



ADMINISTRATIVE RECORD

QUANTA RESOURCES SITE

EDGEWATER, BERGEN COUNTY, NEW JERSEY

VOLUME 4 OF 5

Prepared for:

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U. S. EPA Region II
Removal Action Branch
Edison, New Jersey 08837

Prepared by:

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Edison, New Jersey 08837

DCN #: RST-02-F- 00612

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PCS #: 2171

June 2002

QUANTA RESOURCES SITE

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Lever Brothers Site

Document #: LB 1.3001 - LB 1.3008
Title: Preliminary Assessment - Lever Brothers, Inc.
Category: Site Identification
Author: Robert Hayton, Hazardous Site Mitigation Administration, New Jersey Department of Environmental Protection
Recipient: US Environmental Protection Agency, Region II
Date: September 20, 1984

Document #: LB 1.4001 - LB 1.4097
Title: Final Draft Site Inspection Report and Hazardous Ranking System Model, Lever Brothers, Incorporated, Edgewater, New Jersey
Category: Site Identification
Author: J. Wagner and R. Naman, NUS Corporation Superfund Division
Recipient: U.S. Environmental Protection Agency, Environmental Services Division
Date: March 25, 1986

Document #: LB 3.2001 - LB 3.2133
Title: Lever Brothers Company Edgewater Plant Phase II Report
Category: Remedial Investigation
Author: Louis Apoldo, Associate, and Donald Supkow, Senior Hydrologist, Dames & Moore, Inc.
Recipient: Lever Brothers/Lever Research
Date: 1982

Lustrelon Site

Document #: LU 3.2001 - LU 3.2097
Title: Remedial Investigation Report, The Lustrelon, Inc. Site
Category: Remedial Investigation
Author: Paulus, Sokolowski, and Sartor, Inc.
Recipient: Edgewater Associates, Inc.
Date: November 1994

Document #: LU 3.3001 - LU 3.3025
Title: Ecological Assessment (EA) - Remedial Action Work Plan (RAW), Former Celotex and Lustrelon Properties

Note: Since this document pertains to two sites it was included in the Celotex Property section of the Administrative Record

Category: Remedial Investigation
Author: Mark London, Vice-President, Enviro-Services, Inc.
Recipient: Robert Hayton, Sharon Bruder, New Jersey Department of Environmental Protection, Bureau of Federal Case Management
Date: April 15, 1988

For the complete index of the Quanta Resources Site Administrative Record, refer to Volume I of the document.



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

L IDENTIFICATION
01 STATE 03 SITE NUMBER

II. SITE NAME AND LOCATION

01 SITE NAME (Legal name, or descriptive name of site) Lever Brothers Inc.		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 101 River Road			
03 CITY Edgewater	04 STATE NJ	05 ZIP CODE 07020	06 COUNTY Bergen	07 COUNTY OR CONG CODE	08 CONG DIST
09 COORDINATES LATITUDE 40°48'11"		LONGITUDE 73° 59' 34"		Block 99 Lots 1,4,5,6,7 Block 97 Lots 1,3,4,5	

10 DIRECTIONS TO SITE (Starting from nearest public road)
Turnpike North to Exit 16. Take exit and head for Lincoln Tunnel. Take exit for JFK Blvd. North and continue to River Rd. Make Rt. onto River Rd. and continue until you reach the town of Edgewater. Lever Bros. is on rt.

III. RESPONSIBLE PARTIES

01 OWNER of record Lever Brothers Inc.		02 STREET (Industrial, dining, residential) 390 Park Avenue			
03 CITY New York	04 STATE NY	05 ZIP CODE 10022	06 TELEPHONE NUMBER (212) 688-6000		
07 OPERATOR (If record and different from owner)		08 STREET (Industrial, dining, residential)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER		

13 TYPE OF OWNERSHIP (Check one)

- A. PRIVATE B. FEDERAL C. STATE D. COUNTY E. MUNICIPAL
 F. OTHER _____ (Agency name) G. UNKNOWN
(Agency)

14 CORNER OPERATOR NOTIFICATION ON FILE (Check as that apply)

- A. RCRA 3001 DATE RECEIVED: _____ (MONTH DAY YEAR) B. UNCONTROLLED WASTE SITE (RCRA 103) DATE RECEIVED: _____ (MONTH DAY YEAR) C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 SITE INSPECTION		BY (Check as that apply)			
<input checked="" type="checkbox"/> YES DATE 8/25/83 (MONTH DAY YEAR)	<input type="checkbox"/> NO	<input type="checkbox"/> A. EPA	<input type="checkbox"/> B. EPA CONTRACTOR	<input checked="" type="checkbox"/> C. STATE	<input type="checkbox"/> D. OTHER CONTRACTOR
		<input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER _____ (Agency)			
CONTRACTOR NAME(S): _____					

02 SITE STATUS (Check one)	03 YEARS OF OPERATION
<input checked="" type="checkbox"/> A. ACTIVE <input type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN	1932 (BEGINNING YEAR) _____ (ENDING YEAR) <input type="checkbox"/> UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED
of fuel oil and asphalt sludges Oil and grease and other constituents

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Fuel oil has contaminated soil and groundwater. Groundwater flows toward and into the Hudson River. Fish and waterfowl populations are at risk..

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Media Substitution and Part 3 - Description of Reported Conditions and Impacts)			
<input type="checkbox"/> A. HIGH (Inspection required promptly)	<input checked="" type="checkbox"/> B. MEDIUM (Inspection required)	<input type="checkbox"/> C. LOW (Inspect on site owner's basis)	<input type="checkbox"/> D. NONE (No further action needed, complete current delisting form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Bob Dante	02 Of (Agency/Organization) BFO-Northern Field Office		03 TELEPHONE NUMBER ()
04 PERSON RESPONSIBLE FOR ASSESSMENT Robert Hayton	05 AGENCY DEP	06 ORGANIZATION HSMA	07 TELEPHONE NUMBER 609292-1210
		08 DATE 9/20/84 (MONTH DAY YEAR)	

LB 1.3001

Gorge Road



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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 OBSERVED (DATE: 1/12/82) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Analysis by ETC shows contamination of groundwater with fuel oil (oil & grease).
Attachment B Table 2

01 B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: _____
02 OBSERVED (DATE: 5/23/83) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

U.S. Coast Guard observes oil in puddles along shoreline, and rainbow sheen of oil on river.
Attachment C

01 C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: _____
02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

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

01 E. OTHER SOURCE
03 POPULATION POTENTIALLY AFFECTED: _____
02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

01 F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: _____
02 OBSERVED (DATE: 1/12/82) POTENTIAL ALLEGED
04 NARRATIVE DESCRIPTION

Analysis of soil by ETC Inc. for Dames & Moore Inc. of Cranford indicates soil contaminated with high concentrations of oil & grease.
Attachment B

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

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

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

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

IDENTIFICATION	
01 STATE	02 SITE NUMBER

HAZARDOUS CONDITIONS AND INCIDENTS

J. DAMAGE TO FLORA OBSERVED (DATE: _____) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION
 and grease leaching into the Hudson River could effect the aquatic flora.

K. DAMAGE TO FAUNA OBSERVED (DATE: _____) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION
 and grease leaching into the Hudson River could effect fish and waterfowl.

L. CONTAMINATION OF FOOD CHAIN OBSERVED (DATE: _____) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION

M. UNSTABLE CONTAINMENT OF WASTES OBSERVED (DATE: _____) **POTENTIAL** **ALLEGED**
(Including liquid-containing drums, tanks, drums)
POPULATION POTENTIALLY AFFECTED: _____ **04 NARRATIVE DESCRIPTION**

N. DAMAGE TO OFF-SITE PROPERTY OBSERVED (DATE: _____) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION

O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs OBSERVED (DATE: 8/25/83) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION
 storm drains conveyed oil & grease (fuel oil) to river for discharge outfalls.

Attachment D

P. ILLEGAL/UNAUTHORIZED DUMPING OBSERVED (DATE: 3/16/83) **POTENTIAL** **ALLEGED**
NARRATIVE DESCRIPTION Approximately 100 lbs. of sodium silicate dumped in vicinity of outfall 001. Material was cleaned up by Lever Bros. Also oil spill observed by Coast Guard.

Attachment D, Pages 3 & 12

DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL OR ALLEGED HAZARDS This site was originally owned by the Barret Co., makers of asphalt products. It is alleged that they had buried much of their waste on site.

TOTAL POPULATION POTENTIALLY AFFECTED: _____

COMMENTS
 Manufacturing has stopped at this location. Buildings that were built 1932 and 1950 are being demolished. Lever Bros. is expected to expand its research facilities on this site.

SOURCES OF INFORMATION
 Division of Water Resources-Newark
 " " " -Trenton
 Division of Waste Management-Trenton



Edgewater

COOPERS PARK

Post Office

NEW JERSEY
NEW YORK

CHANNEL

EDGEWATER

WEHAWKEN

H U D S O N

NORTH
EDGE

BERGEN CO
HUDSON CO
NEW YORK

PUTTENBERG

WEST
NEW YORK

NEW YORK CITY BOUNDARY

Basin

RESERVOIR

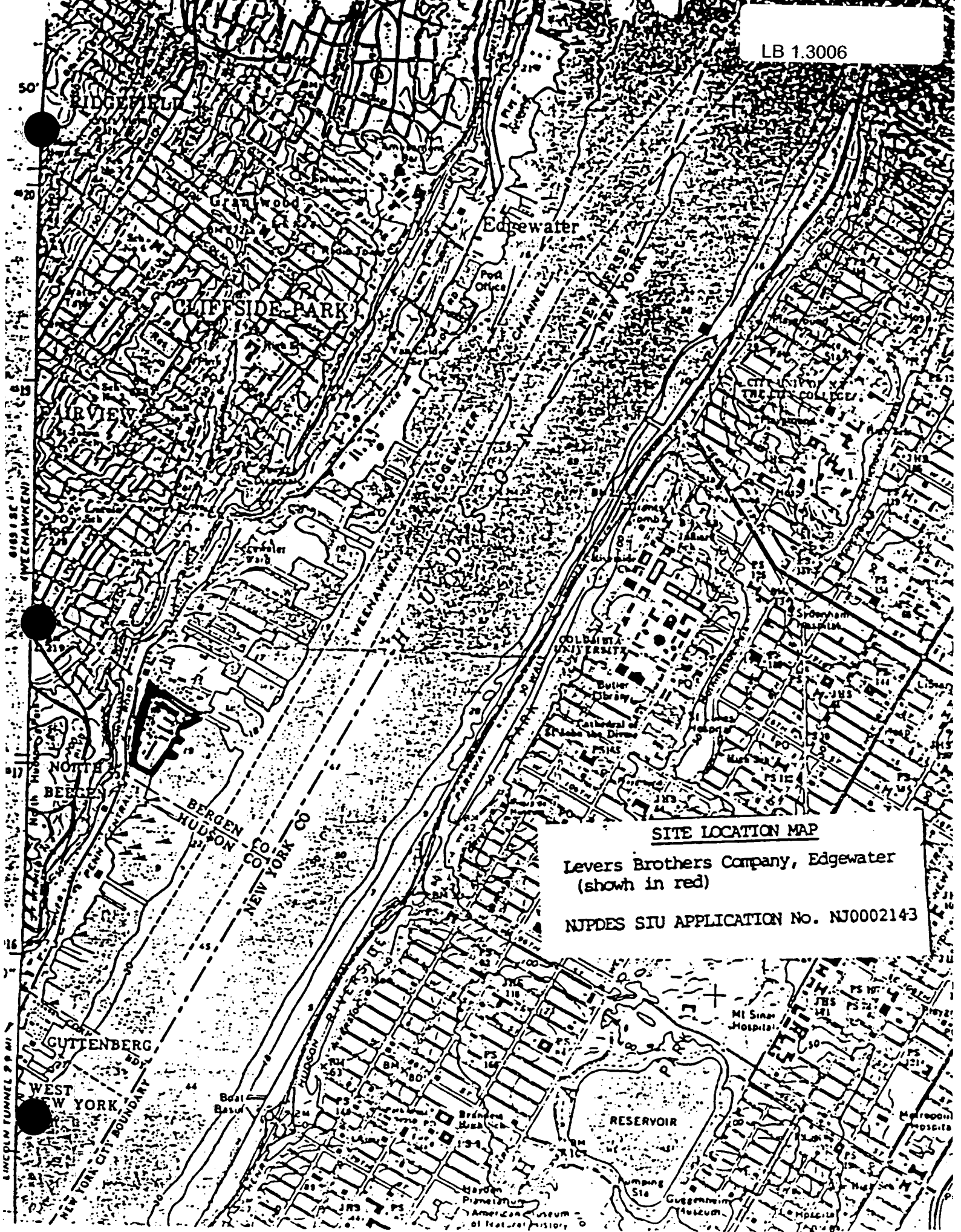
Mt Sinai
Hospital

Pumping
Sta

Metropolitan
Museum
of Natural History

Metropolitan
Court

The
Lak



SITE LOCATION MAP

Levers Brothers Company, Edgewater
(shown in red)

NJPDES SIU APPLICATION No. NJ0002143

50
40
30
20
10
0
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30
40
50
60
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110
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870
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950
960
970
980
990
1000

6155 SE
(MEEMAWKEN)

NEW YORK CITY BOUNDARY

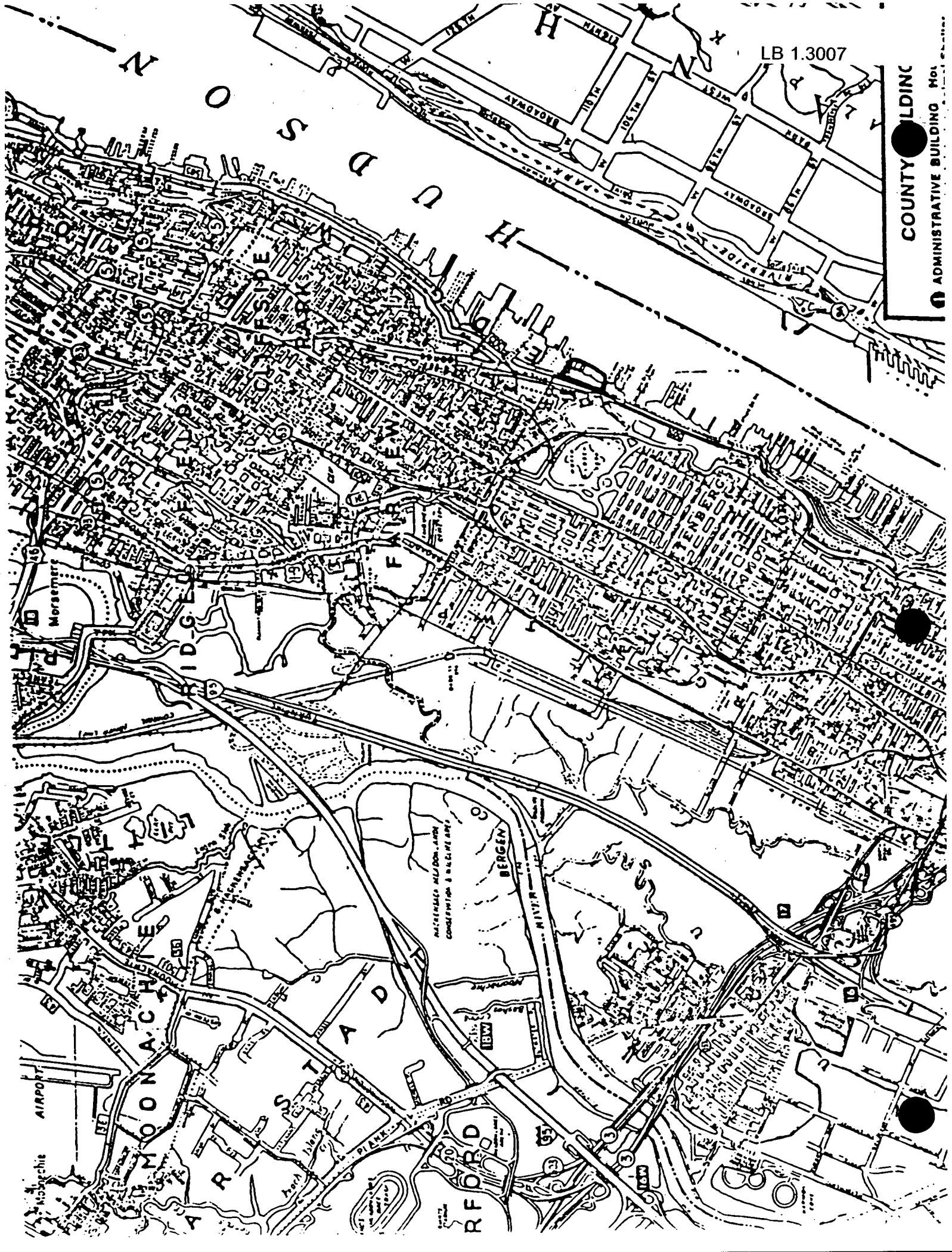
NEW JERSEY

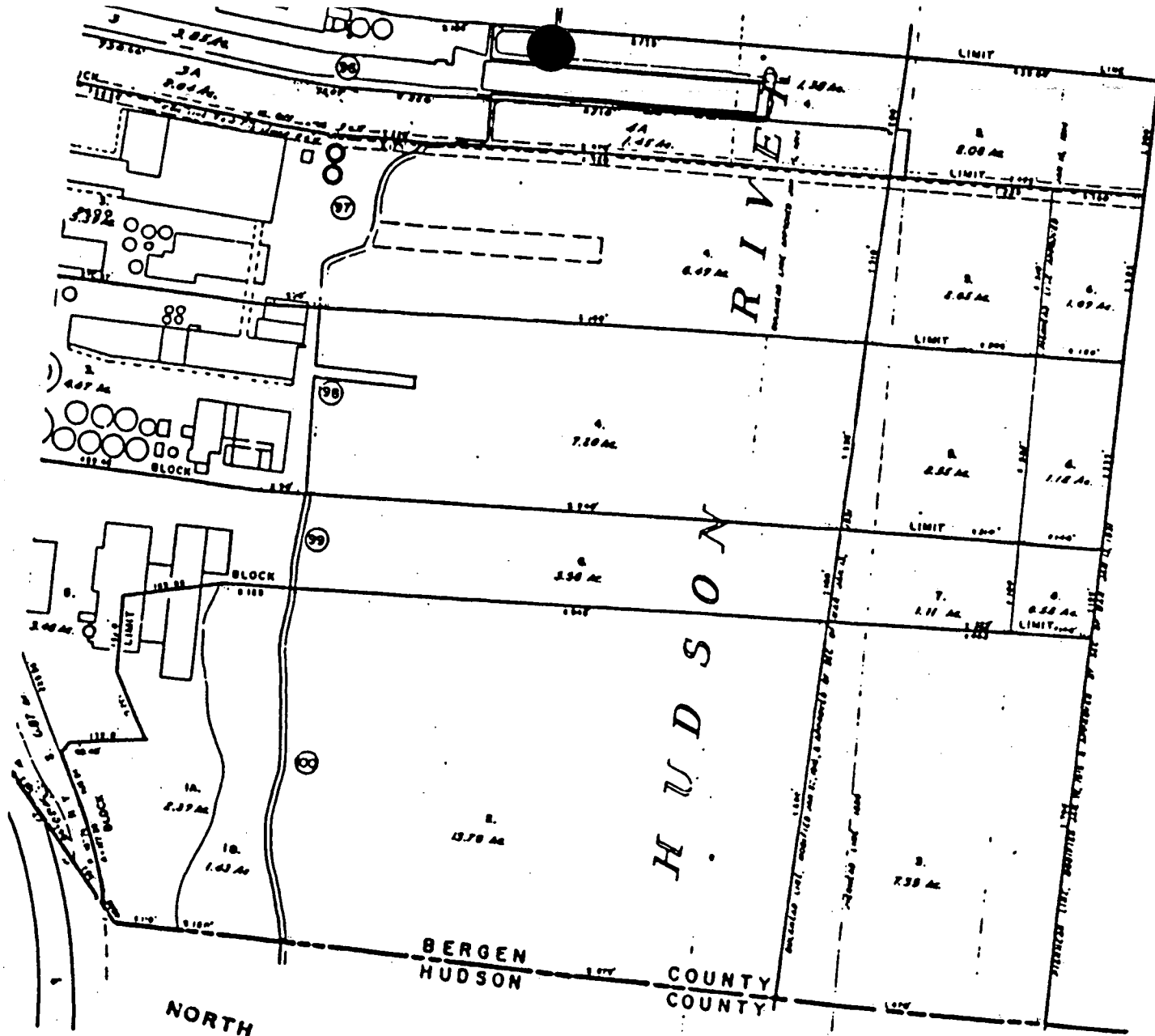
BERGEN HUDSON CO. NEW YORK CO.

