles ranged from background to 2 on the HNu and from 10 to over 100 on the OVA.

We continued east along the dirt road towards the former Conrail Police firing range (P on map). The firing range is situated on a slag bank which rises approximately 30 feet above the surrounding topography. The areas to the west, south and north of the firing range are relatively flat and are littered with solid wastes consisting of construction and household debris and tires.

We continued to an area (Q on map) directly south of the firing range which was formerly a drum dump. Approximately twenty large plastic containers were noted in this area. It is unknown what these containers were used for. This area is currently owned by Central Jersey Industries. According to Mr. Beeman, all drums and visibly contaminated soil were removed from this area. Soil gas readings in this area ranged from background to 400 on the OVA and from background to 80 on the HNu which indicates that all contaminated soil was not removed.

As we proceeded back towards the aforementioned buildings, a Conrail truck with a similar sludge as that disposed on the ground was observed in the area. Mr Beeman questioned the driver as to where the sludge was removed from, to which the driver replied it had come from York Ave. The sludge in the truck was not dumped in our presence.

We then entered the building (R on map) on the northern side of the road. Approximately 100 tires were being stored both inside one of the rooms and on the loading dock. Mr. Beeman and Richard Gervasio, who had also inspected this portion of the property in the past, stated these tires were not present before. We then proceeded through a hole in the wall, into an adjoining room where a few partially full 55 gallons drums were noted. One of the drums, labeled glacial acetic acid, was corroded through and material was leaking across the floor and draining into a hole. It is unknown where this hole leads. A drum labeled isopropanol was also observed. Other drums in this room had unknown contents. It should also be noted that the smell of vinegar (acetic acid) was evident in the room. We then continued to the last room in the building. This room also contained a few partially full 55 gallon drums, one of which was labeled caustic. The other drums had unknown contents.

We proceeded outside to an area (S on map) where approximately 40 x 55 gallon drums were being stored. The drums, most of which had unknown contents, were stored on a cracked asphalt pad which was bermed. However, no weather protection was present over the storage area. A reading of over 300 was recorded on the OVA over the bung of one of the drums.

It should be noted that numerous drums were also scattered along the dirt roads in the area northeast of the shop building.

We then proceeded to the property directly north of the Conrail site which is owned by Central Jersey Industries. This area is a large open dump consisting of household and construction debris. A few drums were also observed throughout the dump. Much of the dumping in this area appears to be unpermitted.

Dave Beeman, Richard Gervasio, David Van Eck and the writer departed from the site at approximately 1200 hours and proceeded to York Ave. At York Ave., Conrail trucks were being loaded with sludge similar to that seen on the Elizabethport site. This sludge originated from a drainage ditch which runs along the tracks.

The assessment of the Conrail Elizabethport facility concluded on 7/27 with the inspection of the property along Trumbull St. Donna Gaffigan, Robert Raisch, and the writer met with Craig Curry at the Conrail headquarters on Division St. at 1015 hours.

We began the assessment near Conrail's Communications and Signals Building (T on map) off of Trumbull St. Background readings of 1 ppm as methane on the OVA and 1 ppm as benzene on the HNu were determined behind the Communications and Signals Building. Air temperature at the time of the assessment was approximately 75°F with sunny skies and moderate winds.

A storage yard near the Communications and Signals building was observed to contain approximately 15 x 55 gallon drums which were being stored on the ground surface. The ground surface in this area consisted of gravel. Most of the drums appeared to contain virgin oils and others appeared empty. However, waste oils were also being stored in this area as oil was noted being stored in a 5 gallon water cooler bottle. The ground surface around

this storage area was stained as evidence of numerous spills. No readings above background were noted in this area.

Craig Curry, Donna Gaffigan, Robert Raish and the writer continued east along the railroad tracks towards the New Jersey Turnpike overpass (U on map). Two empty 55 gallon drums were noted along the bridge abutment on the northern edge of the Conrail property. No readings above background were observed near these drums. We continued east under the overpass where a soil gas reading of 4 on the HNu was recorded in an erosion rill. No readings above background on the OVA were observed in this area.

We continued east along the tracks towards the Dowd Ave. train bridge. A partially full drum of unknown material was observed near the center tracks. This drum was rusted and appeared to have been in this location for a long period of time. A soil gas reading of 4 on the HNu was noted near this drum. On the southern edge of the tracks near Trumbull St. a small dump (V on map) consisting of tires, household and construction debris, and approximately 10 empty 5 gallon containers of roofing tar was also noted. Most of this dumping is unpermitted.

We continued west along the tracks to an area directly behind the Unex Welding Supply Company. Two small canisters were noted in this area. It is unknown what the canisters were used for or where they originated.