Edgewater
Cliffside Park
Guttenberg
West New York
St. Luke's Church
Cathedral of St. Luke the Divine
Butler Library
Colburn University
St. Joseph's Hospital
Guggenheim Museum
American Museum of Natural History
Boat Basin
Reservoir
MI Sinai Hospital

LB 1.3007

COUNTY BUILDING
ADMINISTRATIVE BUILDING No. 1





LB 1.3008

TAX MAP
 BOROUGH OF EDGEWATER
 BERGEN COUNTY NEW JERSEY

DEGLAVE & DEGLAVE
 CIVIL & SURVEYING ENGINEERS
 200 N. 10TH ST.
 NEWARK, N.J. 07102
 DATE: 11-1-74

FINAL DRAFT
SITE INSPECTION REPORT
AND HAZARDOUS RANKING SYSTEM MODEL
LEVER BROTHERS, INCORPORATED
EDGEWATER, NEW JERSEY

PREPARED UNDER

TECHNICAL DIRECTIVE DOCUMENT NO. 02-8410-44
CONTRACT NO. 68-01-6699

FOR THE

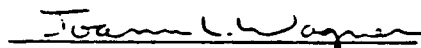
ENVIRONMENTAL SERVICES DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

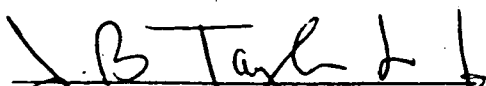
MARCH 25, 1986

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY

REVIEWED/APPROVED BY


JOANN L. WAGNER
PROJECT MANAGER


RONALD M. NAMAN
REGIONAL PROJECT MANAGER

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
EXECUTIVE SUMMARY

LB 1.4002

Lever Brothers, Inc.
Site Name

NJD001495811
EPA Site ID Number

45 River Road, Edgewater, NJ
Address

02-8410-44
TDD Number

SITE DESCRIPTION

The Lever Brothers, Inc. site is a 31-acre research & development facility located in Edgewater, Bergen County, NJ. The site is in a densely populated area just north of the Bergen-Hudson County border, and is bounded to the west by the Palisades Sill and to the east by the Hudson River. Commercial/industrial property is located on both sides of the facility along the river.

The site is part of a much larger piece of land that was previously owned by the Barrett Co., which manufactured roofing materials using asphalt and petroleum-based oils. It is alleged that they buried much of their waste on-site. Lever Brothers purchased a portion of that site in 1932 and used the facilities for the manufacture of margarine, table oils, and detergents. Manufacturing operations were phased out in 1976, while research operations were implemented and expanded.

Several incidents of seepage or spillage into the Hudson River of fuel oil occurred in 1981 and 1983. All incidents were monitored by the U.S. Coast Guard and/or the New Jersey Department of Environmental Protection. In all cases, the oil was contained and removed using sorbent sweeps and booms. An isolated incident in which 100 lbs. of sodium silicate was spilled occurred in March of 1983. The spill was confined to a small radius in the vicinity of outfall 001 and was cleaned up by Lever Bros.

On February 8, 1985 NUS Corp., Region II FIT conducted a site inspection of the Lever Brothers facility, during which six soil samples were collected. Laboratory results indicate the presence of several heavy metals and numerous polyaromatic hydrocarbons. At the time of inspection, a boom was in place on the river in the area of previous underground seepage of oil into the river. No water samples were collected.

Prepared by: Joann Wagner
of NUS Corporation

Date: 2/26/86



Site Inspection Report

LB 1.4004

SITE NAME AND LOCATION
 SITE NAME (Legal, common, or descriptive name of site) 02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
 Brothers, Inc. 45 River Road
 04 STATE 05 ZIP CODE 06 COUNTY 07 COUNTY 08 CONG DIST.
 CODE
 NJ 07020 Bergen 003 NJ09
COORDINATES
 LATITUDE LONGITUDE
 4 00 4 8' 1 1".N 7 30 5 9' 3 4".W
10 TYPE OF OWNERSHIP (Check one)
 A. PRIVATE B. FEDERAL C. STATE
 D. COUNTY E. MUNICIPAL F. OTHER
 G. UNKNOWN

INSPECTION INFORMATION
 01 DATE OF INSPECTION 02 SITE STATUS 03 YEARS OF OPERATION
 2 / 8 / 85 ACTIVE 1932 / Present UNKNOWN
 INACTIVE BEGINNING YEAR ENDING YEAR
11 PERFORMING INSPECTION (Check all that apply)
 A. EPA CONTRACTOR NUS Corporation C. MUNICIPAL D. MUNICIPAL CONTRACTOR
 B. EPA CONTRACTOR (Name of firm) (Name of firm)
 F. STATE CONTRACTOR (Name of firm) G. OTHER (Specify)

06 TITLE **07 ORGANIZATION** **08 TELEPHONE NO.**
 Crystall Civil Engineer NUS Corporation (201) 225-6160
09 TITLE **11 ORGANIZATION** **12 TELEPHONE NO.**
 Wojek Environmental Scientist NUS Corporation (201) 225-6160
 Mayo Environmental Scientist NUS Corporation (201) 225-6160
 Semer Environmental Scientist NUS Corporation (201) 225-6160
 Environmental Scientist NUS Corporation (201) 225-6160

13 REPRESENTATIVES INTERVIEWED **14 TITLE** **15 ADDRESS** **16 TELEPHONE NO.**
 Dunn Regulatory Affairs Officer 45 River Rd., Edgewater, NJ (201) 943-7100
 Math A. Holland Chemist 45 River Rd., Edgewater, NJ (201) 943-7100
 Farrell Attorney 45 River Rd., Edgewater, NJ (201) 943-7100
 A. Carrol Environmental Engineer 45 River Rd., Edgewater, NJ (201) 943-7100
 ()
 ()

17 OBSERVATIONS GAINED BY **18 TIME OF INSPECTION** **19 WEATHER CONDITIONS**
 (Check one) 1015 Clear, custy northwest winds, temp. 16°F.

20 PERMISSION
 WARRANT 1015
21 INFORMATION AVAILABLE FROM
 CONTACT 02 OF (Agency/Organization) 03 TELEPHONE NO.
 (201) 321-6685
22 RESPONSIBLE FOR SITE INSPECTION FORM
 U.S. Environmental Protection Agency
 05 AGENCY 06 ORGANIZATION 07 TELEPHONE NO. 08 DATE
 09 SIGNATURE 10 DATE
 Gagner NUS Corp. FIT II (201) 225-6160 2 / 28 / 86
 MONTH DAY YEAR

QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply) 02 WASTE QUANTITY AT SITE

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

(Measures of waste quantities must be independent)

TONS Unknown
 CUBIC YARDS Unknown
 NO. OF DRUMS Unknown

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

II. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			Unknown amount buried in ground
SOL	SOLVENTS	Unknown		Unknown amount spilled on ground
PSD	PESTICIDES			Currently used for r & d purposes
OCC	OTHER ORGANIC CHEMICALS	Unknown		Currently used for r & d purposes
IOC	INORGANIC CHEMICALS	Unknown		Currently used for r & d purposes
ACD	ACIDS	Unknown		Currently used for r & d purposes
BAS	BASES			Currently used for r & d purposes
MES	HEAVY METALS	Unknown		Currently used for r & d purposes

HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	Lead	7439-92-1	Unknown	288	mg/kg
MES	Mercury	7439-97-6	Unknown		
OCC	Naphthalene	91-20-3	Unknown	0.51	mg/kg
OCC	Acenaphthylene	208-96-8	Unknown	2100	ug/kg
OCC	Acenaphthene	83-32-9	Unknown	830	ug/kg
OCC	Fluorene	86-73-7	Unknown	4000	ug/kg
OCC	Phenanthrene	85-01-8	Unknown	3700	ug/kg
OCC	Anthracene	120-12-7	Unknown	15000	ug/kg
OCC	Fluoranthene	206-44-0	Unknown	6700	ug/kg
OCC	Benzo(a)anthracene	56-55-3	Unknown	42000	ug/kg
OCC	Chrysene	218-01-9	Unknown	16000	ug/kg
OCC	Benzo(b)fluoranthene	205-99-2	Unknown	25000	ug/kg
OCC	Benzo(k)fluoranthene	207-08-9	Unknown	16000	ug/kg
OCC	Benzo(a)pyrene	50-32-8	Unknown	16000	ug/kg
OCC	Indeno(1,2,3-cd)pyrene	193-39-5	Unknown	14000	ug/kg
OCC	Dibenzo(g,h)anthracene	53-70-3	Unknown	14000	ug/kg
OCC	Benzo(g,h,i)perylene	191-24-2	Unknown	16000	ug/kg
OCC				18000	ug/kg

FEEDSTOCKS (See Appendix for CAS Numbers)

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

SRCS OF INFORMATION (See specific references. e.g., state files, sample analysis, reports)

A Preliminary Assessment

poration Site Inspection Sample Analyses.

LB 14005

POTENTIAL HAZARDOUS WASTE SITE
 SITE INSPECTION REPORT
 PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

1. IDENTIFICATION
 01 STATE 02 SITE NUMBER
 NJ 0001495811

LB 1.4006

HAZARDOUS CONDITIONS AND INCIDENTS

X A. GROUNDWATER CONTAMINATION 02 X OBSERVED (DATE: 12/22/81) _ POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 0 04 NARRATIVE DESCRIPTION

Analytical results of samples collected by Dames & Moore on December 22, 1981 from monitoring wells on-site showed the presence of oil and grease.

X B. SURFACE WATER CONTAMINATION 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 33,900 04 NARRATIVE DESCRIPTION

U.S. Coast Guard observed puddles of oil along the shoreline, and a rainbow sheen of oil on the river; no samples were collected for laboratory analysis, however. Lever Brothers installed a boom to contain the oil. The potential for surface water contamination exists in the event that booms were not installed early enough to contain an oil leak or if an installed boom developed gaps allowing oil to escape.

C. CONTAMINATION OF AIR 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There is no potential for air contamination; the facility is no longer used for manufacturing operations.

X D. FIRE/EXPLOSIVE CONDITIONS 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 339,100 04 NARRATIVE DESCRIPTION

Instrumentation was used during the site inspection which would indicate the potential for fire/explosive conditions; it is assumed that the potential does exist, as contaminants were found on-site.

X E. DIRECT CONTACT 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: Approx. 600 04 NARRATIVE DESCRIPTION

There is no potential for direct contact by the general public; the facility is surrounded by fencing with a 24-hr. security patrol system at several places along the site perimeter. Entrance and egress are regulated by a security guard during working hours. However, contaminants were found in soil samples adjacent to buildings occupied by employees; these areas are easily accessible to all persons allowed on-site.

X F. CONTAMINATION OF SOIL 02 X OBSERVED (DATE: 12/17/81; 2/8/85) _ POTENTIAL _ ALLEGED
 AREA POTENTIALLY AFFECTED: 31 (ACRES) 04 NARRATIVE DESCRIPTION

Analyses of soil samples collected by Dames & Moore in December of 1981 indicated the presence of high concentrations of oil and grease. Analytical results of soil samples collected by NUS Corporation personnel during the site inspection on 2/8/85 show the presence of several heavy metals and numerous polycyclic aromatic hydrocarbons.

G. DRINKING WATER CONTAMINATION 02 OBSERVED (DATE:) _ POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 04 NARRATIVE DESCRIPTION

There is no potential for drinking water contamination, as there are no surface water intakes within 3 miles downstream of the site. Drinking water is supplied to the area by the Hackensack Water Co., which draws from the Oradell Reservoir about 11 miles north of the Lever Brothers facility. Groundwater is not used for drinking water purposes within a 3-mile radius of the site.

X H. WORKER EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
 WORKERS POTENTIALLY AFFECTED: Approx. 600 04 NARRATIVE DESCRIPTION

A potential for worker exposure/injury exists due to the presence of contaminants in soils adjacent to buildings on-site.

X I. POPULATION EXPOSURE/INJURY 02 OBSERVED (DATE:) X POTENTIAL _ ALLEGED
 POPULATION POTENTIALLY AFFECTED: 339,100 04 NARRATIVE DESCRIPTION

A potential for population exposure via contact with surface waters during recreational activities on the Hudson River.

LB 1.4007

HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

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

ganic and inorganic substances found in the soils on-site could enter the Hudson River via rainwater runoff and adversely affect aquatic flora in the vicinity via bioaccumulation.

K. DAMAGE TO FAUNA
 NARRATIVE DESCRIPTION (Include name(s) of species) 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED

ana inhabiting or migrating through the area could be adversely affected by contaminants as described above for damage to flora.

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

potential contamination of the food chain does exist due to the potential for damage to aquatic flora & fauna.

M. UNSTABLE CONTAINMENT OF WASTES
 (Spills/runoff/standing liquids/leaking drums) 02 OBSERVED (DATE: _____) POTENTIAL ALLEGED
 POPULATION POTENTIALLY AFFECTED: Unknown 04 NARRATIVE DESCRIPTION

hant sludges have allegedly been buried on-site by the previous owner/operator; no liners, dikes, or other types of containment were used in the burial process.

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

ere is potential for damage to the Hudson River from contaminants in the soil being washed into the river.

O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTs
 NARRATIVE DESCRIPTION 02 OBSERVED (DATE: 8/25/83) POTENTIAL ALLEGED

drains conveyed fuel oil to the river for discharge at outfall 001.

P. ILLEGAL/UNAUTHORIZED DUMPING
 NARRATIVE DESCRIPTION 02 OBSERVED (DATE: 3/16/83) POTENTIAL ALLEGED

ddition to oil spills observed by the U.S. Coast Guard, approximately 100 lbs. of sodium silicate were dumped in the vicinity of outfall 001. The material was cleaned up by Lever Brothers.

DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

site was originally owned by the Barret Co., makers of asphalt roofing materials. It is alleged that they buried waste from the manufacture of their products on-site.

TOTAL POPULATION POTENTIALLY AFFECTED: Approx. 339,100

COMMENTS

ufacturing operations have ceased at this location; and buildings constructed in 1932 and 1950 have been demolished. The Lever Bros. facility is now primarily used for research & development purposes; some perfume blending activities are also done on-site.

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

al Software Corp., GEMS population data.
 EPA Preliminary Assessment
 phone conversation with James Dunn, Regulatory Affairs Officer for Lever Bros., 9/19/85.
 Jersey Geological Survey, Open File Report No. 83-1, "New Jersey Ground Water Population Index, September 1974-January, 1975"

ORM 2070-13 (7-81)

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED
(Check all that apply)

02 PERMIT NUMBER

03 DATE ISSUED

04 EXPIRATION DATE

05 COMMENTS

See Attachment A for complete list of all permits issued.

A. NPDES

B. UIC

C. AIR

D. RCRA

E. RCRA INTERIM STATUS

F. SPCC PLAN

G. STATE (Specify) NJPDES

H. LOCAL (Specify)

I. OTHER (Specify)

J. NONE

III. SITE DESCRIPTION

01 Storage/Disposal
(Check all that apply)

02 AMOUNT

03 UNIT OF MEASURE

04 TREATMENT
(Check all that apply)

05 OTHER

- A. SURFACE IMPOUNDMENT
- B. PILES
- C. DRUMS, ABOVE GROUND
- D. TANK, ABOVE GROUND
- E. TANK, BELOW GROUND
- F. LANDFILL
- G. LANDFARM
- H. OPEN DUMP

I. OTHER underground burial
(Specify)

Unknown

- A. INCINERATION
- B. UNDERGROUND INJECTION
- C. CHEMICAL/PHYSICAL
- D. BIOLOGICAL
- E. WASTE OIL PROCESSING
- F. SOLVENT RECOVERY
- G. OTHER RECYCLING/RECOVERY
- H. OTHER None
(Specify)

A. BUILDINGS ON SITE

13
06 AREA OF SITE

31
(Acres)

07 COMMENTS

Underground burial of wastes from the manufacture of asphalt roofing materials allegedly occurred during the years of ownership by the Barrett Company. There is no information indicating the use of liners in the burial process.

V. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

A. ADEQUATE, SECURE

B. MODERATE

C. INADEQUATE, POOR

D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

Booms were deployed around discharge 001 to contain spilled fuel oil from demolition of fuel tanks on June 22, 1983. They were observed on 6/23/83 to have gaps in them, allowing oil to escape to the river. Lever Brothers was notified of the problem and thereafter maintained the proper integrity of the boom until the spilled oil was removed from the site. A seawall and/or riprap line the facility along the river's edge for the purpose of securing the shoreline property from erosion. Migration of contaminants through these structures is possible.

VI. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE:

YES

NO

02 COMMENTS

The site is completely enclosed, and access is controlled during the hours of operation by a security guard, thereby preventing access by the general public to the facility. However, the soils in which contaminants were found are located adjacent to buildings occupied by employees and are easily accessible to any persons allowed on the property.

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

Telephone conversation with James Dunn, Regulatory Affairs Officer for Lever Bros.
New Jersey Corporation Project Files for Lever Bros.

Attachment A

LEVER RESEARCH, INC. ENVIRONMENTAL PERMITS
FOR THE EDGEWATER, NEW JERSEY FACILITY

<u>PERMIT TYPE/DESCRIPTION</u>	<u>PERMIT #</u>	<u>DATE ISSUED</u>	<u>EXPIRATION</u>
Air Quality/Wet cyclone stack	070404	11-29-84	*
Air Quality/Main dust collector exhaust air stacks (4)	070403	12-12-84	*
Air Quality/Agglomeration bag collector stack	070402	12-12-84	*
Air Quality/Vacuum pump discharge air stack	070401	12-12-84	*
Air Quality/Schugi II fluidizer bag collector stack	070400	12-12-84	*
Air Quality/Fluidizer conditioner stack	070399	12-12-84	*
Air Quality/Air lift separator bag collector stack	070398	12-12-84	*
Air Quality/Marion mixer cyclone exhaust air stack	070397	12-12-84	*
Air Quality/4 foot Laminar flow hood, Room 5-217A	070136	11-27-84	*
Air Quality/4 foot Laminar flow hood, Room 5-224	070135	11-27-84	*
Air Quality/6 foot Laminar flow hood, Room 5-221	070134	11-02-84	*
Air Quality/6 foot Laminar flow hood, Room 5-217A	070133	11-27-84	*
Air Quality/Diesel electric generator stack	069985	10-19-84	*
Air Quality/Inhalation chamber system, Room 6-141	060038	9-17-84	*

Attachment A (cont'd)

<u>PERMIT TYPE/DESCRIPTION</u>	<u>PERMIT #</u>	<u>DATE ISSUED</u>	<u>EXPIRATION</u>
Air Quality/Low pressure boiler stack #3	068585	9-02-82	9-02-87
Air Quality/Low pressure boiler stack #2	068585	9-02-82	9-02-87
Air Quality/High pressure boiler stack #1	068585	9-02-82	9-02-87
Air Quality/Boiler (Bldg 6)- stack #5	065187	7-07-83	7-07-88
Air Quality/Low pressure boiler 400 BHP stack #4	060038	9-17-84	*
Air Quality/Low pressure boiler stack #4	063020	12-01-82	12-28-87
RCRA/Interim status permit (Part A modification)	NJD001495753	7-24-85	**N/A
NPDES/Direct discharge permit	NJ0002143	12/01/81	11-30-86
NPDES/Indirect discharge permit	NJ0002143	10/15/84	11-30-86
Air Quality/Inhalation chamber system	069856	10/10/84	*

*Following final permit issuance, the permit is valid for five years.
Unless otherwise indicated, these permits have not been established as
final.

**This permit is subject to filing of final status application when deemed
necessary by the EPA or NJDEP.

LB 1.4011

DRINKING WATER SUPPLY

TYPE OF DRINKING SUPPLY
(Check as applicable)

COMMUNITY
NON-COMMUNITY

SURFACE
A.
C.

WELL
B.
D.

02 STATUS

ENDANGERED
A.
D.

AFFECTED
B.
E.

MONITORED
C.
F.

03 DISTANCE TO SITE

A. 11 (mi)
B. 1.5 (mi)

GROUNDWATER

GROUNDWATER USE IN VICINITY (Check one)

A. ONLY SOURCE FOR DRINKING B. DRINKING C. COMMERCIAL, INDUSTRIAL, IRRIGATION D. NOT USED, UNUSEABLE

(Other sources available) (Limited other sources available)
COMMERCIAL,
INDUSTRIAL,
IRRIGATION
(No other water sources available)

POPULATION SERVED BY GROUND WATER: Unknown

03 DISTANCE TO NEAREST DRINKING WATER WELL: 1.5 (mi)

DEPTH TO GROUNDWATER

05 DIRECTION OF GROUNDWATER FLOW

06 DEPTH TO AQUIFER OF CONCERN

07 POTENTIAL YIELD OF AQUIFER

08 SOLE SOURCE AQUIFER

Approx. 6 (ft)

east

Approx. 6 (ft)

Unknown (gpd)

YES

NO

DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings)

There are several industrial and potable supply wells in the vicinity, ranging in depth from about 200' to 700'. The nearest to the site is a private well located about 1.5 miles to the north. The other two potable wells are owned by a restaurant and another business establishment. The population served by these wells is unknown. The wells are not located in hydraulically connected to the aquifer of concern. There are numerous monitoring wells in the vicinity also, ranging in depth from 4' - 21'.

RECHARGE AREA

YES
 NO

COMMENTS

II. DISCHARGE AREA

YES
 NO

COMMENTS

Groundwater discharges into the Hudson River.

SURFACE WATER

SURFACE WATER USE (Check one)

A. RESERVOIR, RECREATION DRINKING WATER SOURCE
 B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES
 C. COMMERCIAL, INDUSTRIAL
 D. NOT CURRENTLY USED

AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Hudson River	<input checked="" type="checkbox"/>	<u>adjacent</u> (mi)
		(mi)
		(mi)

DEMOGRAPHIC AND PROPERTY INFORMATION

TOTAL POPULATION WITHIN

02 DISTANCE TO NEAREST POPULATION

ONE (1) MILE OF SITE TWO (2) MILES OF SITE THREE (3) MILES OF SITE

A. Approx. 33,900
NO. OF PERSONS

B. Approx. 339,100
NO. OF PERSONS

C. Approx. 802,000
NO. OF PERSONS

Approx. 0.08 (mi)

NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE

04 DISTANCE TO NEAREST OFF-SITE BUILDING

Approx. 169,200

Approx. 0.08 (mi)

POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site. e.g., rural, village, densely populated urban area)

Lever Brothers site is located on an industrial strip of land between densely populated areas to the north, west, and southwest and the Hudson River to the east.

SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

01 STATE 02 SITE NUMBER
NJ 0001495811

LB 1.4012

ENVIRONMENTAL INFORMATION

PERMEABILITY OF UNSATURATED ZONE (Check one)
 A. $10^{-6} - 10^{-8}$ cm/sec B. $10^{-4} - 10^{-6}$ cm/sec C. $10^{-4} - 10^{-3}$ cm/sec D. GREATER THAN 10^{-3} cm/sec

PERMEABILITY OF BEDROCK (Check one)
 A. IMPERMEABLE (Less than 10^{-6} cm/sec) B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

DEPTH TO BEDROCK 04 DEPTH OF CONTAMINATED SOIL ZONE 05 SOIL pH
 20 (ft) At least 12 (ft) 4.5-5.4

NET PRECIPITATION 07 ONE YEAR 24 HOUR RAINFALL 08 SLOPE SITE SLOPE DIRECTION OF SITE SLOPE TERRAIN AVERAGE SLOPE
 12 (in) 2.5-3.0 (in) 0-2 % southeast 0-3 %

FLOOD POTENTIAL 10
 SITE IS IN 100 YEAR FLOODPLAIN SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

DISTANCE TO WETLANDS (5 acre minimum) 12 DISTANCE TO CRITICAL HABITAT (of endangered species)
 ESTUARINE OTHER adjacent (mi)
 A. 2 (mi) B. 1 (mi) ENDANGERED SPECIES: short-nosed sturgeon

LAND USE IN VICINITY
 DISTANCE TO:
 COMMERCIAL/INDUSTRIAL RESIDENTIAL AREAS: NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES AGRICULTURAL LANDS: PRIME AG LAND AG LAND
 A. adjacent (mi) B. residential - 0.08 wildlife preserve-2 (mi) C. 2 (mi) D. 1 (mi)

DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The Lever Bros. site is located on a relatively flat parcel of land between the Palisades Sill to the west and the Hudson River to the east. The site itself consists mostly of leveled fill material and paving, which is unrepresentative of the natural topography of the area.

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

- Telephone conversation with Peter Rambone of the Edgewater Borough Dept. of Public Works, 9/18/85.
- Telephone conversation with Bob Wiener of the Hackensack Water Co., 9/18/85.
- US Corporation site inspection, 2/8/85.
- General Software Corp., GEMS pop. data for Lever Bros. site.
- Telephone conversation with Angelo Caruso of the Bergen County Soil Conservation, 9/18/85.
- Uncontrolled Hazardous Waste Site Ranking System - A Users Manual, MITRE Corporation.
- S.G.S. Topographic Map - Central Park, NY - NJ Quadrangle.
- Nationally Listed Endangered and Threatened Species in New Jersey - NUS Corp. Files.
- New Jersey Geological Survey, Open File Report No. 83-1, "New Jersey Groundwater Pollution Index, September 1974 - January, 1985."
- Telephone conversation with Gale Carter of the U.S.G.S in Trenton, NJ.
- S. EPA Preliminary Assessment, Attachment B
- New Jersey Department of Environmental Protection, Division of Water Resources.
- New Jersey Geological Survey: "Geology of Bergen County in Brief."
- S. Geological Survey, Water Resources Investigations 76-74: "Appraisal of Water Resources in the Hackensack River Basin, New Jersey."

IDENTIFICATION
 SITE INSPECTION REPORT
 PART 6 - SAMPLE AND FIELD INFORMATION

01 STATE 02 SITE NUMBER
 NJ 0001495811

1.4013

SAMPLES TAKEN			
SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER		Organic: IT Corporation	April 1985
SURFACE WATER		17605 Fabrica Way	
WASTE		Suite D	
AIR		Cerritos, California 90701	
RUNOFF		Inorganic: Rocky Mountain Analytical Labs	April 1985
SPILL		5530 Marshall Street	
SOIL	6	Arvada, Colorado 80002	
VEGETATION			
OTHER			

I. FIELD MEASUREMENTS TAKEN	
TYPE	02 COMMENTS
	HNU photoionizer and OVA flame detectors indicated no readings above background levels in the ambient air.

PHOTOGRAPHS AND MAPS		
TYPE	<input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF
		NUS Corp., Edison, NJ (Name of organization or individual)
MAPS	04 LOCATION OF MAPS	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	NUS Corp., Edison, NJ	

OTHER FIELD DATA COLLECTED (Provide narrative description)

eld log book #1081 filed in TDD #02-8410-44.

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

S Corporation Project Files.

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

1. IDENTIFICATION
01 STATE 02 SITE NUMBER
NJ 0001495811

LB 1.4014

CURRENT OWNER(S)			PARENT COMPANY (If applicable)		
NAME	02 D + B Number	08 NAME	09 D + B NUMBER		
Lever Bros. Inc.					
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
River Road					
CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
Loewater	NJ	07020			
NAME	02 D + B Number	08 NAME	09 D + B NUMBER		
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
NAME	02 D + B Number	08 NAME	09 D + B NUMBER		
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE
NAME	02 D + B Number	08 NAME	09 D + B NUMBER		
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	10 STREET ADDRESS (P.O. Box, RFD#, etc.)	11 SIC CODE		
CITY	06 STATE	07 ZIP CODE	12 CITY	13 STATE	14 ZIP CODE

I. PREVIOUS OWNER(S) (List most recent first)			IV. REALTY OWNER(S) (If applicable; list most recent first)		
NAME	02 D + B Number	01 NAME	02 D + B NUMBER		
Irrett Co.					
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE		
River Road					
CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Loewater	NJ	07020			
NAME	02 D + B Number	01 NAME	02 D + B NUMBER		
Attachment B					
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE		
CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
NAME	02 D + B Number	01 NAME	02 D + B NUMBER		
STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD#, etc.)	04 SIC CODE		
CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

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

IS Information project files for Lever Bros.

ATTACHMENT B

All background information received from the U.S. Environmental Protection Agency indicates previous ownership of at least a portion of the Lever Brothers property by the Barrett Company, a manufacturer of asphalt roofing materials. Following is a list received from Janice Handler, assistant general counsel for Lever Brothers, of all sellers from whom they purchased the various properties constituting their Edgewater facility.

PROPERTIES LOCATED IN BLOCK # 96

LB 1.4016

BOUNDARIES: East of Railroad to East end line of lot 4A.

LOTS INCLUDED: 3A,4A

ACRES: TRACT#1 2.9021
TRACT#2 .6117

ACQUIRED FROM: SPENCER KELLOG AND SONS INC.

DATE: JUNE 13, 1960

REFERENCE: (Book 4133, Page 206), (Both Tracts)

LOTS EXCLUDED: 5 (Beyond Eastern Boundary)

EXCEPTION: LEVER BROS. CO. TO THE BORO of EDGEWATER (2 Deeds)

Location: West of Railroad and North of Lot#1 Block# 97

REFERENCE: (Book 3046, Page 499; Book 3248, Page 78.

PROPERTIES LOCATED IN BLOCK # 97

BOUNDARIES: East of Railroad to East end line of lot 4 (S 26° 29' 15'' W)

LOTS INCLUDED: 3,4

ACRES: 10.3350

ACQUIRED FROM: JAMES PYLE AND SONS

DATE MARCH 9, 1920

REFERENCE: (Book 1053, Page 441)

LOTS EXCLUDED: 1 (.9663 acres) (West of Railroad)
5,6 (Beyond Eastern Boundary)

PROPERTIES LOCATED IN BLOCK # 98

BOUNDARIES: East of Railroad to Eastern end line of lot 4 (S 28° 31' 48''W)

LOTS INCLUDED: 3,4

ACRES: 10.5486

ACQUIRED FROM: MICHEAL P. MURPHY AND CATHERINE J. (H/W)

DATE: JUNE 26, 1920

REFERENCE: (Book 1071, Page 97)

LOTS EXCLUDED: 1 (.6862 acres) (West of Railroad)
5,6 (Beyond Eastern Boundary)

PROPERTIES LOCATED IN BLOCK # 99

BOUNDARIES: East of Railroad to Eastern end line of lot 6

LOTS INCLUDED: 5,6

ACRES: TRACT#1 7.2171
TRACT#2 .3275

ACQUIRED FROM: FREDERICK G. HOLST AND ETHEL MAY HOLST

DATE: FEBRUARY 15, 1944

REFERENCE: (Book 2427, Page 279) (Both Tracts)

BOUNDARIES: West of Railroad approximately to River Road

LOTS INCLUDED: 4

ACRES: .1736

ACQUIRED FROM: NEW YORK SUSQUEHANNA AND WESTERN RAILROAD CO.

DATE: FEBRUARY 16, 1959

REFERENCE: (Book 4015, Page 444)

LOTS EXCLUDED: 1A (.1987 acres) (West of Railroad)
7,8 (Beyond Eastern Boundary)

EXCEPTION: VERGONA AND SQNS INCORPORATED

LOTS INCLUDED: 1B,2A,2B (.5142 acres)

PROPERTIES LOCATED IN BLOCK # 100

BOUNDARIES: East of Railroad to Eastern end line of lot 1A

LOTS INCLUDED: 1A

ACRES: 2.2892

ACQUIRED FROM: LOCKEN BACH TERMINALS INC.

DATE: MAY 3, 1950

REFERENCE: (Book 3069, Page 473)

POTENTIAL HAZARDOUS WASTE SITE
 SITE INSPECTION REPORT
 PART 8 - OPERATOR INFORMATION

1. IDENTIFICATION
 01 STATE 02 SITE NUMBER
 NJ 0001495811

LB 1.4018

CURRENT OPERATOR(S)			OPERATOR'S PARENT COMPANY (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
Lever Brothers, Inc.					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
River Road					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Paterson	NJ	07020			
08 YEARS OF OPERATION		09 NAME OF OWNER			

22-present

PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)			PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
Pretz Co.					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
River Road					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
Paterson	NJ	07020			
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD			

PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)			PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
[Redacted]					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
CITY					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD			

PREVIOUS OPERATOR(S) (List most recent first: Provide only if different from owner)			PREVIOUS OPERATOR'S PARENT COMPANIES (If applicable)		
01 NAME	02 D + B Number	10 NAME	11 D + B NUMBER		
[Redacted]					
03 STREET ADDRESS (P.O. Box, RFD#, etc.)		04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD#, etc.)		13 SIC CODE
CITY					
05 CITY	06 STATE	07 ZIP CODE	14 CITY	15 STATE	16 ZIP CODE
08 YEARS OF OPERATION		09 NAME OF OWNER DURING THIS PERIOD			

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

S Corporation project files for Lever Bros.

POTENTIAL HAZARDOUS WASTE SITE
 SITE INSPECTION REPORT
 PART 9 - GENERATOR/TRANSPORTER INFORMATION

1. IDENTIFICATION
 01 STATE 02 SITE NUMBER
 NJ 0001495811

LB 1.4019

III. ON-SITE GENERATOR

1 NAME 02 D + B Number

3 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

5 CITY 06 STATE 07 ZIP CODE

01 NEWARK NJ 07020

IV. OFF-SITE GENERATOR(S)

1 NAME 02 D + B Number 01 NAME 02 D + B NUMBER

3 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 02 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

5 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

1 NAME 02 D + B Number 01 NAME 02 D + B NUMBER

3 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 02 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

5 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

V. TRANSPORTER(S)

1 NAME 02 D + B Number 01 NAME 02 D + B NUMBER

3 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 02 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

5 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

01 NEWARK NJ 07638

1 NAME 02 D + B Number 01 NAME 02 D + B NUMBER

3 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE 02 STREET ADDRESS (P.O. Box, RFD#, etc.) 04 SIC CODE

5 CITY 06 STATE 07 ZIP CODE 05 CITY 06 STATE 07 ZIP CODE

01 NEWARK NJ 07094

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

US Corporation project files for Lever Bros.

POTENTIAL HAZARDOUS WASTE SITE
 SITE INSPECTION REPORT
 PART 10 - PAST RESPONSE ACTIVITIES

1. IDENTIFICATION
 01 STATE 02 SITE NUMBER
 NJ 0001495811

LB 1.4020

I. PAST RESPONSE ACTIVITIES

A. WATER SUPPLY CLOSED
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

B. TEMPORARY WATER SUPPLY PROVIDED
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

C. PERMANENT WATER SUPPLY PROVIDED
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

D. SPILLED MATERIAL REMOVED
 DESCRIPTION O2 DATE: 6/22/83 03 AGENCY: Lever Bros.

oms and sorbent sweeps were deployed to contain and remove fuel oil spilled into the Hudson River during dismantling of oil storage tanks.

E. CONTAMINATED SOIL REMOVED
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

F. WASTE REPACKAGED
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

G. WASTE DISPOSED ELSEWHERE
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

H. ON SITE BURIAL
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

I. IN SITU CHEMICAL TREATMENT
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

J. IN SITU BIOLOGICAL TREATMENT
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

K. IN SITU PHYSICAL TREATMENT
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

L. ENCAPSULATION
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

M. EMERGENCY WASTE TREATMENT
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

N. CUTOFF WALLS
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

O. EMERGENCY DIKING/SURFACE WATER DIVERSION
 DESCRIPTION O2 DATE: 6/22/83 03 AGENCY: Lever Bros.

s were deployed to contain fuel oil spilled into the Hudson River during dismantling of oil storage tanks.

P. CUTOFF TRENCHES/SUMP
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

SUBSURFACE CUTOFF WALL
 DESCRIPTION O2 DATE: _____ 03 AGENCY: _____

POTENTIAL HAZARDOUS WASTE SITE
 SITE INSPECTION REPORT
 PART 10 - PAST RESPONSE ACTIVITIES

1. IDENTIFICATION
 01 STATE 02 SITE NUMBER
 NJ 0001495811

PAST RESPONSE ACTIVITIES		
<input type="checkbox"/> applicable. R. BARRIER WALLS CONSTRUCTED DESCRIPTION	02 DATE: _____	03 AGENCY: _____ LB 1.4021
<input type="checkbox"/> applicable. S. CAPPING/COVERING DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. T. BULK TANKAGE REPAIRED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. U. GROUT CURTAIN CONSTRUCTED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. V. BOTTOM SEALED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. W. GAS CONTROL DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. X. FIRE CONTROL DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. Y. LEACHATE TREATMENT DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. Z. AREA EVACUATED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. 1. ACCESS TO SITE RESTRICTED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input type="checkbox"/> applicable. 2. POPULATION RELOCATED DESCRIPTION	02 DATE: _____	03 AGENCY: _____
<input checked="" type="checkbox"/> applicable. 3. OTHER REMEDIAL ACTIVITIES DESCRIPTION	02 DATE: 6/22/85	03 AGENCY: Lever Bros.

The U.S. Coast Guard instructed Lever Bros. to flush a storm drain which was contaminated by fuel spilled during the demolition of a storage tank and to cover all storm drains while demolition was taking place.

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

IS Corporation project files for Lever Bros.

ENFORCEMENT INFORMATION

PAST REGULATORY/ENFORCEMENT ACTION YES NO

LB 1.4022

DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

June 22, 1983 the U.S. Coast Guard ordered Lever Bros. to deploy a boom to contain oil spilled on the ground and in a storm drain during the dismantling of a storage tank that was reported to contain only water. The boom was observed later that day to be gapping in several areas, allowing oil to escape into the Hudson River. Lever Bros. was ordered by the U.S.C.G. to clean up oil on the ground and to repair and redeploy containment boom in a proper and effective manner. The company was also instructed to flush the affected storm drain and cover all storm drains during demolition of storage tanks.

June 23 & 24, 1983 the U.S.C.G. observed a saturated sorbent sweep and containment boom, and areas of sheen outside of the containment boom area. Lever Bros. was instructed to remove and replace sorbent sweeps and to redeploy containment boom in an effective manner.

August 25, 1983 a representative of the NJDEP-DWR observed oil escaping from submerged sections of the containment boom surrounding patches of oil on the waterfront in the areas of outfall 001 and monitoring well #B-3. Absorbent mats were immediately ordered to facilitate removal of the remaining oil. Absorbent booms were ordered to be maintained in proper condition until the visible oil was no longer present.

December 14, 1983, the NJDEP Metro Office inquired the U.S.C.G. about the status of the deployment boom at outfall 001. Jacobson reported that the U.S.C.G. no longer required the boom, that they considered the case closed, and that the boom could be removed. During a prior visit by the NJDEP (11/83) no oil was observed on the water surface; they agreed to the removal of the boom and notified Lever Bros.

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

Corporation project files for Lever Bros.

LEVER BROTHERS, INC.
EDGEWATER, NEW JERSEY

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



LB 1.4024



(QUAD) CENTRAL PARK, N.Y.-N.J.

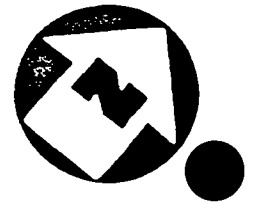
SITE LOCATION MAP
LEVER BROS., EDGEWATER, N.J.

SCALE: 1" = 2000'

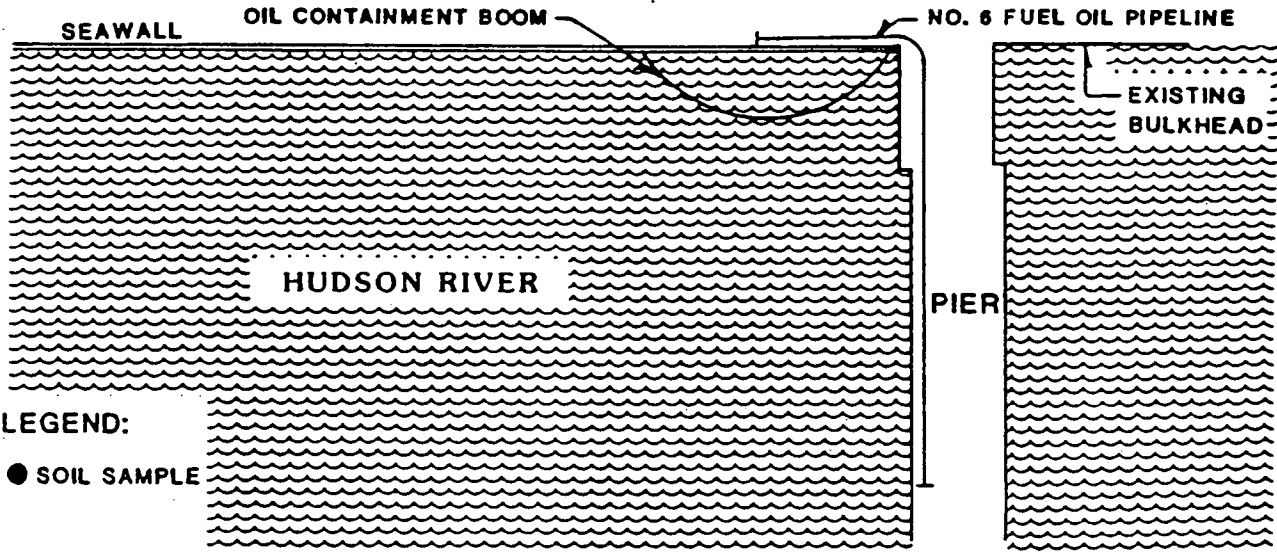
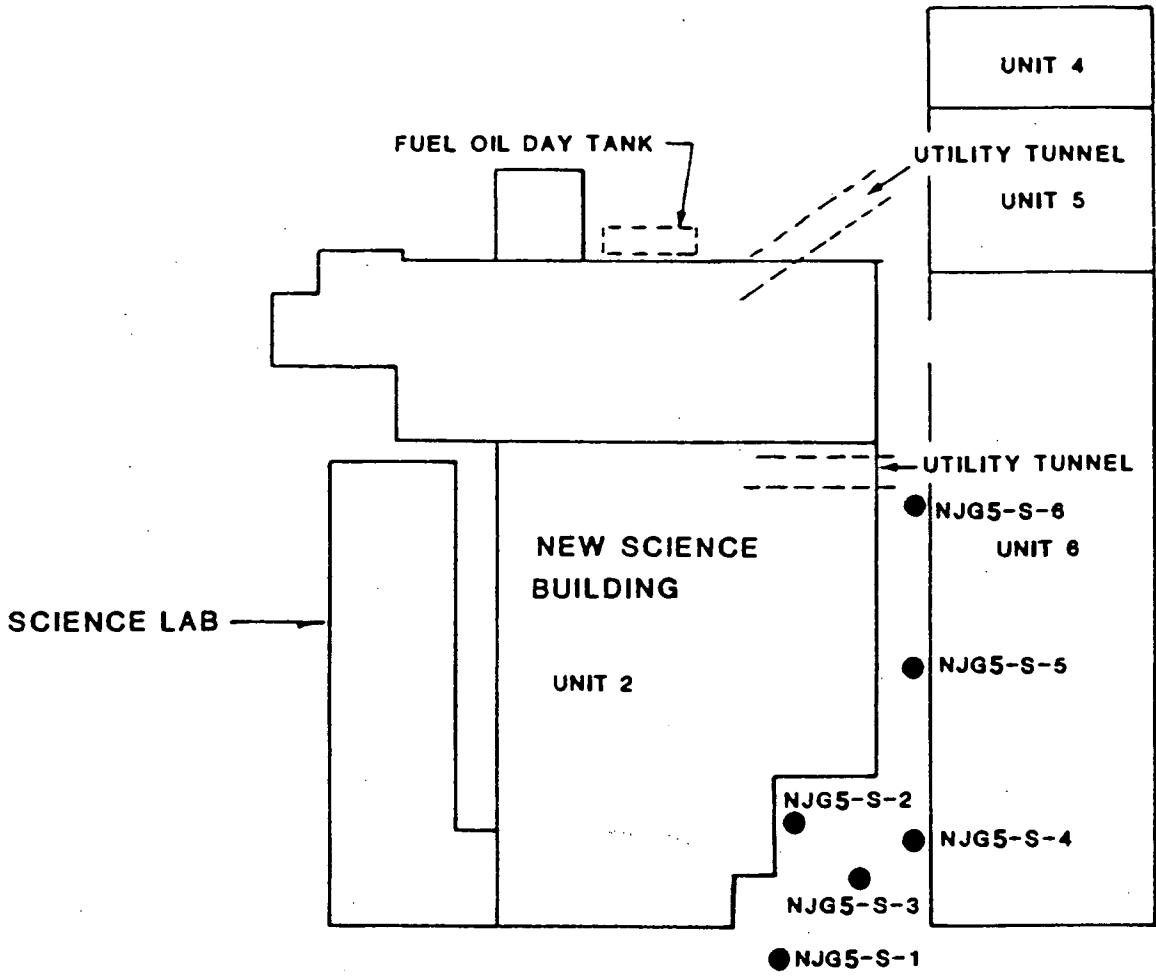
FIGURE 1