We then proceeded west along the northern most tracks. These tracks are approximately 4 feet lower in elevation than the remaining tracks and are separated from the other tracks by a wall. A small drum dump (W on map), consisting of approximately 25 x 55 gallon drums was noted along the lower tracks. Most of the drums were similar to those observed in other areas of the Elizabethport Yard. Some of the drums were rusted and their contents could not be determined. However, most of the drums were labeled as formerly containing oil, hydraulic fluid or mineral spirits. It should also be noted this area was covered with approximately 6 inches of standing water. No soil gas readings above background were recorded in this area.

The ground surface along these lower tracks was very wet as drainage in the area is poor. One storm drain which was filled with water was observed between the tracks. A few small erosion rills were also observed which had water flowing through them and appeared to contain an oil sheen. No readings above background were noted near these rills. A small pipe approximately 1 inch in diameter was noted to run the length of the tracks towards the warehouse buildings off of Division St. It is unknown if this pipe is for communication systems or some type of discharge.

As we continued west along the northern tracks towards Division St., two more partially full 55 gallon drums were observed. The soil near one of the drums is heavily contaminated with oil. A soil gas reading of 16 on the OVA was recorded near this drum.

The writer followed the aforementioned pipe until it was observed to be buried near the loading docks leased to a paper company. As the pipe was being followed, two areas of oil spillage were observed along the Shop-Rite warehouse (X on map). One area of heavy contamination is directly outside

a bay door of the warehouse where a cardboard box compactor operates. It is believed the oil originated from the compactor.

Craig Curry, Donna Gaffigan, Robert Raisch and the writer then proceeded along the loading docks (Y on map) towards the Conrail Division offices on Division St. Large batteries, a few 55 gallon drums and transformers were observed on the loading dock. A 55 gallon drum which appeared to have fallen off the dock was lying along the railroad tracks and the soil beneath the drum was stained with oil. A soil gas reading of over 400 on the OVA was recorded in the stained soil. Many of the batteries, which Mr. Curry stated were used for the signal boxes, had also fallen off the dock and spilled their contents onto the ground surface.

As we continued along the area behind the division offices (Z on map), it was noted two transformers were being stored on the ground surface. One of the transformers was laying on its side and was leaking oil. The ground surface near these transformers was stained. No readings on the instruments above background were noted in this area. The following information was obtained off of one of these transformers:

Manufacturer: Westinghouse
Serial #: 55B2867
Both these transformers are 25 gallon capacity.

Two more transformers were observed on the ground along the side of a building. Information from one of these transformers is as follows:

Manufacuturer: General Electric
Serial #: C655155
Both of these transformers were also 25 gallon capacity but did not appear to be leaking.

It should also be noted an empty, partially crushed 55 gallon drum was also observed in this area. The label on this drum stated, "Silicone Compounds, vapor, liquid, or solid residues may be hazardous".

We completed the inspection by walking east along the tracks back towards the Communications and Signals building. Thousands of small (less than 1 gallon) oil, paint and hydraulic fluid cans were scattered among the tracks. Numerous rail cars including tankers were located throughout this area. Mr. Curry stated no transfer of materials occurs in this area. Mr. Curry departed at approximately 1200 hours.

Donna Gaffigan, Robert Raisch and the writer then proceeded to the portion of the Elizabethport Yard east of the Turnpike to try to determine the actual location of the oil water separator. One area (AA on map) approximately 100 yards west of the former firing range was devoid of vegetation. It appeared as though this area had been filled in. The ground surface was covered with a black silty material. Soil gas readings of about 1 on the OVA were observed in this area. It should also be noted that standing water in this area had a black color although it did not appear to be contaminated with oil.

Donna Gaffigan, Robert Raisch and the writer departed from the site at approximately 1245 hours.

It should be noted that security throughout the Elizabethport Yard was inadequate as the entire site is easily accessible from Trumbull St. The unpermitted dumping which is prevalent throughout the site is evidence to this fact.

Due to the extreme contamination which was observed throughout the site, it is recommended that a site inspection, including groundwater and soil sampling, be conducted as soon as possible. At least 4 wells (#'s 3,4,5, and 7) should be sampled for priority pollutants plus forty and petroleum hydrocarbons. Soil should be sampled in the following areas (see map):

1. area (B on map) of heavily contaminated soil directly east of the shop building.

2. underneath the pipes (C on map) originating from the tank storage area.

3. the area (D on map) around the drum storage pad east of the shop building.

4. along the top of the pit of the alleged oil water separator (E on map).

5. suspicious area (AA on map) approximately 100 yards west of the firing range.

6. from within the bermed area of the large oil storage tank (H on map).

7. along the railroad tracks in the Flexi-Flo area (K on map).

8. the area (L on map) of the dead vegetation east of the Flexi-Flo and,

9. the area (Z on map) of transformer storage on the property west of the Turnpike.

All soil samples should be at 6"-12" depths except for #5 above which should be at a 5'-6'depth. All soil samples should be analyzed for priority pollutants plus forty and petroleum hydrocarbons.