 A Halliburton Company



LB 1.4025



SAMPLE LOCATION MAP
LEVER BROS., EDGEWATER, N.J.
(NOT TO SCALE)

FIGURE 2





LB 1.4026

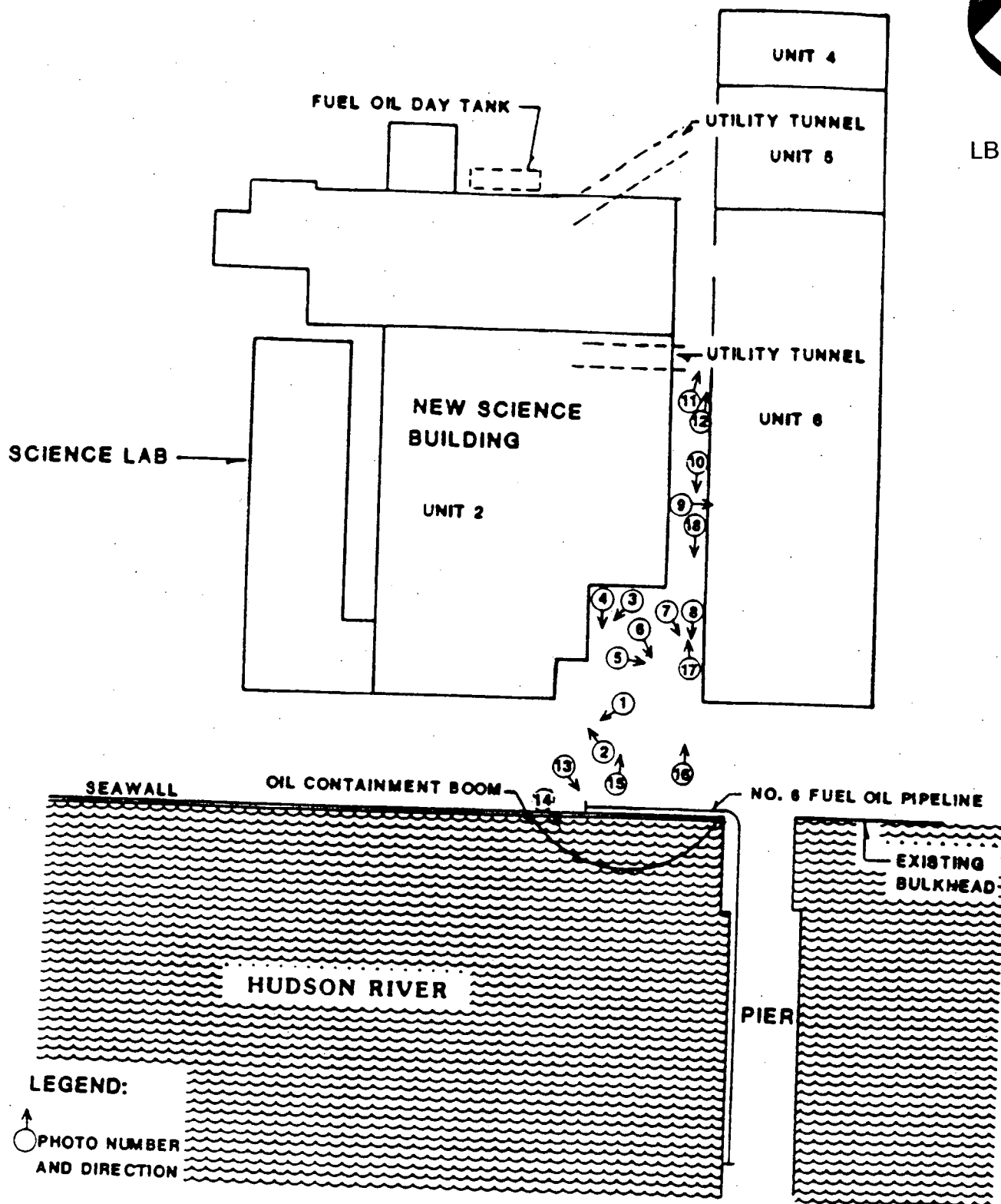


PHOTO LOCATION MAP
LEVER BROS., EDGEWATER, N.J.
(NOT TO SCALE)

FIGURE 3



LEVER BROTHERS, INC.
Edgewater, New Jersey

02-8410-44

February 8, 1985

Photograph Log

LEVER BROTHERS, INC.
Edgewater, New Jersey

LB 1.4028

02-8410-44

February 8, 1985

Photograph Index

All Photos Taken By Gary Rojek

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
1.	Don Hessemer and Joe Mayo collecting soil sample NJG5-S1, approximately 54 ft. west of the fuel oil pipeline. Sample was taken 1.5 ft. below surface.	1045
2.	Looking west towards a landscaped area adjacent to the new science building where sample NJG5-S1 was taken.	1045
3.	Don Hessemer and Joe Mayo collecting soil sample NJG5-S2 4 ft. from northeast corner of the new science building.	1118
4.	Location of 1.5 foot boring from which sample NJG5-S2 was taken. Note inactive loading pier and fuel oil pipeline (now capped and out of service), the site of a former leak.	1118
5.	Brad Dougherty monitoring boring while Don Hessemer and Joe Mayo take sample NJG5-S3.	1125
6.	Looking eastward towards the location of sample NJG5-S3, near building 6.	1125
7.	Don Hessemer and Joe Mayo collecting Sample NJG5-S4 from unpaved portion of the alleyway between buildings 6 and 2.	1140
8.	Location of sample NJG5-S4 looking east towards Hudson. Pictured are Brad Dougherty and Joe Mayo of NUS Corp., and Elizabeth Holland representing Lever Bros.	1141

02-8410-44

February 8, 1985

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
9.	Don Hessemer and Joe Mayo collecting sample NJG5-S5 from alleyway, between building 2 and building 6.	1155
10.	Looking east towards Hudson. Location of sample NJG5-S5 is in foreground, and that of NJG5-S4 can be seen in background (about 39' east of NJG5-S5).	1157
11.	Don Hessemer and Joe Mayo collecting sample NJG5-S6 from a 2 foot boring in the aforementioned alleyway.	1210
12.	Westward view of alleyway showing a 2 foot boring from which sample NJG5-S6 was taken. The boring is approximately 32 ft. west of sample location NJG5-S6.	1210
13.	Loading pier showing capped end of old fuel oil line. Before disassembly the pipe continued underground and turned west towards the facility. It was at this point that a subterranean leak occurred years ago.	1232
14.	Oil containment boom on Hudson River situated just east of former underground leakage site. Note capped pipeline on left.	1232
15.	Landscaped area adjacent to new science building (unit 2) from which samples NJG5-S1 and NJG5-S2 were taken.	1233
16.	Landscaped area adjacent to new science building from which samples NJG5-S1 and NJG5-S2 were taken. Alleyway between buildings 6 and 2 is pictured at right.	1233

LEVER BROTHERS, INC.
Edgewater, New Jersey

02-8410-44

February 8, 1985

<u>Photo Number</u>	<u>Description</u>	<u>Time</u>
17.	Looking in a westward direction down alleyway from which samples NJGS-S4, S5, and S6 were taken.	1239
18.	Looking east down alleyway between buildings 6 and 2. Strip of land on left was sampled.	1239

LEVERS BROTHERS, INC.
Edgewater, NJ
02-8410-44



1. February 8, 1985 1045
Don Hessemer and Joe Mayo collecting soil
sample NJG5-S1, approximately 54 ft. west
of the fuel oil pipeline. Sample was taken
1.5 ft. below surface.



2. February 8, 1985 1045
Looking west towards a landscaped area
adjacent to the new science building where sample
NJG5-S1 was taken.



3. February 8, 1985 1118
Don Hessemer and Joe Mayo collecting soil sample
NJG5-S2 4 ft. from northeast corner of the new
science building.



4. February 8, 1985 1118
Location of 1.5 foot boring from which sample
NJG5-S2 was taken. Note inactive loading pier and
fuel oil pipeline (now capped and out of service),
the site of a former leak.



5. February 8, 1985 1125
Brad Dougherty monitoring boring while Don Hessemer and Joe Mayo take sample NJG5-S3..



6. February 8, 1985 1125
Looking eastward towards the location of sample NJG5-S3, near building 6.

LEVERS BROTHERS, INC.

Edgewater, NJ

02-8410-44



7. February 8, 1985 1140
Don Hessemer and Joe Mayo collecting Sample NJG5-S4
from unpaved portion of the alleyway between buildings
6 and 2 .



8. February 8, 1985 1141
Location of sample NJG5-S4 looking east
towards Hudson. Pictured are Brad Dougherty
and Joe Mayo of NUS Corp., and Elizabeth Holland
representing Lever Bros.



9. February 8, 1985 1155
Don Hessemer and Joe Mayo collecting sample
NJG5-S5 from alleyway, between building 2 and
building 6.



10. February 8, 1985 1157
Looking east towards Hudson. Location of sample
NJG -S5 is in foreground, and that of NJG 5-S4 can
be seen in background (about 39' east of NJG5-S5).



11. February 8, 1985 1210
Don Hessemer and Joe Mayo collecting sample NJG5-S6
from a 2 foot boring in the aforementioned
alleyway.



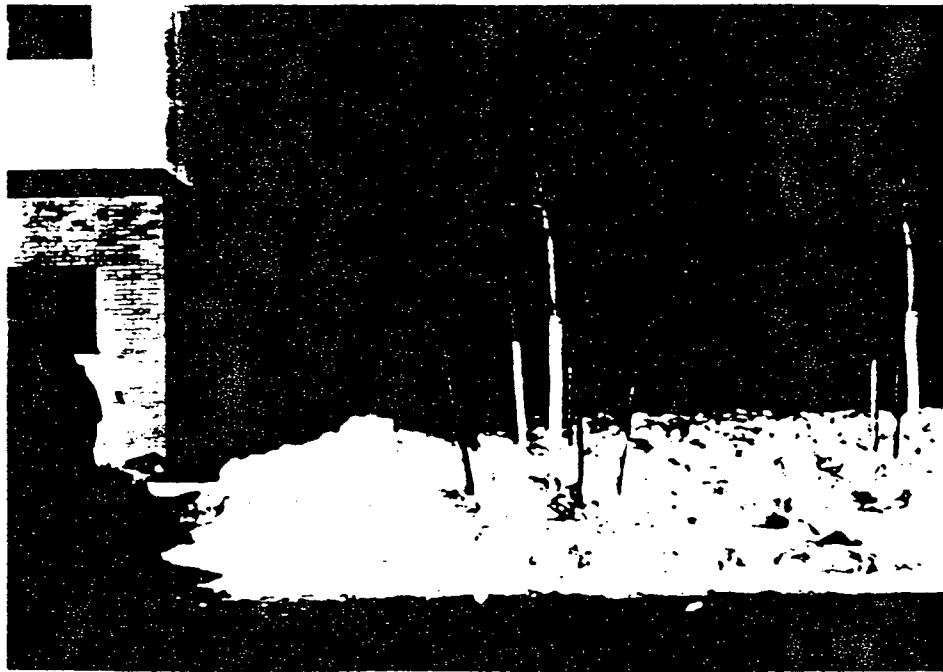
12. February 8, 1985 1210
Westward view of alleyway showing a 2 foot boring
from which sample NJG5-S6 was taken. The boring is
approximately 32 ft. west of sample location NJG5-S6.



13. February 8, 1985 1232
Loading pier showing capped end of old fuel oil line. Before disassembly the pipe continued underground and turned west towards the facility. It was at this point that a subterranean leak occurred years ago.



14. February 8, 1985 1232
Oil containment boom on Hudson River situated just east of former underground leakage site. Note capped pipeline on left.



15. February 8, 1985 1233
Landscaped area adjacent to new science building
(unit 2) from which samples NJG5-S1 and NJG5-S2
were taken.



16. February 8, 1985 1233
Landscaped area adjacent to new science building from
which samples NJG5-S1 and NJG5-S2 were taken.
Alleyway between buildings 6 and 2 is pictured
at right.



17.

February 8 1985 1239

Looking in a westward direction down alleyway from which samples NJG5-S4, S5, and S6 were taken.



18.

February 8, 1985 1239

Looking east down alleyway between buildings 6 and 2. Strip of land on left was sampled.

FIT QUALITY ASSURANCE TEAM
DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Lever Brothers, Inc.

LOCATION: 45 River Road, Edgewater, New Jersey

DATE SCORED: February 26, 1986

PERSON SCORING: Joann L. Wagner

PRIMARY SOURCE(S) OF INFORMATION (e.g., EPA region, state, FIT, etc.):
U.S. Environmental Protection Agency background file. NUS Corporation, Region II FIT files.

FACTORS NOT SCORED DUE TO INSUFFICIENT INFORMATION:

COMMENTS OR QUALIFICATIONS: No readings above background were detected with either the Organic Vapor Analyzer (OVA) or with the HNu photoionization detector during the site inspection on 2/8/85. Therefore, the Air Route on the MITRE Model was scored zero.

GROUNDWATER ROUTE

1 OBSERVED RELEASE**Contaminants detected (5 maximum):**

There is no evidence of an observed release, as no groundwater samples were collected.

Ref: #1

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2 ROUTE CHARACTERISTICS**Depth to Aquifer of Concern****Name/description of aquifer(s) of concern:**

The aquifer of concern is considered to be the shallow aquifer, consisting of medium to coarse-grained sand and gravel, silty sand, and organic clayey silt.

Ref: #2

Depth(s) from the ground surface to the highest seasonal level of the saturated zone water table(s) of the aquifer of concern:

Approximately 6 feet.

Ref: #2

Depth from the ground surface to the lowest point of waste disposal/storage:

Soil samples collected by Dames & Moore in December of 1981 showed contamination with oil and grease to a depth of 12 feet.

Ref: #2

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

44 inches.

Ref: #3

Mean annual lake or seasonal evaporation (list months for seasonal):

32 inches.

Ref: #3

Net precipitation (subtract the above figures):

12 inches.

Permeability of Unsaturated Zone

Soil type in unsaturated zones:

Boonton/Urban fill.

Ref: #2, #4, #5

Permeability associated with soil type:

$1.4 \times 10^{-3} - 4.2 \times 10^{-4}$ cm/sec.

Ref: #5

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid, sludge.

Ref: #2

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Underground burial of asphalt manufacturing wastes with no liner for containment.

Ref: #1, #2

Method with highest scores

Underground burial (landfill) with no liner.

Ref: #3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

Polyaromatic hydrocarbons; arsenic, lead, magnesium, manganese, mercury, nickel, tin.

Ref: #20

Compound with highest score:

Mercury.

Ref: #3, #6

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown.

Ref: #2

Basis of estimating and/or computing waste quantity:

The site was originally part of the Barrett Co. property which was allegedly filled in with waste from the manufacture of asphalt roofing materials. A value of 1 has been assigned to the hazardous waste quantity to reflect contaminants found in the soil samples.

Ref: #2, #20

5 TARGETS

Groundwater Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

There are several industrial and domestic wells within a 3-mile radius of the Lever Brothers Facility. Well records and available geologic information indicate that these wells are not located in or hydraulically connected to the aquifer of concern.

Ref: #7, #8, #9

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

The nearest building not served by a public water supply is located north of the Lever Brothers site and is separated from it topographically by the Palisades sill. The well on this property does not draw from the aquifer of concern.

Ref: #2, #7, #10

Distance to above well or building:

1.5 miles.

Ref: #7, #11

Population Served by Groundwater Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

There are no water supply wells drawing from the aquifer of concern within a 3-mile radius of the Lever Brothers facility.

Ref: #2, #7, #11

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre).

There are no supply wells for irrigational purposes within a 3-mile radius of the site.

Ref: #7, #11

Total population served by groundwater within a 3-mile radius:

None.

SURFACE WATER ROUTE**1 OBSERVED RELEASE**

Contaminants detected in surface water at the facility or downhill from it
(5 maximum):

There is no evidence of an observed release, as no surface water samples
were collected.

Ref: #1

Rationale for attributing the contaminants to the facility:

Not applicable.

* * *

2 ROUTE CHARACTERISTICS**Facility Slope and Intervening Terrain**

Average slope of facility in percent:

0-2%.

Ref: #1, #10

Name/description of nearest downslope surface water:

Hudson River.

Ref: #1, #10

**Average slope of terrain between facility and above-cited surface water body in
percent:**

0-3%

Ref: #1, #10

Is the facility located either totally or partially in surface water?

No.

Ref: #1, #10

Is the facility completely surrounded by areas of higher elevation?

No; the Palisades Sill lies approximately 1000 feet to the west of the site, but to the east the site slopes down to the Hudson River.

Ref: #1, #10

1-Year 24-Hour Rainfall in Inches

2.5 - 3.0 inches.

Ref: #3

Distance to Nearest Downslope Surface Water

The site is adjacent to the Hudson River.

Ref: #1, #10

Physical State of Waste

Liquid, sludge.

Ref: #2

* * *

3 CONTAINMENT**Containment****Method(s) of waste or leachate containment evaluated:**

Underground burial of asphalt manufacturing wastes; not covered and no diversion system present, or diversion system unsound.

Ref: #1, #2

Method with highest score:

Underground burial; not covered, no diversion system present, or diversion system unsound.

Ref: #3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

Polyaromatic hydrocarbons; arsenic, lead, magnesium, manganese, mercury, nickel, tin.

Ref: #20

Compound with highest score:

Mercury.

Ref: #3, #6

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

Unknown.

Ref: #2

Basis of estimating and/or computing waste quantity:

The site was originally part of the Barrett Co. property which was allegedly filled in with waste from the manufacture of asphalt roofing materials. A value of 1 has been assigned to the hazardous waste quantity to reflect contaminants found in the soil samples.

Ref: #2, #20

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substances:

Surface waters downstream of the site are used for recreational purposes.

Ref: #12

Is there tidal influence?

Yes.

Ref: #13

Distance to a Sensitive Environment**Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:**

The eastern fringe of the Hackensack Meadowlands west of the site is just within a 2-mile radius of the Lever Brothers facility.

Ref: #10

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Not applicable; there are no freshwater wetlands within a 1-mile radius of the site.

Ref: #10

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

The Hudson River, which is a critical habitat for the short-nosed sturgeon, is adjacent to the Lever Brothers site.

Ref: #1, #14

Population Served by Surface Water**Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:**

There are no water supply intakes within 3 miles downstream of the site. Water supply to the area comes from the Oradell Reservoir located approximately 11 miles north of the site.

Ref: #15, #16, #17

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

There is no land irrigated by surface water intakes within 3 miles downstream of the Lever Brothers facility.

Ref: #7, #16

Total population served:

None.

Name/description of nearest of above water bodies:

Not applicable.

Distance to above-cited intakes, measured in stream miles.

Not applicable.

1 OBSERVED RELEASE

Contaminants detected:

No organic vapors above background were detected with the air monitoring instruments during the site inspection on February 8, 1985. Therefore, the Air Route has been scored zero.

Date and location of detection of contaminants

Not applicable.

Methods used to detect the contaminants:

Not applicable.

Rationale for attributing the contaminants to the site:

Not applicable.

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

Not applicable.

Most incompatible pair of compounds:

Not applicable.

Toxicity

Most toxic compound:

Not applicable.

Hazardous Waste Quantity

Total quantity of hazardous waste:

Not applicable.

Basis of estimating and/or computing waste quantity:

Not applicable.

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0 to 4 mi 0 to 1 mi 0 to 1/2 mi 0 to 1/4 mi

Not applicable.

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

Not applicable.

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

Not applicable.

Distance to critical habitat of an endangered species, if 1 mile or less:
Not applicable.

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Not applicable.

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

Not applicable.

Distance to residential area, if 2 miles or less:

Not applicable.

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Not applicable.

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Not applicable.

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

Not applicable.

FIRE AND EXPLOSION**1 CONTAINMENT****Hazardous substances present:**

Polyaromatic hydrocarbons; arsenic, lead, magnesium, manganese, mercury, nickel, tin.

Ref: #20

Type of containment, if applicable:

Underground burial of asphalt manufacturing wastes with no liner, cover, or diversion system.

Ref: #2

* * *

2 WASTE CHARACTERISTICS**Direct Evidence****Type of instrument and measurements:**

No instrumentation was used or measurements taken supporting direct evidence of fire/explosive conditions.

Ref: #1

Ignitability**Compound used:**

Napthalene.

Ref: #3

Reactivity**Most reactive compound:**

None.

Ref: #3

Incompatibility**Most incompatible pair of compounds:**

None.

Ref: #3

Hazardous Waste Quantity**Total quantity of hazardous substances at the facility:**

Unknown.

Ref: #2

Basis of estimating and/or computing waste quantity:

The site was originally part of the Barrett Co. property which was allegedly filled in with waste from the manufacture of asphalt roofing materials. A value of 1 has been assigned to the hazardous waste quantity to reflect contaminants found in the soils samples.

Ref: #2, #20

* * *

3 TARGETS**Distance to Nearest Population**

Approximately 0.08 miles.

Ref: #1, #10

Distance to Nearest Building

On-site.

Ref: #1

Distance to Sensitive Environment**Distance to wetlands:**

Less than 2 miles.

Ref: #10

Distance to critical habitat:

The Hudson River, a critical habitat for the short-nosed sturgeon, is adjacent to the site.

Ref: #1, #14

Land Use**Distance to commercial/industrial area, if 1 mile or less:**

Commercial facilities border the site to the northeast and southwest along the Hudson River.

Ref: #1, #2, #10

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:
The nearest wildlife preserve is 12,000 feet from the site.

Ref: #17

Distance to residential area, if 2 miles or less:

Approximately 0.08 miles.

Ref: #1, #10

Distance to agricultural land in production within past 5 years, if 1 mile or less:

Not applicable; the entire area within 1 mile of the site is highly urbanized & industrialized. There is no agricultural land within 1 mile of the site.

Ref: #10, #17

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

Not applicable; the entire area within 2 miles of the site is highly developed, except for the eastern fringe of the Hackensack Meadowlands, which is marsh or swamp land unsuitable for agriculture.

Ref: #10, #17

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

No.

Ref: #1

Population Within 2-Mile Radius

Approximately 339,100.

Ref: #18

Buildings Within 2-Mile Radius

Approximately 169,200

Ref: #18

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No observed incidents of direct contact are on record.

Ref: #2

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

The facility is surrounded by a fence with 24-hour security cameras located along the perimeter of the site. During working hours a security guard regulates entrance and egress at the facility, thereby limiting access to the general population. However, the soils in which contaminants were found are located adjacent to buildings occupied by employees and are easily accessible to anyone allowed on the Lever Brothers property.

Ref: #1, #13, #20

* * *

3 CONTAINMENT

Type of containment, if applicable:

Underground burial of wastes allegedly occurred on-site, with no covers, liners, or diversion systems used. Contaminants were found in the upper 2 feet of the soil.

Ref: #2, #20

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

Polyaromatic hydrocarbons; arsenic, lead, magnesium, manganese, mercury, nickel, tin.

Ref: #20

Compound with highest score:

Mercury.

Ref: #3

5 TARGETS

Population Within One-Mile Radius

Because the site is inaccessible to the general population, the target population within a one-mile radius is considered to be only the employees allowed on-site, which is approximately 600 people.

Ref: #19

Distance to Critical Habitat (of Endangered Species)

The Hudson River, a critical habitat for the short-nosed sturgeon, is adjacent to the site.

Ref: #1, #14

SUMMARY STATEMENT
LEVER BROTHERS, INCORPORATED
EDGEWATER, NEW JERSEY

The Lever Brothers site is a 31-acre research & development facility located in Edgewater, Bergen County, NJ. The site is in a densely populated area just north of the Bergen-Hudson County border, and is bounded to the west by the Palisades Sill and to the east by the Hudson River. Commercial/industrial property is located on both sides of the facility along the river.

The site is part of a much larger piece of land that was previously owned by the Barrett Co., which manufactured roofing materials using asphalt and petroleum-based oils. It is alleged that they buried much of their waste onsite. Lever Brothers purchased a portion of that site in 1932 and used the facilities for the manufacture of margarine, table oils, and detergents. Manufacturing operations were phased out in 1976, while research operations were implemented and expanded.

Several incidents of seepage or spillage into the Hudson River of fuel oil occurred in 1981 and 1983. All incidents were monitored by the U.S. Coast Guard and/or the New Jersey Department of Environmental Protection. In all cases, the oil was contained and removed using sorbent sweeps and booms. An isolated incident in which 100 lbs. of sodium silicate was spilled occurred in March of 1983. The spill was confined to a small radius in the vicinity of outfall 001 and was cleaned up by Lever Brothers.

Analytical results of soil samples collected from the site indicate the presence of several heavy metals and numerous polyaromatic hydrocarbons. Due to the high seasonal water table and the proximity of the site to the Hudson River, the groundwater and surface water routes are the contamination routes of major concern. In addition, the highly urbanized nature of the facility's location is cause for concern with respect to the fire and explosion hazard mode.

SECTION 8

ATTACHMENTS- CITED DOCUMENTS

Joe
Lever Bros. Recor

2/7/85 13/5 met with
Mr. Jim Dunn of Lever Bros.

Mus Personnel

Gary Borch - Documentation

Joe Mayo - SSO

Mark Gallagher - Photography

Lever Bros Employees

Jim Farrell - Patent attorney

Jim Dunn - ~~Gen. Mgr.~~ Safety & SSWA

Chas. Carroll - Env. Engr. manager

Elizabeth Holland - Chemist

Met

OVAC - Serial # 427696

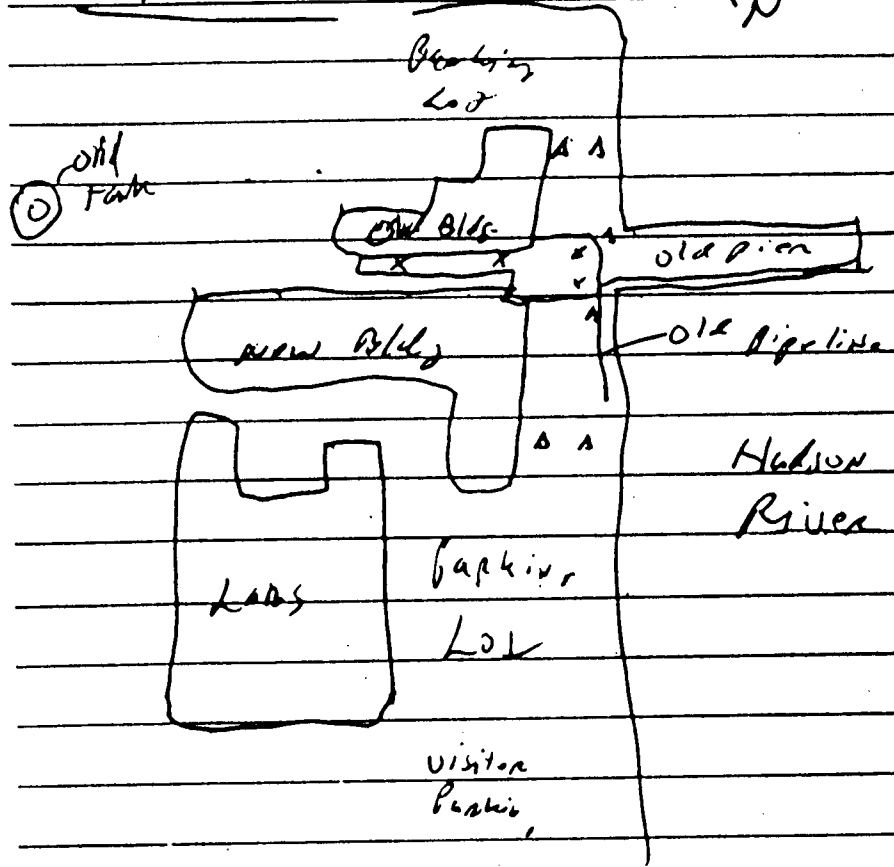
HNU B - Serial # 307138

Air instruments used

Mary Pryor 2/7/85

Joyl

Site sketch



X = ~~at~~ ~~soil~~ ~~stn~~ proposed soil sample locations.

A² old well locations

Henry Borch states

Joyl

LB 1.4061

Log

Met with Leona Bros. personnel at 1325. They requested split samples, copies of photographs taken, and copies of lab results if possible. Site map given to us by Charles Currell

Recor of area for sampling begun at 1345. Accompany Leona Bros. personnel were Elizabeth Holland, Charles Currell and Jim Dunn. Weather sunny, 30°F.

~~ground~~ ground snow covered to depth of ~ 6 inches

Area near previous soil boring is covered over with pavement. Underlying pipeline and pier is no longer in use. A new building covers most of the area of old Railroad trucks.

There is a small patch of dirt alongside original building.

Also there is a rectangular patch of earth with shrubbery planted on top. This is area where oil spill occurred.

Mary Boyd 2/7/15 LB 1.4062

Dayl

No. out of HRM readings were detected, either ambient or at potential soil locations. Snow was removed and soil disturbed and no readings detected.

Left recon. area at 1410.

Met with Laura Brown. Personnel in administration building at 1420 to give them copies of photos which were taken at sample locations.

Left building at 1440.

Mary Projib 2/17/85

Dayl

LB 1.4063

July
Levee Basin ~~Recon~~ⁱⁿ Site Inspect

2/8/05 1015 EST

Weather Clear, NW wind gusty,
temp 16°K

Met with Jim Penn and
Lisa Holland of Levee Basin
They will accompany to split
samples

DVAB #307134 used

Personnel

Gary Ruck - Project manager

Dellie LaMond - SMO

Paul Hesserer - sampler/decon

Joe Mayo - sampler

Brad Duscherty - SSO

Range Project 2/8/05

Sorgh
after SCBA #1/92059

Surveillance and test hole dug by
Joe Mayer or etc at 1039 to
1038. No readings with OVA.

First auger hole hit hard
stones and hard rocks. Went to
second^{er} another auger hole.

Sample #1 1045

~~6-5~~ ~~1045~~
NO 6-5-1 dugged to depth
of 1.5 feet. Sample was
Composite near six inches below
surface to 1.5 feet

Photos #1 taken from slide
Photo #2 taken of auger hole #1
with new research building in
background 1050

Sample #1 - 53' 7" West of pipeline
23' 7" East of it line down a way

Gene March 2/8/85

1

Jay

Sample ^{GS} NJ-69-82 | 110

Augered to depth of 1.5 feet
soil was humus with fill on
bottom - 9" next to ^{with} like kid on
distance to sample NJ-69-82

Photo: 3 taken of sample
if taken - auger hole &
NYC in background 11/8'

3/24/60

Sample ^{GS} NJ-69-83 | 1125

Augered to depth of 14 inches.
humus to 1 foot with fill underneath
Photo # ⁵ 6 taken of sample
~~Photo # 6~~ taken of sample location

Sample 18' 9" next to corner of old
Blas; 13' 9" south of old Blas

Jay

Sample ^{GS (5) 3/24/60} NS-69-5-4 1140at ~~front~~

Alongside old building, augered to
depth of 1' 6" ^{on} ~~some soil~~
at an ^{on} humus, sand, and FM in it

Photo # ⁷ ~~of~~ samples# ⁸ of location 1145

distance ^{to} Road edge west - 34' to sample location

Sample ^{GS (5) 3/24/60} NS-69-5-5 1155

Augered to depth of 1/2 foot
soil was clayey, humus, and sand, hard
Rock encountered at bottom

LB 1.4067

Photo # ⁹ ~~of~~ samples# ¹⁰ of sample location38' 6" west of sample # ^{GS (5) 3/24/60} NS-69-5-4

June

7/24/80

Sample # ~~N0648~~ 1210

At west end of dry flat patch along Bldg.

Augered to depth of 2 feet
dry layer down to sandy layer

Photo of hole taken at sample

12
12 of location 1225No OVA Readings detected all day
Other photos taken of surrounding
buildings by sample spots.

32' 10" from sample #5

Left sample site at 1310 Est

Met with Jim Dunn and Liz Holland
at 1315.

Left site at 1420

Mary Pruitt 2/10/85

Day

1:

SAMPLE DATA:

CASE # 3884

ORGANIC SOIL ANALYSIS AT: IT CORP
CERRITOS, CA 90701

AIRBILL # 923-130-785

INORGANIC SOIL ANAL @: RCKY MTN ANAL LABS
ARVADA, CO 80002

TASKS 1 & 2

AIRBILL # 923-130-784

SAMPLE #	TYPE	TRAFFIC REP #	AIRBILL #
GS (2) 2/21/80 NJ64-51	org soil	BA 501	923 130 795
"	inorg soil	MBA 858	923 130 78
GS (2) 2/21/80 NJ64-52	org soil	BA 502	"
"	inorg soil	MBA 859	"
GS (2) 2/21/80 NJ64-53	org soil	BA 503	"
"	inorg soil	MBA 860	"
GS (2) 2/24/80 NJ64-54	org soil	BA 504	"
"	inorg soil	MBA 861	"
GS (2) 2/21/80 NJ64-55	org soil	BA 505	"
"	inorg soil	MBA 862	"
GS (2) 2/24/80 NJ64-56	org soil	BA 506	"
"	inorg soil	MBA 863	"

LB 1.4069

PHOTO LOG

prepared 7/19/85

Jay C

SLIDES & PHOTOS (CORRESPOND)

GARY PUGH

- * 1) 1045 DON MESSNER & JOE MAYO COLLECTING NJ64-S1 ^{GS (G) 7/24/86}
- 2) 1045 LOCATION OF NJ64-S1 IN LANDSCAPE AREA ^{GS (G) 7/24/86}
- 3) 1118 DON MESSNER & JOE MAYO COLLECTING NJ64-S2 ^{GS (G) 7/24/86}
- 4) 1118 LOCATION OF NJ64-S2 FACING EAST ^{7/24/86 (G) GS}
- 5) 1175 DON MESSNER & JOE MAYO COLLECTING NJ64-S3 ^{GS (G) 7/24/86}
- 6) 1175 LOCATION OF NJ64-S3 LOOKING EAST ^{GS (G) 7/24/86}
- 7) 1140 DON MESSNER & JOE MAYO COLLECTING NJ64-S4 ^{GS (G) 7/24/86}
- 8) 1141 LOCATION OF NJ64-S4; LIE HOLLAND OF NEW JERSEY PICTURED ^{GS (G) 7/24/86}
- 9) 1155 COLLECTION OF NJ64-S5 BY DON M & JOE MAYO ^{GS (G) 7/24/86}
- 10) 1157 LOCATION OF NJ64-S5 FACING EAST ^{GS (G) 7/24/86}
- 11) 1210 COLLECTION OF NJ64-S6 BY JOE M & DON M. ^{GS (G) 7/24/86}
- 12) 1210 LOCATION OF NJ64-S6 FACING WEST ^{GS (G) 7/24/86}
- 13) 1232 LOADING PIER (INACTIVE) SHOWING CAPPED OIL LINE.
- 14) 1232 OIL CONTAINMENT DOOR BY
- 15) 1233 PANORAMIC VIEW OF LANDSCAPE AREA FROM WHICH NJ64-S1 & NJ64-S2 WERE TAKEN. ^{7/24/86 (G) GS}
- 17) 1239 WALKWAY BETWEEN BUILDINGS UNIT 6 & UNIT 7 SHOWING STRIP OF 3 UNPAVED AREA FROM WHICH SAMPLES NJ64-S3, S4, S5, S6 WERE TAKEN ^{GS (G) 7/24/86}
- FACING WEST.
- 18) 1239 AREA BETWEEN BUILDINGS UNIT 6 & UNIT 7

LB 1.4070

0009-0

02-8410-44/NJG5

LB 1.4071

Lever Bros. Inc.
Edgewater/Bergen County
New Jersey
07020

The Lever Brothers facility located in Edgewater, Bergen County, New Jersey has been in operation since 1932. This facility was used for the manufacture of margarine, Spry and detergents. Manufacturing operations have ceased and the buildings demolished. Lever Bros. Inc. plans to expand its research and development facilities here.

The site was originally part of the Barret Co. property which was allegedly filled in with waste from the manufacture of asphalt roofing materials. The site has had several oil spills including an underground leak in the fuel oil system. Groundwater and soil is heavily contaminated with oil and grease. Oil has also been observed leaching into the Hudson River.

This site has been given a medium priority for inspection.

Submitted by: Robert Hayton
Environmental Specialist
NJDEP-HSMA
RCRA 3012 Project



Preliminary Assessment

Lever Brothers Inc.
101 River Road
Edgewater/Bergen County
New Jersey 07020



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

L IDENT# _____
S1 STATE S3 SITE NUMBER

II. SITE NAME AND LOCATION

S1 SITE NAME (Name, address, or other name of site) Lever Brothers Inc.		S2 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 101 River Road			
S3 CITY Edgewater	S4 STATE NJ	S5 ZIP CODE 07020	S6 COUNTY Bergen		S7 COUNTY OR CONG CODE S8 DIST
S9 COORDINATES LATITUDE 40° 48' 11"		LONGITUDE 73° 59' 34"		Block 99 Lots 1,4,5,6,7 Block 97 Lots 1,3,4,5	

10 DIRECTIONS TO SITE (Starting from nearest major road)
Turnpike North to Exit 16. Take exit and head for Lincoln Tunnel. Take exit for JFK Blvd. North and continue to River Rd. Make Rt. onto River Rd. and continue until you reach the town of Edgewater. Lever Bros. is on rd.

III. RESPONSIBLE PARTIES

S1 OWNER of company Lever Brothers Inc.		S2 STREET (Number, name, direction) 390 Park Avenue			
S3 CITY New York	S4 STATE NY	S5 ZIP CODE 10022	S6 TELEPHONE NUMBER 1212688-6000		
S7 OPERATOR (Name and address of operator)		S8 STREET (Number, name, direction)			
S9 CITY	S10 STATE	S11 ZIP CODE	S12 TELEPHONE NUMBER ()		

13 TYPE OF OWNER (Check one)

- A. PRIVATE B. FEDERAL C. STATE D. COUNTY E. MUNICIPAL
 F. OTHER: _____ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

- A. RCRA 3001 DATE RECEIVED: _____ B. UNCONTROLLED WASTE SITE (RCRA 102) DATE RECEIVED: _____ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

S1 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE <u>8, 25, 83</u> <input type="checkbox"/> NO	S2 (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER: _____
CONTRACTOR NAME(S): _____	

S2 SITE STATUS (Check one)

- A. ACTIVE B. INACTIVE C. UNKNOWN

S3 YEARS OF OPERATION

1932

UNKNOWN

S4 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN OR ALLEGED

Oil and grease and other constituents of fuel oil and asphalt sludges.

S5 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Fuel oil has contaminated soil and groundwater. Groundwater flows toward and into the Hudson River. Fish and waterfowl populations are at risk..

V. PRIORITY ASSESSMENT

S1 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - More Information and Part 3 - Description of Hazardous Constituents and Features)

- A. HIGH (Immediate action required)
 B. MEDIUM (Investigation required)
 C. LOW (Inspected at site (Priority basis))
 D. NONE (No further action needed, complete current inspection only)

VI. INFORMATION AVAILABLE FROM

S1 CONTACT Bob Dante	S2 Of Agency/Organization BFO-Northern Field Office	S3 TELEPHONE NUMBER ()
S4 PERSON RESPONSIBLE FOR ASSESSMENT Robert Hayton	S5 AGENCY DEP	S6 ORGANIZATION HSMA
S7 TELEPHONE NUMBER 609292-1210	S8 DATE 920 84	



**POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION**

I. IDENTIFICATION

01 STATE 02 SITE NUMBER

WASTE STATES, QUANTITIES, AND CHARACTERISTICS

WASTE STATES
 LIQUID
 SOLID
 POWDER
 GEL
 OTHER

WASTE QUANTITIES AT SITE
 TONS _____
 CUBIC YARDS _____
 NO. OF DRUMS _____

WASTE CHARACTERISTICS
 TOXIC
 CORROSIVE
 RADIOACTIVE
 FLAMMABLE
 REACTIVE
 HIGHLY VOLATILE
 EXPLOSIVE
 REACTIVE
 INCOMPATIBLE
 NOT APPLICABLE

II. WASTE TYPE

01 CATEGORY	02 SUBSTANCE NAME	03 GROSS AMOUNT	04 UNIT OF MEASURE	05 COMMENTS
SLU	SLUDGE	XXX		Unknown amt. buried in ground
OLW	OIL WASTE	XXX		Unknown amount spilled on ground
SOL	SOLVENTS			
PSO	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
HES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/ DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OLW	Oil & grease		Soil sample	15.100	mg/kg
	Oil & grease		Ground water	210	mg/L

V. FEEDSTOCKS

01 CATEGORY	02 FEEDSTOCK NAME	03 CAS NUMBER	04 CATEGORY	05 FEEDSTOCK NAME	06 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION

Division of Water Resources-Trenton



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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 <input checked="" type="checkbox"/> A. GROUNDWATER CONTAMINATION	02 <input checked="" type="checkbox"/> OBSERVED (DATE: <u>1/12/82</u>)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Analysis by ETC shows contamination of groundwater with fuel oil (oil & grease).			
Attachment B Table 2			

01 <input type="checkbox"/> B. SURFACE WATER CONTAMINATION	02 <input checked="" type="checkbox"/> OBSERVED (DATE: <u>6/23/83</u>)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
U.S. Coast Guard observes oil in puddles along shoreline, and rainbow sheen of oil on river.			
Attachment C			

01 <input type="checkbox"/> C. CONTAMINATION OF AIR	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		

01 <input type="checkbox"/> D. FIRE/EXPLOSIVE CONDITIONS	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		

01 <input type="checkbox"/> E. AIR POLLUTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		

01 <input checked="" type="checkbox"/> F. CONTAMINATION OF SOIL	02 <input checked="" type="checkbox"/> OBSERVED (DATE: <u>1/12/82</u>)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 AREA POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Analysis of soil by ETC Inc. for Dame & Moore Inc. of Cranford indicates soil contaminated with high concentrations of oil & grease.			
Attachment B			

01 <input type="checkbox"/> G. DRINKING WATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		

01 <input type="checkbox"/> H. WORKER EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		

01 <input type="checkbox"/> I. POPULATION EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		



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

L IDENTIFICATION	
01 STATE	02 SITE NUMBER

E. HAZARDOUS CONDITIONS AND INCIDENTS

01 J. DAMAGE TO FLORA
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE _____) | POTENTIAL | ALLEGED

Oil and grease leaching into the Hudson River could effect the aquatic flora.

01 K. DAMAGE TO FAUNA
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE _____) | POTENTIAL | ALLEGED

Oil and grease leaching into the Hudson River could effect fish and waterfowl.

01 L. CONTAMINATION OF FOOD CHAIN
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE _____) | POTENTIAL | ALLEGED

01 M. UNSTABLE CONTAINMENT OF WASTES
03 POPULATION POTENTIALLY AFFECTED _____

02 OBSERVED (DATE _____) | POTENTIAL | ALLEGED

04 NARRATIVE DESCRIPTION

01 N. DAMAGE TO OFF-SITE PROPERTY
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE _____) | POTENTIAL | ALLEGED

01 O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE 8/25/83) | POTENTIAL | ALLEGED

Storm drains conveyed oil & grease (fuel oil) to river for discharge at outfalls.