Because of the numerous deficiencies noted at the site it is also recommended that the site be referred to the Divison of Hazardous Waste Management/Metro Field Office for possible enforcement actions. It is believed the site should come under RCRA legislation for the on-site storage of waste oil (including oil stored in the basement of the shop). Conrail and NJ Transit should be held responsible for removal and proper disposal of all waste oil including that in the basement of the shop, the

oil and metal grindings in the rolloff in the shop and all oil and water present in the galleries underlying the site. It is also recommended that all the drums observed throughout the site be treated as wastes because of their poor condition and unknown contents of many of the drums. The drums and nearby soil should also be sampled for hazardous constituents and if it is determined that they are hazardous, the drums and all associated contaminated soil should be removed and properly disposed. All work should be conducted by Conrail under direction of the Metro Field Office. All of the compressed air canisters should also be removed and properly disposed. Proper secondary containment should be installed near the hazardous waste storage area. The area of drum storage near the Communications and Signals building should also be investigated and proper secondary containment installed if this area is continued to be used to store wastes. It is also recommended that more frequent inspections be conducted by the DEP to ensure housekeeping practices are upgraded throughout the site, and storage areas for both raw materials and wastes are established and properly maintained. It should also be ensured that hazardous substances are not migrating offsite via the aforementioned storm drains or culverts.

It is also recommended that the Division of Water Resources/Bureau of Underground Storage Tanks be notified as to the presence of numerous underground tanks throughout the site. Conrail should provide the Bureau of Underground Storage Tanks with the locations and possible contents of these tanks.

The New Jersey Department of Health should be notified as to working conditions in the shop building. The high readings on the OVA recorded over the wheel pit indicates potentially hazardous conditions for workers. None of the workers observed had any respiratory protection. It should also be noted the high readings observed may also indicate the presence of potentially explosive conditions.

Due to the numerous unpermitted dumps present throughout the site, it is also recommended that the Division of Solid Waste Management also be notified for possible enforcement actions.

Conrail should also be held responsible for providing more adequate security to prevent unpermitted dumping and lower the potential of unauthorized personnel coming into contact with wastes stored on site.

Further recommendations concerning the Elizabethport facility will be made after a site inspection is completed and sample analyses are reviewed.

Lastly, it is also recommended that the additional properties observed during the assessment including the oil spillage outside the Shop-Rite warehouse and the two Central Jersey Industry's properties be investigated by the appropriate DEP agencies.

Soil sampling should be conducted on the former drum dump (Q on map) on Central Jersey Industries property to determine if additional contaminated soil should be removed. Any sampling conducted should be under the direction of the Metro Field Office. The Metro Field Office should also inspect the area outside of the Shop-Rite where the oil stained soil was observed (area X on map). Soil sampling should also be conducted under

direction of the Metro Field Office. If it is determined that the soil is hazardous it should be removed and properly disposed. Proper precautions should also be taken by Shop-Rite to ensure no additional spillage will occur.

The open dump on the Central Jersey Industries property north of the Conrail property should also be investigated by the Division of Solid Waste Management for additional enforcement actions.

HS:203:mz
attachment

c: Dave Beeman, Metro Field Office
Richard Gervasio, Bureau of Planning and Assessment
David Van Eck, Bureau of Planning and Assessment
Donna Gaffigan, Bureau of Planning and Assessment
Robert Raisch, Bureau of Planning and Assessment

M912

MEMO

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO Spill File

FROM Edward J. Faille DATE October 13, 1981

SUBJECT Suspected P.C.B. spill - Conrail E. Port

Friday, October 2, 1981

1030 hours: Called office and talked with Dave Shotwell. He wanted me to check on a PCB spill called in on 10-1-81 by Robert Longo at 1500 hours. I told Dave I would investigate the call. I asked Mr. Santa Maria, assistant shop manager, for Conrail if he knew Mr. Longo? He said yes, he did and would try to get in touch with him for me. After awhile (approx. 5 min.) Mr. Santa Maria found out that Mr. Longo was off site. He would return at 1330 hours. He checked to see if anyone else knew of this spill.

1230: Mr. Santa Maria could not find anyone with knowledge of this problem. I went to lunch.

1330: Met with Bob Longo, electrician for Conrail. (He is also Local Chairman IBEW Local 748). He informed me he found two transformers leaking at this site.

1415: We went to the auto shop. Outside in a fenced in area on (a concrete pad) there sat a G-E transformer (serial NO 6405930 50kVA). The transformer looked like it was leaking a black tarish-like substance onto the concrete pad. I took a sample (no. C41471) of this liquid. (Had PCB sticker on transformer). (636,364 ppm PCB 1260)

1500: We went to the passenger car shop and found another transformer leaking. (serial no. 587107 G-E 100kV) this transformer was sitting on the ground. The ground area looked stained. I took a sample of this (No. C41472). (11.68 ppm PCB 1260)

1600: We went to shop managers office and met with Joe Santa Maria. I told him not to let anyone into these areas until samples are analyzed.

1615: Ed Faille left site.

1745: Arrived home base

EJF:ab

491-7461
Steve Turow

BAC000046