Attachment D

01 P. ILLEGAL/UNAUTHORIZED DUMPING
04 NARRATIVE DESCRIPTION

02 OBSERVED (DATE 3/16/83) | POTENTIAL | ALLEGED

Approximately 100 lbs. of sodium silicate dumped in vicinity of outfall 001. Material was cleaned up by Lever Bros. Also oil spill observed by Coast Guard.

Attachment D, Pages 3 & 12

05 DESCRIPTION OF ANY OTHER KNOWN POTENTIAL OR ALLEGED HAZARDS
This site was originally owned by the Barret Co., makers of asphalt products. It is alleged that they had buried much of their waste on site.

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS
Manufacturing has stopped at this location. Buildings that were built in 1932 and 1950 are being demolished. Lever Bros. is expected to expand its research facilities on this site.

V. SOURCES OF INFORMATION
Division of Water Resources-Newark
" " " " -Trenton
Division of Waste Management-Trenton

January 12, 1982

Mr. Donald Supkow
Dames & Moore
6 Commerce Drive
Cranford, NJ 07016

Dear Mr. Supkow:

We at ETC are pleased to submit the attached laboratory reports in response to your testing requirements. As you know, the analyses were performed by Dr. Denis C.K. Lin and his staff, and we are confident that you will find the results are of the highest quality.

If you have any questions regarding your report, we encourage you to contact our Customer Service organization (201/225-5600) and they will coordinate your request with appropriate laboratory personnel. You are also invited to visit with either Swep Davis or Henry Beal, Esq., if you have any questions regarding the regulatory or the legal aspects of your project. Dr. George Vander Velde is also available to assist you in defining the requirements for future testing programs.

All of us at ETC welcome your next call if we can be of further service to your organization in the future.

Sincerely,


T. L. Loucks
President

TLL:man
Attachments

TABLE OF CONTENTS

Introduction

Methodology

Results

Conclusions

Table 1: Quantitative Data

Chapter 1: Study Record

Appendix

RESULTS

The sample chromatograms were compared to chromatograms of #6 fuel oil for matching peaks. The data for ETC Sample No.'s 000648 to 000654 are presented in Table 1. The Chain-of-Custody record is included in this report after Table 1. Sample and standard chromatograms are included in the Appendix. Additionally, the results of the above mentioned samples plus the seven (7) soil samples (ETC Sample No.'s 000639 to 000645) analyzed for oil & grease are in Table 1.

CONCLUSIONS

#6 fuel oil was not found at or above the limit of detection.

LEVER BROTHERS COMPANY
EDGEWATER PLANT
PHASE II REPORT

LB 1.4080

INTRODUCTION

General

In this report we present the results of Dames & Moore's hydrogeologic investigation at the Lever Brothers Company plant at Edgewater, New Jersey.

The objective of this study was to determine the extent of a No. 6 fuel oil leak in the vicinity of the off-loading pipeline and the fuel oil day tank, and the composition and extent of oily contaminants, if any, in the local ground water which could potentially enter the Hudson River.

Scope of Work

To fulfill these objectives Dames & Moore performed a work program consisting of the following tasks:

- o drilling of exploratory borings and collection of soil samples
- o installation of monitoring wells
- o collection of ground water samples from the monitoring wells
- o chemical analysis of the soil and water samples
- o evaluation of the data and report preparation

FIELD PROGRAM

General

The Lever Brothers site is located on the western shore of the Hudson River ~~with an average elevation of about eight feet above MSL.~~ It is characterized by ~~very low relief across the site,~~ and an extensive asphalt pavement ~~overlying fill materials composed primarily of ashes, cinders and concrete rubble,~~ approximately 10

ATTACHMENT 15
DAMES & MOORE

feet thick. The site slopes gently toward the east. Surface water is collected by storm drains which discharge into the Hudson River.

No. 6 fuel oil is brought to the site by river barge and off-loaded at the pier. The fuel oil pipeline runs along the top of the pier to the seawall, makes a 90° bend southward, and then runs along the top of the seawall for a short distance. The pipeline then goes underground, making a 90° turn westward. The fuel oil pipeline then continues underground from the seawall to northeast corner of Refinery Building Unit 2 (a distance of 40 ft.), from whence it comes out of the ground and traverses westward to the bulk fuel oil storage tank about 300 feet inland. An above ground pipeline carries the fuel oil from the bulk storage tank to an underground fuel oil day tank adjacent to the northwest corner of Unit 1 Building. A short pipeline carries the fuel oil from the day tank to the boiler in the Unit 1 Building, through an underground vault.

A leak in the underground part of the fuel oil line (between the seawall and Unit 1 Building) had occurred several years ago. However, the defective pipe was replaced and no oil seepage into the river was reportedly observed at the time. Also, the end of 1981 a small area of oil seepage was observed by Lever Bros., in the rip-rap at the foot of the seawall at a point about 100 feet south of the pier. The rip-rap was excavated at the point of the observed oil seep. The N.J.D.E.P. and the Coast Guard were notified of the oil seep by Lever Bros. Tests were taken by the authorities which identified the oil seepage as No. 6 fuel oil. A floating boom was installed around the oil seep by Lever Bros. to contain the oil and to prevent it from spreading in the river.

Installation of Monitoring Wells

Six exploratory borings drilled in the vicinity of the underground No. 6 fuel oil pipeline, and one exploratory boring drilled near the fuel oil day tank, were advanced through the pavement, fill deposits, and swamp soils into the underlying gray organic clayey silts. All seven boreholes were converted into 1-1/2-inch I.D. monitoring wells, with RVC screens placed in the saturated fill above the gray silty sediments. The locations of the monitoring wells are shown on Fig. 2. Boring logs and well construction details are shown on Fig. A-2 through A-5.

Soil and Ground Water Analyses

The water samples collected in the seven monitoring wells on December 22, 1981 were analyzed for oil and grease. ~~Each water sample contained oil and grease in concentrations ranging from 4.2 to 210 mg/l (ppm).~~ The results are tabulated in Table 1 of Appendix B. The oil and grease was analyzed for No. 6 fuel oil. However, the No. 6 fuel oil content was below the detection limit of 1035 ppm in each case.

~~One soil sample from below the water table in each borehole was analyzed for oil and grease. Each sample contained oil and grease in concentrations ranging from 300 to 64,700 mg/kg (ppm).~~ The oil in the soil samples was not analyzed for No. 6 fuel oil. The high contents of oil and grease in the laboratory analysis are consistent with the visual observations of the soil samples as they were recovered during the drilling operations.

There does not appear to be any meaningful correlation between the oil and grease content of ground water samples, and the oil and grease content of the soil samples at each location.

~~Water samples from the easternmost line of monitoring wells show higher concentrations of oil and grease than samples from the inland row of wells. This higher concentration may be related to the direction of groundwater flow which is from west to east in this area (see Figure 1).~~

Conclusions

Based on the results of our investigations we conclude that:

1. ~~Ground water flow in the eastern part of the site is generally eastward toward the Hudson River,~~
2. ~~All water and soil samples collected from the site contain oil and grease,~~
3. No. 6 fuel oil was not found in the water samples at or above the limit of detection of 1035 mg/l,

DAMES & MOORE

4. No apparent correlation exists between the oil and grease found in the ground water and that found in the soils underlying the site,
5. Oil contaminated soil has been removed from test pits excavated previously in the vicinity of the underground fuel line, and the test pits have been backfilled with clean fill. This should serve to help reduce the potential for oil seepage into the river by this partial removal of a potential source of contamination.
6. Visual observations behind the floating oil retention boom indicate a barely visible oil sheen,
7. ~~A significant area of soil for a distance of at least 100 feet on either side of the fuel oil pipeline is contaminated with oil and grease.~~ Soil and water tests do not show any correlation between contaminant levels and distances from the fuel oil pipeline.
8. ~~Because the oil seep into the river is very small and localized and can be effectively contained by the floating boom,~~ it does not appear to be either feasible or cost effective to construct a cut-off wall or to dig up large volumes of oil-contaminated soil.
9. Although the oil and grease content found in the ground water was highest (210 ppm) at B-7, near the fuel oil day tank, it was the lowest (300 ppm) of that found in the soil samples at this same location. Insofar as this location is about 500 feet away from the river, and an oil leak in the area of the underground fuel line (a short distance from the river) reportedly took several years to appear in the river, it does not appear that the presence of oil in the ground near the fuel oil day tank would pose an immediate threat to river contamination.

Recommendations

Based upon the available data and our site observations, we offer the following recommendations:

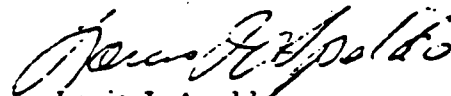
1. Replace the excavated rip rap in the vicinity of the oil seep, as this may help retard the escape of oil into the river, and will prevent erosion of the soil under and behind the seawall at that location.
2. Continue to maintain the existing oil boom, clean up any oil caught by the boom, and note the approximate rate of oil collection.
3. Resample the seven monitoring wells for oil and grease and total hydrocarbons to confirm contaminant levels at these locations.

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If you have any questions regarding this report, or if we can be of further assistance, please contact us.

Very truly yours,

DAMES & MOORE



Louis J. Apoldo
Associate



Donald J. Supkow, Ph.D.
Senior Hydrologist

LJA/DJS:jp

Attachments

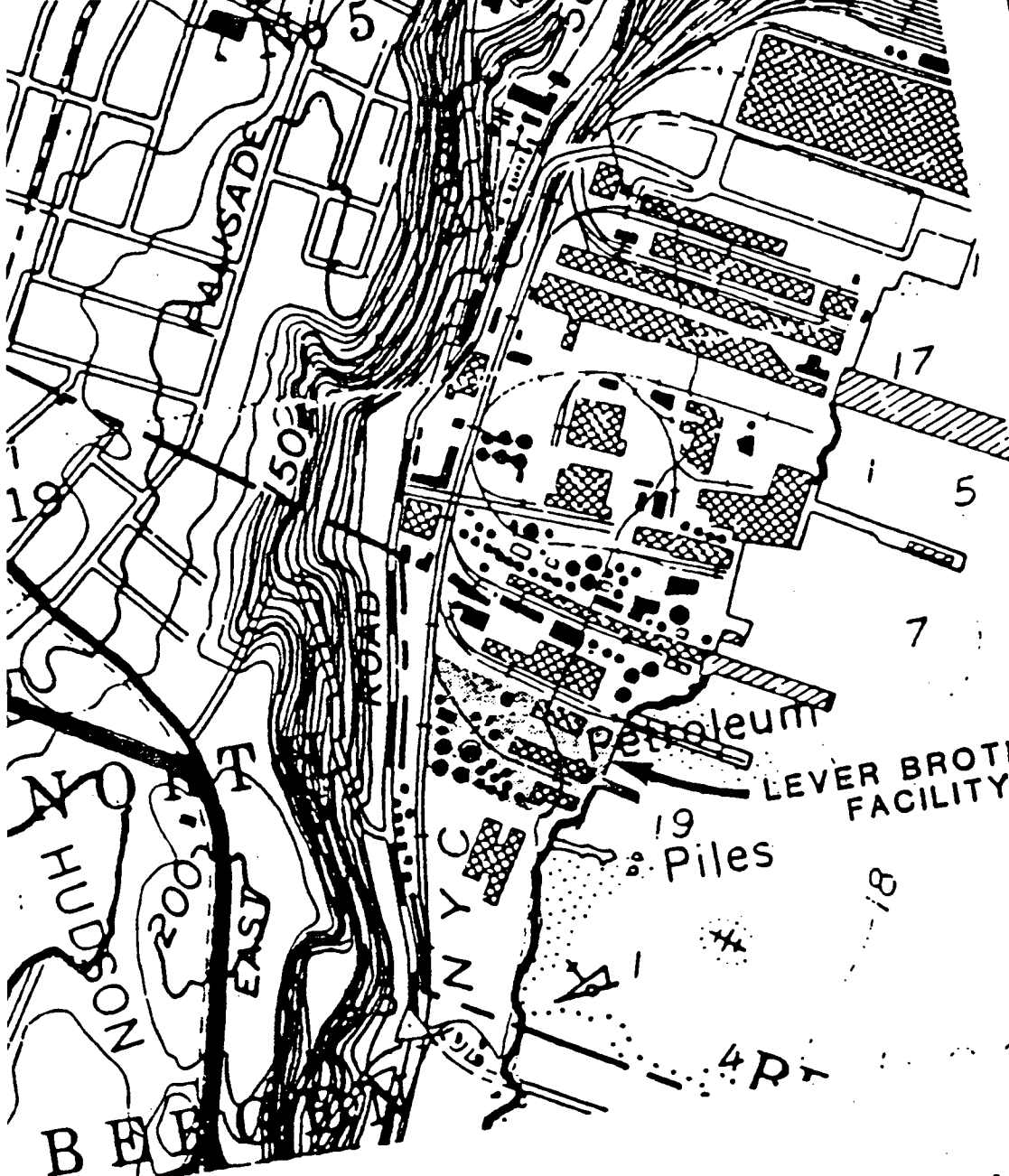
TABLE 1
GROUND WATER LEVEL DATA

<u>Well No.</u>	<u>Casing Elevation</u>	<u>Date of Water Level Measurement</u>	<u>Time</u>	<u>Depth to Water</u>	<u>Water Well Elevation</u>
1	8.29	12/17/81	10:00	5.95	2.34
		12/22/81	10:45	5.92	2.37
2	8.07	12/17/81	10:02	6.10	1.97
		12/22/81	10:46	6.18	1.89
3	7.79	12/17/81	10:04	5.65	2.14
		12/22/81	10:47	5.86	1.93
4	7.46	12/17/81	10:06	6.55	0.91
		12/22/81	10:50	6.68	0.78
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		12/22/81	10:52	6.05	1.42
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		12/22/81	12:30	6.18	1.39

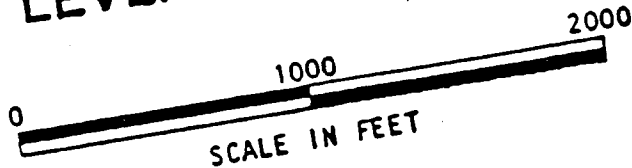
TABLE 2

QUANTITATIVE DATA ON OIL AND GREASE
AT LEVER BROS. SITE IN DECEMBER 1981

Location No.	Depth Below Ground Surface (in ft)	Soil Sample Oil and Grease Concentration in mg/kg	Ground Water (Sampled Dec. 22, 1981) Oil and Grease Concentration in mg/l
B-1	10-12	780	4.2
B-2	10-12	15,100	11
B-3	10-12	1,600	26
B-4	10-10.5	700	33
B-5	10-12	630	21
B-6	10-12	64,700	12
B-7	5-7	300	210



SITE LOCATION MAP SHOWING THE VICINITY OF THE LEVER BROTHERS FACILITY



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FIGURE 1

BASE MAP FROM USGS 1:24000, 7.5 TOPOGRAPHIC MAP

INSTALLATION OF MONITORING WELLS

Type and Location

Between December 14 and December 17, a total of seven monitoring wells were installed at the Lever Brothers Company plant in Edgewater, New Jersey. All monitoring wells were shallow, of small diameter, and screened from the water table downward in the fill material. The locations of the monitoring wells are shown on Figure 2. The monitoring wells were installed to evaluate ground water quality, ground water levels, and direction of ground water flow.

Drilling and Soil Sampling

The geologic conditions at the site were investigated by drilling eight (8) borings, seven of which were converted into monitoring wells. Drilling was performed by Warren George, Inc. of New Jersey using a truck-mounted hollow stem auger rig and a truck-mounted rotary-air rig, which were steam-cleaned prior to beginning drilling operations. Borings B-1, B-2 and B-3 were drilled using the auger rig. Location B-2A was abandoned due to difficult subsurface drilling conditions, and a more powerful rotary-air rig with 4-3/4" O.D. tricone roller bit was mobilized to the site to replace the auger rig and to complete the drilling.

The field drilling operations were conducted under the supervision of a Dames & Moore geologist. The soil deposits underlying the site were classified by visual examination in the field and a complete log was maintained of each boring. The Unified Soil Classification System was used to describe the soil types (refer to Figure A-1).

A graphical representation of the fill and soil deposits encountered in the borings is shown on Figure A-2 through Figure A-5.

Standard Penetration Tests were performed to obtain soil samples and data for identifying the sediment types, and to evaluate the relative density of the strata. These tests were performed using a standard 2-inch O.D. split-spoon sampler driven by

a 140-pound weight falling 30 inches. The blow counts were recorded for each foot of sample penetration. Soil sample containers were labeled with pertinent information, including: job number, sample depth, sample number, date, field geologist's name, client, job location, and sample description. The sampling equipment was disassembled and washed with fresh water after each sample, to minimize the possibility of contamination between samples.

CONSTRUCTION OF GROUND WATER MONITORING WELLS

General Procedures

The general drilling and well installation procedures were as follows:

- o Drilled through the fill material to the gray clayey silt.
- o Installed 1-1/2-inch I.D. PVC well screen with PVC riser which was sealed off from the surface by a cement seal into which a 2-inch steel protective casing with a brass cap was set.
- o Developed the well by evacuating the water by compressed air.

Ground Water Sampling

A set of ground water samples was collected on 22 December 1981.

All water sampling was performed utilizing a peristaltic pump and 1/4-inch diameter plastic Tygon tubing. The ground water was collected into brown one-liter bottles containing sulphuric acid as a preservative.

Two one-liter bottles of water were obtained from locations B-1 through B-6. At B-7 only half a bottle of water was collected because of low well yield.

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPROXIMATE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SANDS WITH FINES (APPROXIMATE AMOUNT OF FINES)			SM	SILTY SANDS, SAND-SILT MIXTURES	
			SC	CLAYEY SANDS, SAND-CLAY MIXTURES	
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, SOFT FLOES, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MEDIUM OR DISCONTINUOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	
HIGHLY ORGANIC SOILS				PT	PEAT, MUCK, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

SOIL CLASSIFICATION CHART

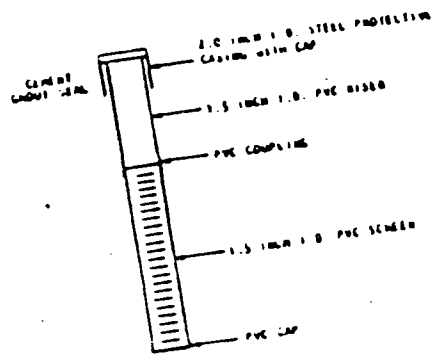
UNIFIED SOIL CLASSIFICATION SYSTEM

DANES & MOORE

REVISED 4/73 12-61

IG B-1
ELEVATION 2.29'

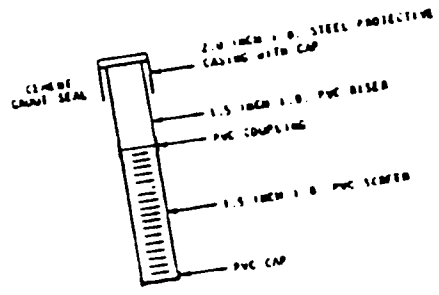
DEPTH	DESCRIPTIONS
0-10 FT.	GRAY SILTY SAND AND GRAVEL (FILL)
10-15 FT.	AT-DRAIN MEDIA TO COARSE SAND, TRACE SILT, FRAGMENTS OF SAND AND BOILER (FILL)
15-18 FT.	DARK GRAY-BROWN SILTY SAND WITH OIL SHEEN STRONG CHEMICAL ODOR
18-20 FT.	DARK BROWN PEAT ORGANIC MUD
20-22 FT.	DARK GRAY ORGANIC CLAYEY SILT
BORING TERMINATED AT 22.0 FT. ON 12/14/81	



LB 1.4091

BORING B-2
SURFACE ELEVATION 8.01'

SOILS	DESCRIPTIONS
SP GP	PAVEMENT GRAY-YELLOWISH SILTY SAND AND GRAVEL, BRICK AND BOILER FRAGMENTS (FILL)
SM	MUD FRAGMENTS AT 4 FT.
ST	GRAY SILTY SAND SATURATED WITH OIL MATERIAL
PT	MUD FRAGMENTS AT 7 FT.
OL	BROWN TO BLACK SAND WITH CLUMBS, SATURATED WITH OIL MATERIAL
	BROWN PEAT
	DARK GRAY ORGANIC CLAYEY SILT
BORING TERMINATED AT 12.5 FT. ON 12/16/81	



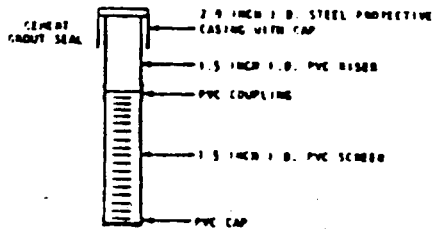
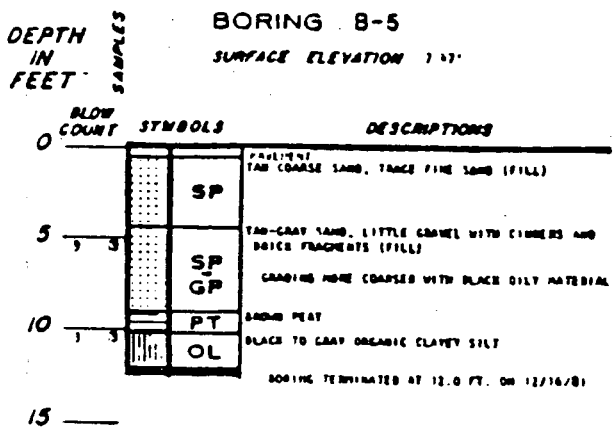
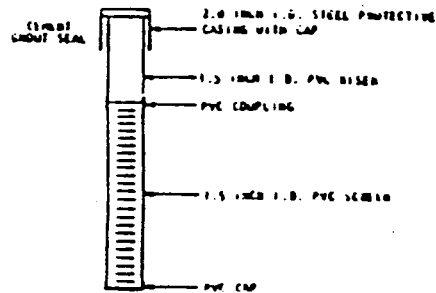
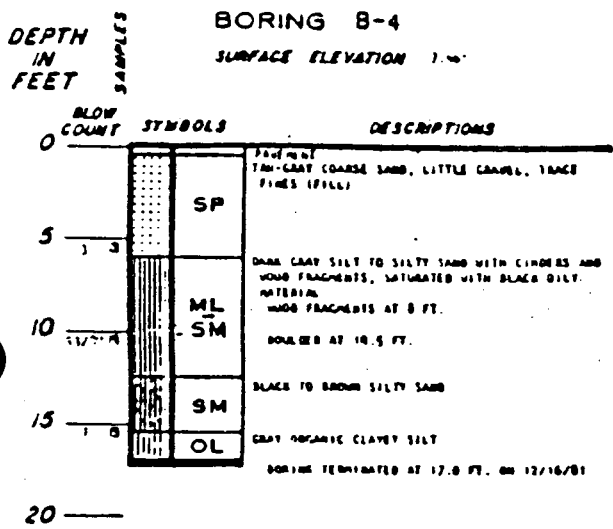
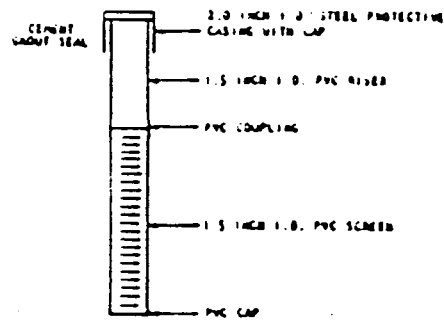
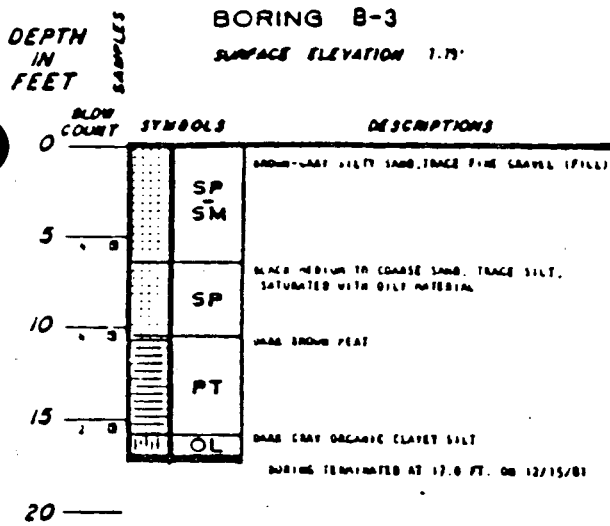
BORING B-2A
SURFACE ELEVATION 8.8'

SOILS	SYMBOLS	DESCRIPTIONS
GP	GP	PAVEMENT FILL SAND, GRAVEL, BRICK FRAGMENTS
SP	SP	DARK BROWN-GRAY SILTY SAND AND GRAVEL (FILL)
SM	SM	GRAY SILTY SAND TO BROWN PEAT
PT	PT	BOILER AT 7 FT.
BORING TERMINATED AT 7.0 FT. ON 12/15/81 (LOCATION NUMBER)		

LOG OF BORINGS AND MONITORING WELL DETAILS

DAMES & MOORE

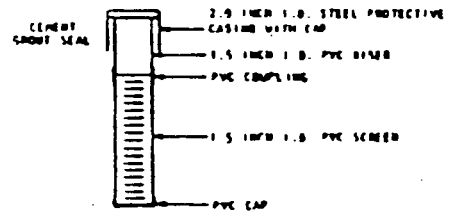
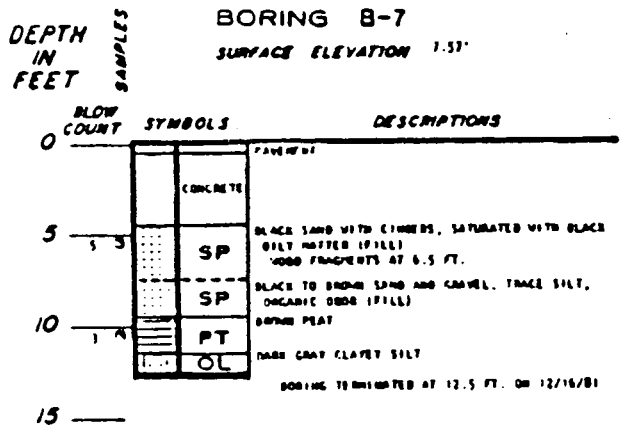
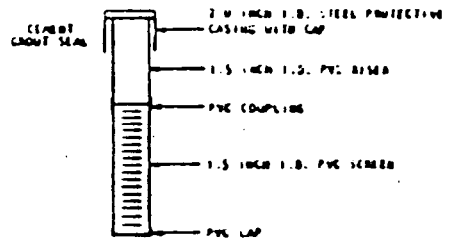
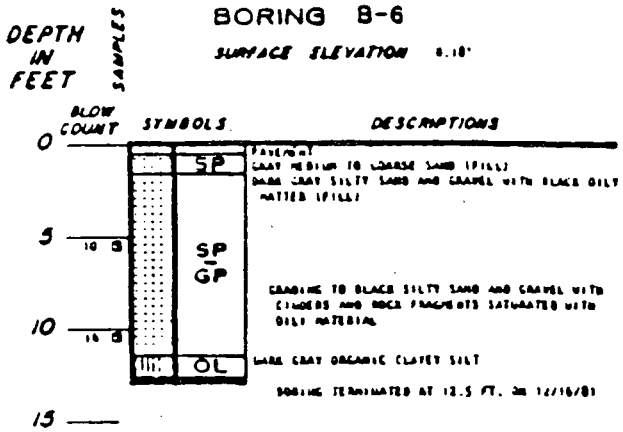
FIGURE A-2



LOG OF BORINGS AND MONITORING WELL DETAILS

DAMES & MOORE

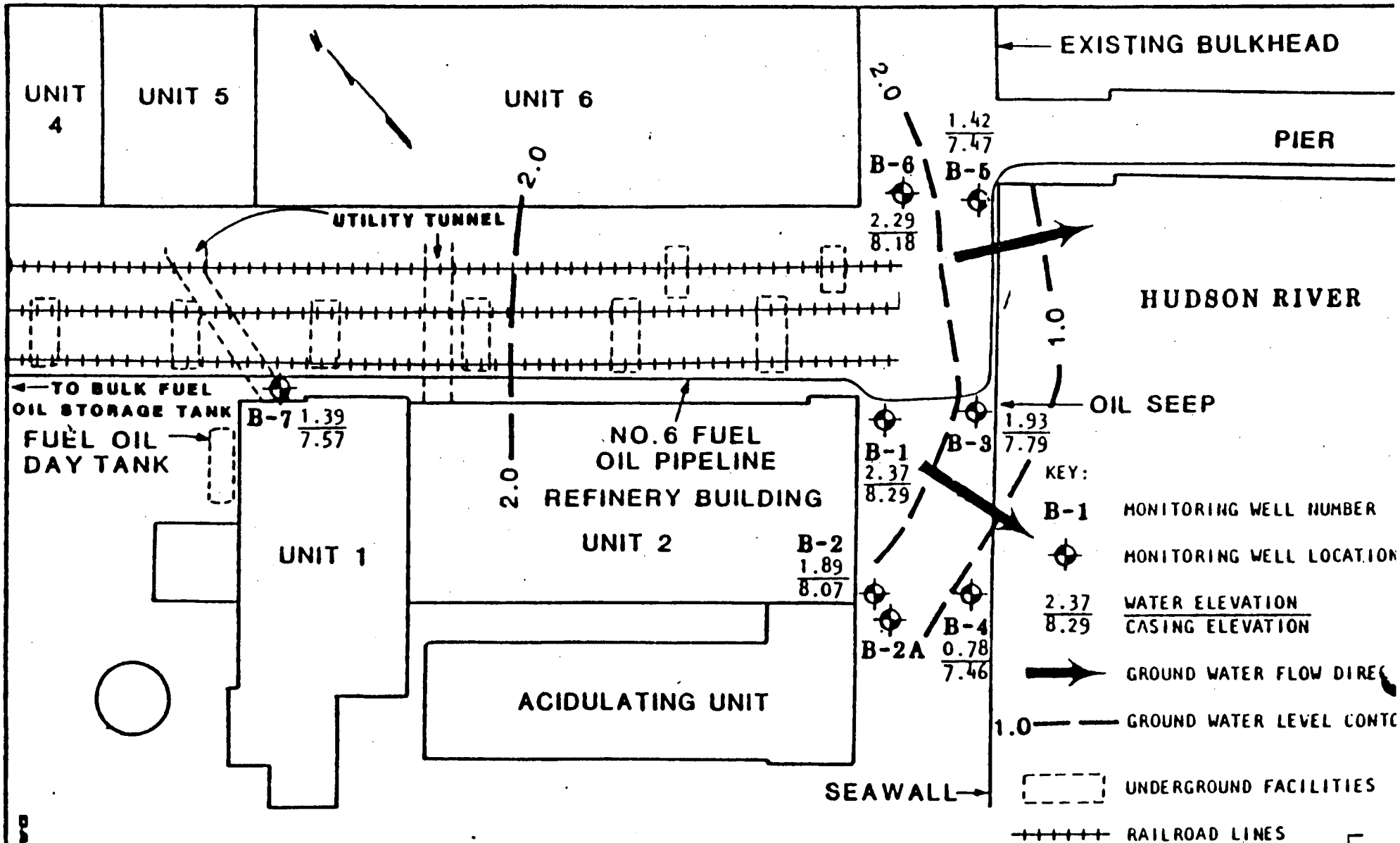
FIGURE A-3



LOG OF BORINGS AND MONITORING WELL DETAILS

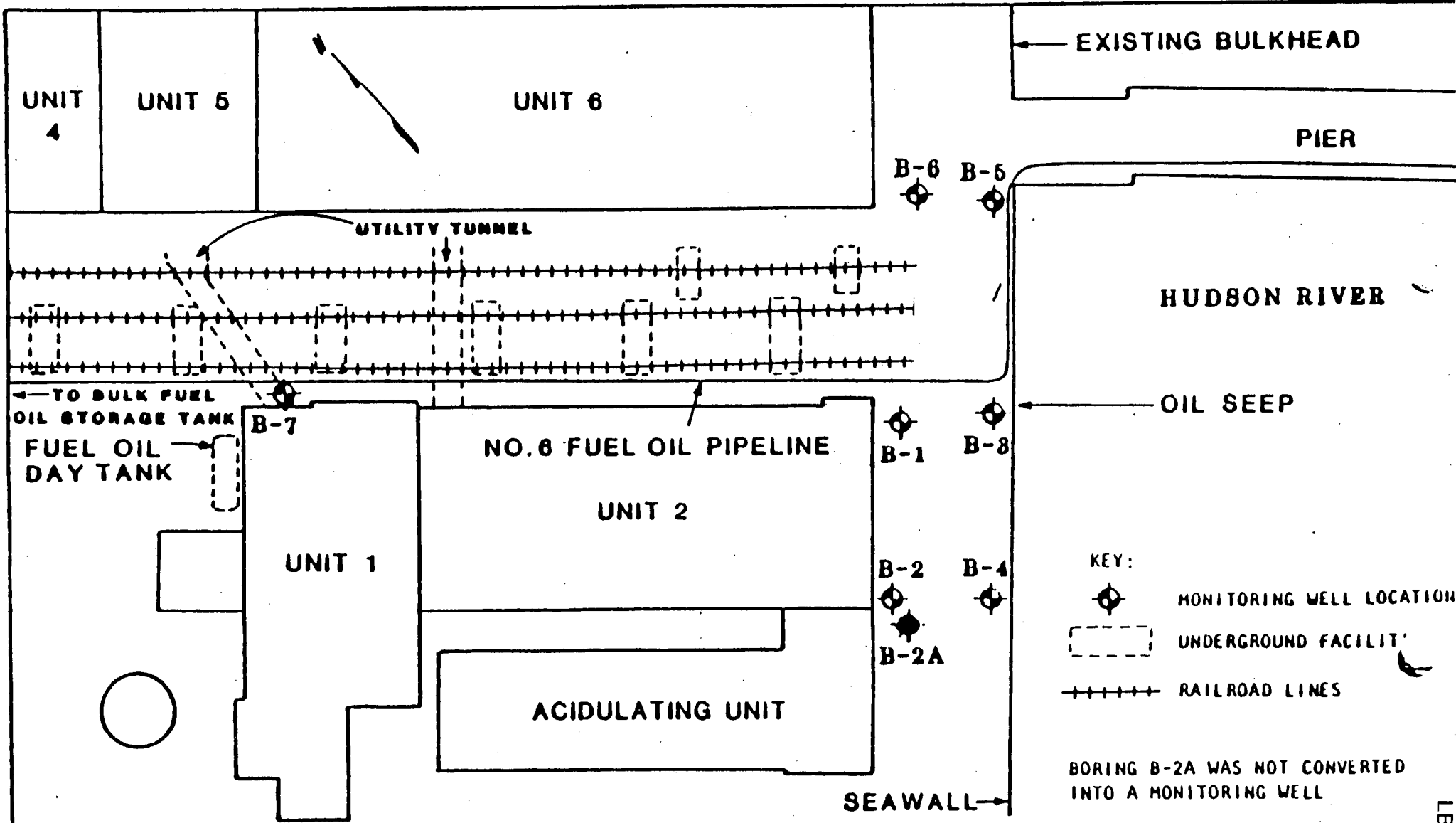
DAMES & MOORE

FIGURE A-4



**WATER TABLE ELEVATION CONTOUR MAP
BASED ON 12/22/81 DATA**

0 40 80 FEET



**LEVER BROTHERS SITE MAP
WITH MONITORING WELL LOCATIONS**

0 40 80 FEET

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LB 1.4095

TABLE 1: QUANTITATIVE DATA OF OIL SE

Customer ID.	ETC Sample No.	Concentration mg/l	Method Detection Limit mg/l
B1	000648	4.2	1
B2	000649	11	1
B3	000650	26	1
B4	000651	33	1
B5	000652	21	1
B6	000653	17	1
B7	000654	210	10 ⁴

* Due to insufficient sample volume.

		Concentration mg/kg**	
B1 Sample 2	000639	700	100
B2 Sample 2A	000640	15100	100
B3 Sample 2	000641	1600	100
B4 Sample 2	000642	700	100
B5 Sample 2A	000643	630	100
B6 Sample 2D	000644	64700	100
B7 Sample 1A	000645	300	100

** Results calculated on dry weight basis.

TABLE 1: QUANTITATIVE DATA ON FUEL OIL #6

Levels of #6 Fuel Oil in ETC Sample No.'s 000648 to 000654

<u>Customer ID.</u>	<u>ETC Sample No.</u>	<u>#6 Fuel Oil Content in PPM</u>
B1	000648	<1035
B2	000649	<1035
B3	000650	<1035
B4	000651	<1035
B5	000652	<1035
B6	000653	<1035
B7	000654	<1035

LEVER BROTHERS COMPANY
EDGEWATER PLANT
PHASE II REPORT

LB 3.2001

INTRODUCTION

General

In this report we present the results of Dames & Moore's hydrogeologic investigation at the Lever Brothers Company plant at Edgewater, New Jersey.

The objective of this study was to determine the extent of a No. 6 fuel oil leak in the vicinity of the off-loading pipeline and the fuel oil day tank, and the composition and extent of oily contaminants, if any, in the local ground water which could potentially enter the Hudson River.

Scope of Work

To fulfill these objectives Dames & Moore performed a work program consisting of the following tasks:

- o drilling of exploratory borings and collection of soil samples
- o installation of monitoring wells
- o collection of ground water samples from the monitoring wells
- o chemical analysis of the soil and water samples
- o evaluation of the data and report preparation

FIELD PROGRAM

General

The Lever Brothers site is located on the western shore of the Hudson River ~~with an average elevation of about eight feet above MSL.~~ It is characterized by ~~very low relief across the site,~~ and an extensive asphalt pavement ~~overlying fill~~ materials composed primarily of ashes, cinders and concrete rubble, approximately 10

ATTACHMENT 15
DAMES & MOORE

feet thick. The site slopes gently toward the east. Surface water is collected by storm drains which discharge into the Hudson River.

LB 3.2002

No. 6 fuel oil is brought to the site by river barge and off-loaded at the pier. The fuel oil pipeline runs along the top of the pier to the seawall, makes a 90° bend southward, and then runs along the top of the seawall for a short distance. The pipeline then goes underground, making a 90° turn westward. The fuel oil pipeline then continues underground from the seawall to northeast corner of Refinery Building Unit 2 (a distance of 40 ft.), from whence it comes out of the ground and traverses westward to the bulk fuel oil storage tank about 500 feet inland. An above ground pipeline carries the fuel oil from the bulk storage tank to an underground fuel oil day tank adjacent to the northwest corner of Unit 1 Building. A short pipeline carries the fuel oil from the day tank to the boiler in the Unit 1 Building, through an underground vault.

A leak in the underground part of the fuel oil line (between the seawall and Unit 1 Building) had occurred several years ago. However, the defective pipe was replaced and no oil seepage into the river was reportedly observed at the time. Near the end of 1981 a small area of oil seepage was observed by Lever Bros., in the river at the foot of the seawall, at a point about 100 feet south of the pier. The rip-rap was excavated at the point of the observed oil seep. The NJDEP and the Coast Guard were notified of the oil seep by Lever Bros. Tests were taken by the authorities which identified the oil seepage as No. 6 fuel oil. A floating boom was installed around the oil seep by Lever Bros. to contain the oil and to prevent it from spreading in the river.

Installation of Monitoring Wells

Six exploratory borings drilled in the vicinity of the underground No. 6 fuel oil pipeline, and one exploratory boring drilled near the fuel oil day tank, were advanced through the pavement, fill deposits, and swamp soils into the underlying gray organic, clayey silts. All seven boreholes were converted into 1-1/2-inch I.D. monitoring wells, with PVC screens placed in the saturated fill above the gray silt sediments. The locations of the monitoring wells are shown on Fig. 2. Boring logs and well construction details are shown on Fig. A-2 through A-5.

After all the wells had been installed, a survey of the wellhead elevations was conducted by a licensed land surveyor, P.L. Caulfield Assoc. of Hoboken, New Jersey. Repeated water level measurements were taken and ground water samples were obtained from each location. Field procedures including ground water sampling techniques used are described in Appendix A. The laboratory chemical analyses performed on selected soil and water samples are presented in Appendix B.

Site Stratigraphy

Subsurface geologic conditions at the site were explored by drilling seven boreholes to depths of up to 17 feet below the existing ground surface. ~~Based on these exploratory borings, the site was found to be underlain by gray organic clayey silt, overlain by peat and river sediments, overlain by fill deposits.~~ The top of the gray silt, which is a river flood plain sequence of fine sediments, occurs at depths ranging from 10 feet (B-5) to 16 feet (B-1 & 3) below the ground surface. No boreholes completely penetrated the gray silt. Brown peat in thicknesses of up to 5 feet (except in B-4 & 6), was found overlying the gray silt. The silt was covered by very soft swampy soils mixed with fill materials composed primarily of ashes, cinders and concrete rubble.

~~The river sediments overlying the peat are for the most part mixed with fill (sands, cinders and wood fragments with occasional boulders), and are characterized by the presence of black oily matter, often with a strong chemical-like odor.~~ This stratum is about four feet thick and was encountered in all borings. It is in turn overlain by more fill material. The fill is covered by asphalt pavement about three inches thick.

Ground Water Level and Flow Direction

The ground water levels at the site were measured on December 17 and 22, 1981 and are presented in Table 1. A contour map of the ground water levels is shown in Figure 3. Ground water generally flows along lines normal to the ground water level contour lines from areas of high to low potential. ~~Thus, the general direction of ground water flow,~~ based on the December 22, 1981 water level measurements, ~~appears to be toward the Hudson River.~~ The lower water level in B-7 probably represents a localized condition influenced by the presence of underground utility tunnels connecting Units 6 and 2, which are within the saturated zone of the fill.

Soil and Ground Water Analyses

The water samples collected in the seven monitoring wells on December 22, 1981 were analyzed for oil and grease. ~~Each water sample contained oil and grease in concentrations ranging from 4.2 to 210 mg/l (ppm).~~ The results are tabulated in Table 1 of Appendix B. The oil and grease was analyzed for No. 6 fuel oil. However, the No. 6 fuel oil content was below the detection limit of 1035 ppm in each case.

~~One soil sample from below the water table in each borehole was analyzed for oil and grease. Each sample contained oil and grease in concentrations ranging from 300 to 64,100 mg/kg (ppm).~~ The oil in the soil samples was not analyzed for No. 6 fuel oil. The high contents of oil and grease in the laboratory analysis are consistent with the visual observations of the soil samples as they were recovered during the drilling operations.

There does not appear to be any meaningful correlation between the oil and grease content of ground water samples, and the oil and grease content of the soil samples at each location.

~~Water samples from the easternmost line of monitoring wells show higher concentrations of oil and grease than samples from the inland row of wells. This higher concentration may be related to the direction of groundwater flow which is from west to east in this area (see Figure 2).~~

Conclusions

Based on the results of our investigations we conclude that:

1. ~~Ground water flow in the eastern part of the site is generally eastward toward the Hudson River,~~
2. ~~All water and soil samples collected from the site contain oil and grease,~~
3. No. 6 fuel oil was not found in the water samples at or above the limit of detection of 1035 mg/l,

4. No apparent correlation exists between the oil and grease found in the ground water and that found in the soils underlying the site,
5. Oil contaminated soil has been removed from test pits excavated previously in the vicinity of the underground fuel line, and the test pits have been backfilled with clean fill. This should serve to help reduce the potential for oil seepage into the river by this partial removal of a potential source of contamination.
6. Visual observations behind the floating oil retention boom indicate a barely visible oil sheen,
7. ~~A significant area of soil for a distance of at least 100 feet on either side of the fuel oil pipeline is contaminated with oil and grease.~~ Soil and water tests do not show any correlation between contaminant levels and distances from the fuel oil pipeline.
8. ~~Because the oil seep into the river is very small and localized and can be effectively contained by the floating boom,~~ it does not appear to be either feasible or cost effective to construct a cut-off wall or to dig up large volumes of oil-contaminated soil.
9. Although the oil and grease content found in the ground water was highest (210 ppm) at B-7, near the fuel oil day tank, it was the lowest (300 ppm) of that found in the soil samples at this same location. Insofar as this location is about 500 feet away from the river, and an oil leak in the area of the underground fuel line (a short distance from the river) reportedly took several years to appear in the river, it does not appear that the presence of oil in the ground near the fuel oil day tank would pose an immediate threat to river contamination.

Recommendations

Based upon the available data and our site observations, we offer the following recommendations:

1. Replace the excavated rip rap in the vicinity of the oil seep, as this may help retard the escape of oil into the river, and will prevent erosion of the soil under and behind the seawall at that location.
2. Continue to maintain the existing oil boom, clean up any oil caught by the boom, and note the approximate rate of oil collection.
3. Resample the seven monitoring wells for oil and grease and total hydrocarbons to confirm contaminant levels at these locations.

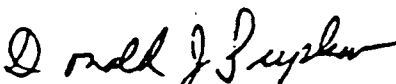
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If you have any questions regarding this report, or if we can be of further assistance, please contact us.

Very truly yours,

DAMES & MOORE


Louis J. Apoldo
Associate


Donald J. Supkow, Ph.D.
Senior Hydrologist

LJA/DJS:jp

Attachments

TABLE 1

GROUND WATER LEVEL DATA

<u>Well No.</u>	<u>Casing Elevation</u>	<u>Date of Water Level Measurement</u>	<u>Time</u>	<u>Depth to Water</u>	<u>Water Well Elevation</u>
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2	8.07	12/17/81	10:02	6.10	1.97
		12/22/81	10:46	6.18	1.89
3	7.79	12/17/81	10:04	5.65	2.14
		12/22/81	10:47	5.86	1.93
4	7.46	12/17/81	10:06	6.55	0.91
		12/22/81	10:50	6.68	0.78
5	7.47	12/17/81	10:08	6.10	1.37
		12/22/81	10:52	6.05	1.42
6	8.18	12/17/81	10:10	5.50	2.68
		12/22/81	10:55	5.89	2.29
7	7.57	12/17/81	10:15	5.80	1.77
		12/22/81	12:30	6.18	1.39

TABLE 2

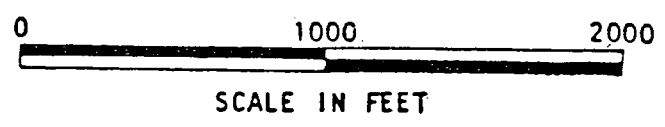
LB 3.2008

QUANTITATIVE DATA ON OIL AND GREASE
AT LEVER BROS. SITE IN DECEMBER 1981

Location No.	Depth Below Ground Surface (in ft)	Soil Sample Oil and Grease Concentration in mg/kg	Ground Water (Sampled Dec. 22, 1981) Oil and Grease Concentration in mg/l
B-1	10-12	780	4.2
B-2	10-12	15,100	11
B-3	10-12	1,600	26
B-4	10-10.5	700	33
B-5	10-12	630	21
B-6	10-12	64,700	12
B-7	5-7	300	210



SITE LOCATION MAP SHOWING THE VICINITY OF THE LEVER BROTHERS FACILITY



BASE MAP FROM USGS 1:24000, 7.5 TOPOGRAPHIC MAP

DAMES & MOORE

INSTALLATION OF MONITORING WELLSType and Location

Between December 14 and December 17, a total of seven monitoring wells were installed at the Lever Brothers Company plant in Edgewater, New Jersey. All monitoring wells were shallow, of small diameter, and screened from the water table downward in the fill material. The locations of the monitoring wells are shown on Figure 2. The monitoring wells were installed to evaluate ground water quality, ground water levels, and direction of ground water flow.

Drilling and Soil Sampling

The geologic conditions at the site were investigated by drilling eight (8) borings, seven of which were converted into monitoring wells. Drilling was performed by Warren George, Inc. of New Jersey using a truck-mounted hollow stem auger rig and a truck-mounted rotary-air rig, which were steam-cleaned prior to beginning drilling operations. Borings B-1, B-2 and B-3 were drilled using the auger rig. Location B-2A was abandoned due to difficult subsurface drilling conditions, and a more powerful rotary-air rig with 4-3/4" O.D. tricone roller bit was mobilized to the site to replace the auger rig and to complete the drilling.

The field drilling operations were conducted under the supervision of a Dames & Moore geologist. The soil deposits underlying the site were classified by visual examination in the field and a complete log was maintained of each boring. The Unified Soil Classification System was used to describe the soil types (refer to Figure A-1).

A graphical representation of the fill and soil deposits encountered in the borings is shown on Figure A-2 through Figure A-5.

Standard Penetration Tests were performed to obtain soil samples and data for identifying the sediment types, and to evaluate the relative density of the strata. These tests were performed using a standard 2-inch O.D. split-spoon sampler driven by

a 140-pound weight falling 30 inches. The blow counts were recorded for each foot of sample penetration. Soil sample containers were labeled with pertinent information, including: job number, sample depth, sample number, date, field geologist's name, client, job location, and sample description. The sampling equipment was disassembled and washed with fresh water after each sample, to minimize the possibility of contamination between samples.

CONSTRUCTION OF GROUND WATER MONITORING WELLS

General Procedures

The general drilling and well installation procedures were as follows:

- o Drilled through the fill material to the gray clayey silt.
- o Installed 1-1/2-inch I.D. PVC well screen with PVC riser which was sealed off from the surface by a cement seal into which a 2-inch steel protective casing with a brass cap was set.
- o Developed the well by evacuating the water by compressed air.

Ground Water Sampling

A set of ground water samples was collected on 22 December 1981.

All water sampling was performed utilizing a peristaltic pump and 1/4-inch diameter plastic Tygon tubing. The ground water was collected into brown one-liter bottles containing sulphuric acid as a preservative.

Two one-liter bottles of water were obtained from locations B-1 through B-6. At B-7 only half a bottle of water was collected because of low well yield.

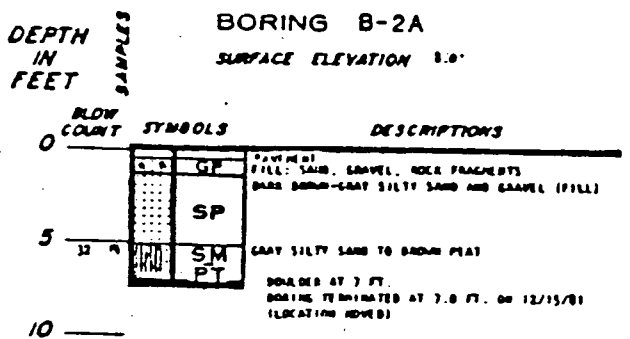
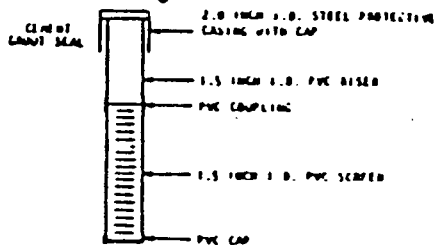
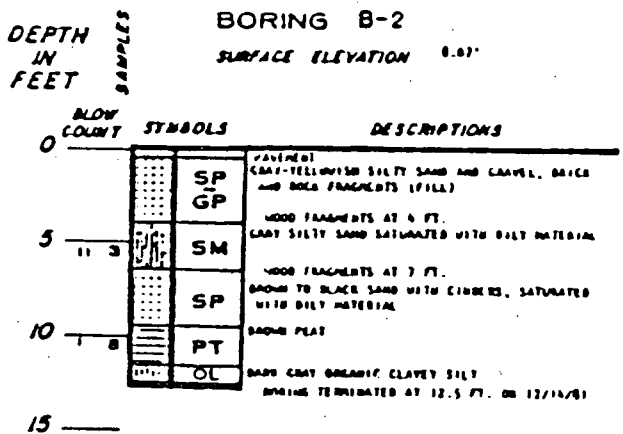
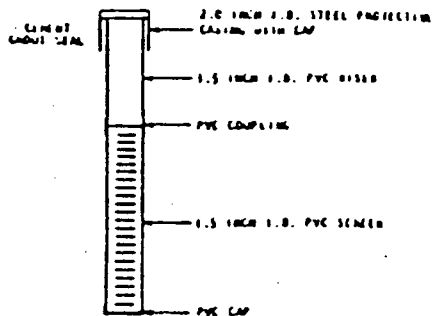
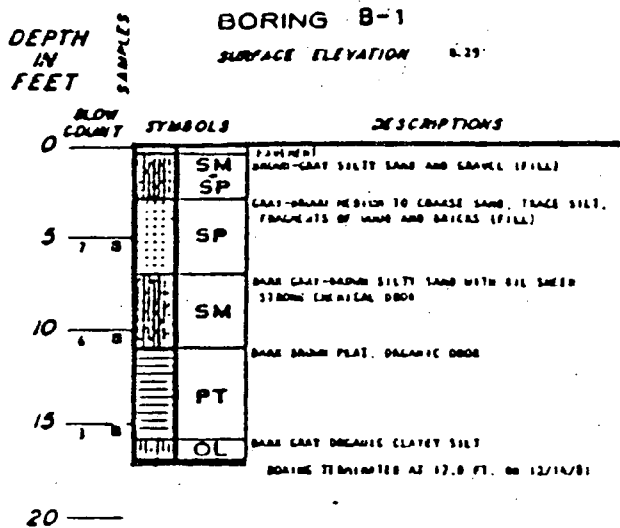
MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS			
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES			
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES			
				GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES			
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES			
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES			
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES			
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES			
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES			
			FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, SOFT FLUIDS, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
							CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY				
			MH	INORGANIC SILTS, INORGANIC OR DISTORTED FINE SAND OR SILTY SOILS				
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS				
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS				
HIGHLY ORGANIC SOILS				PT	PEAT, MUCK, SWAMP SOILS WITH HIGH ORGANIC CONTENTS			

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

SOIL CLASSIFICATION CHART

UNIFIED SOIL CLASSIFICATION SYSTEM

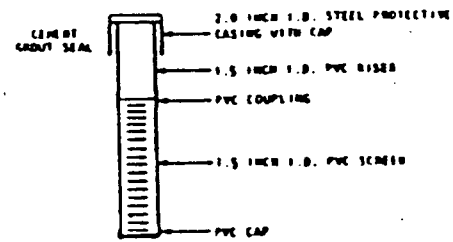
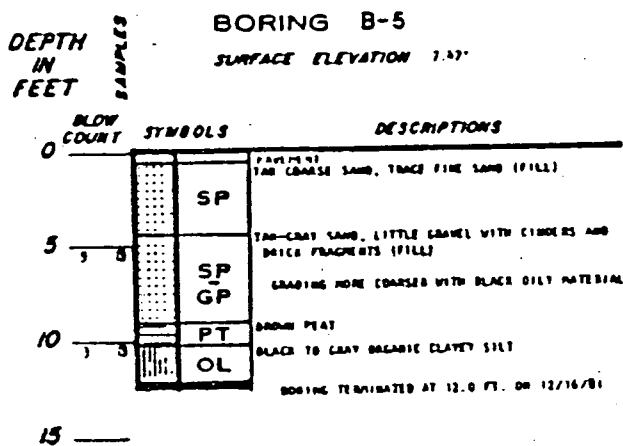
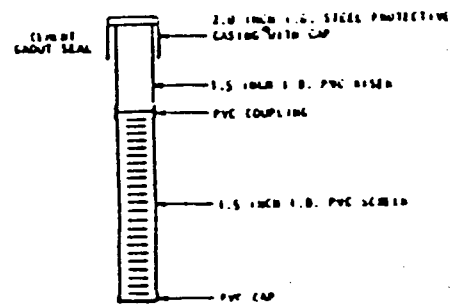
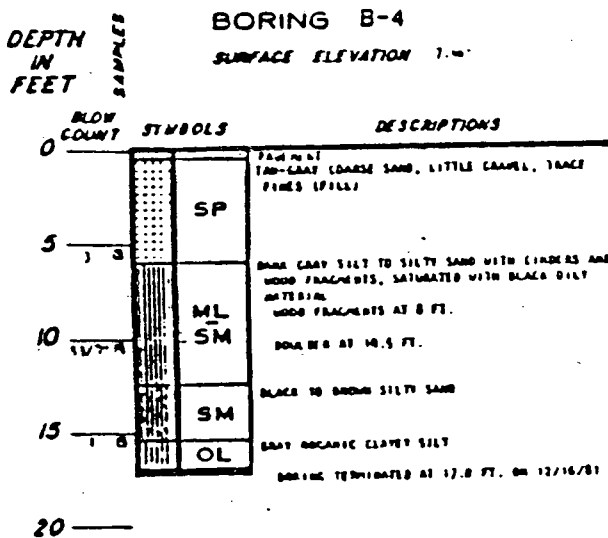
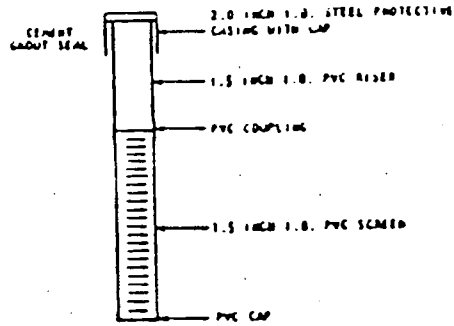
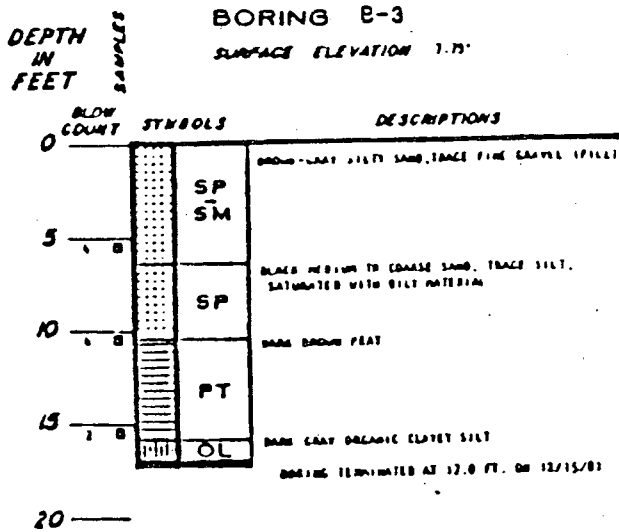
FORM NO. 4873 (1961)



LOG OF BORINGS AND MONITORING WELL DETAILS

DAMES & MOORE

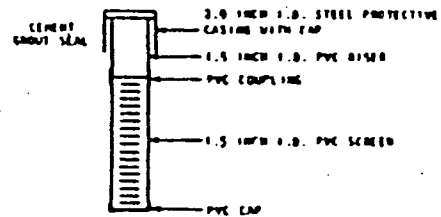
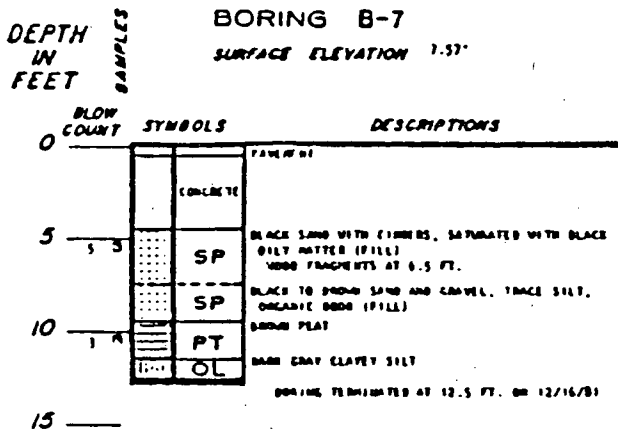
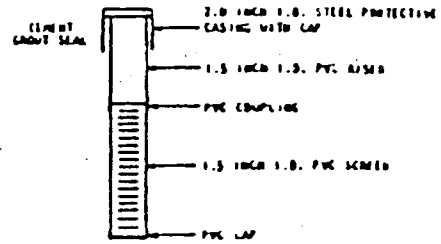
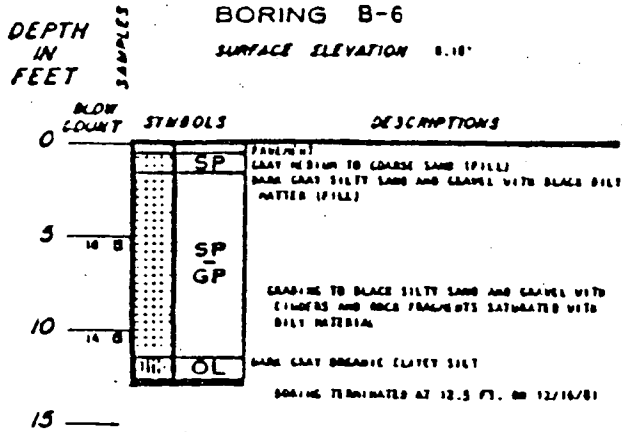
FIGURE A-2



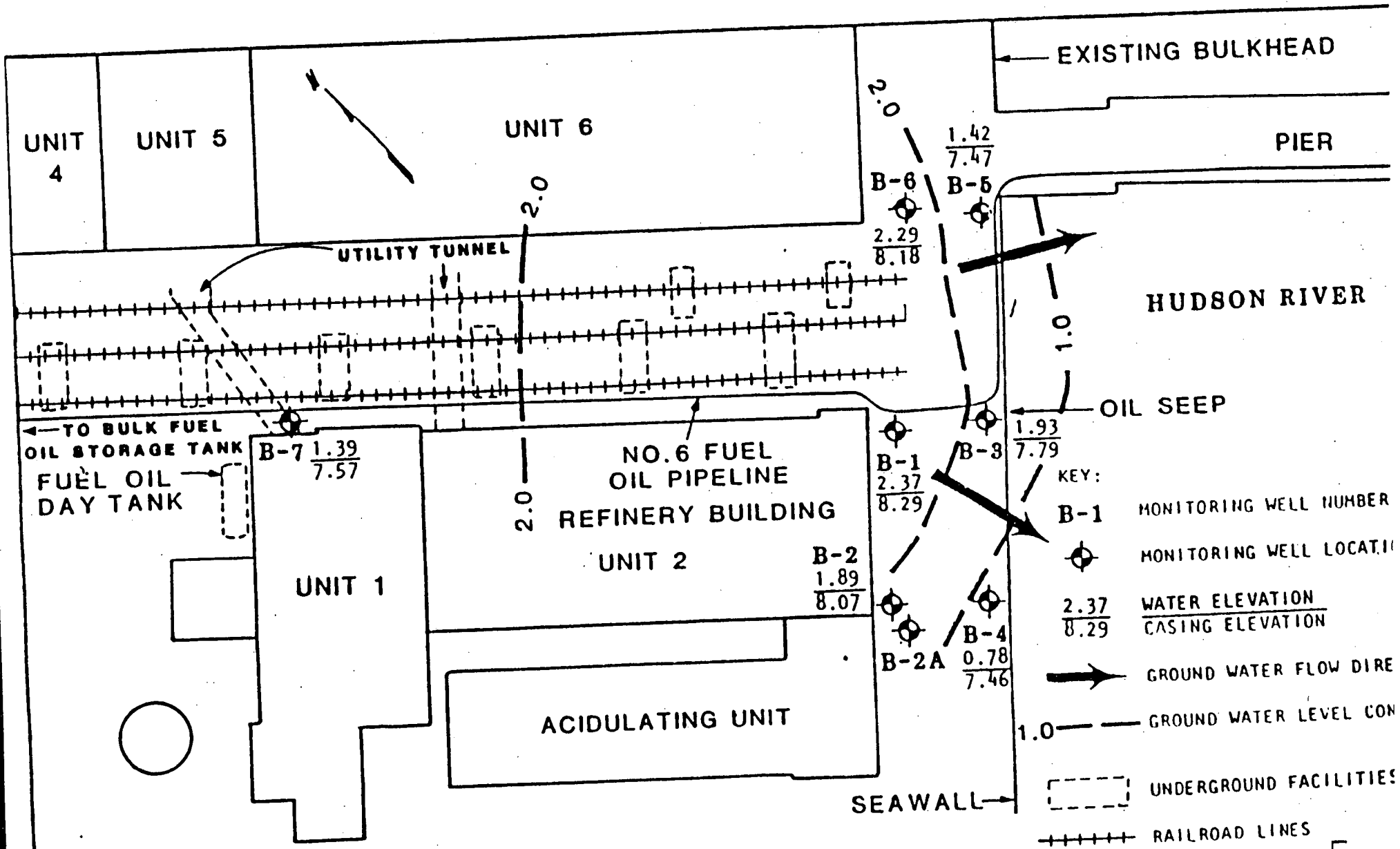
LOG OF BORINGS AND MONITORING WELL DETAILS

DAMES & MOORE

FIGURE A-3



LOG OF BORINGS AND MONITORING WELL DETAILS



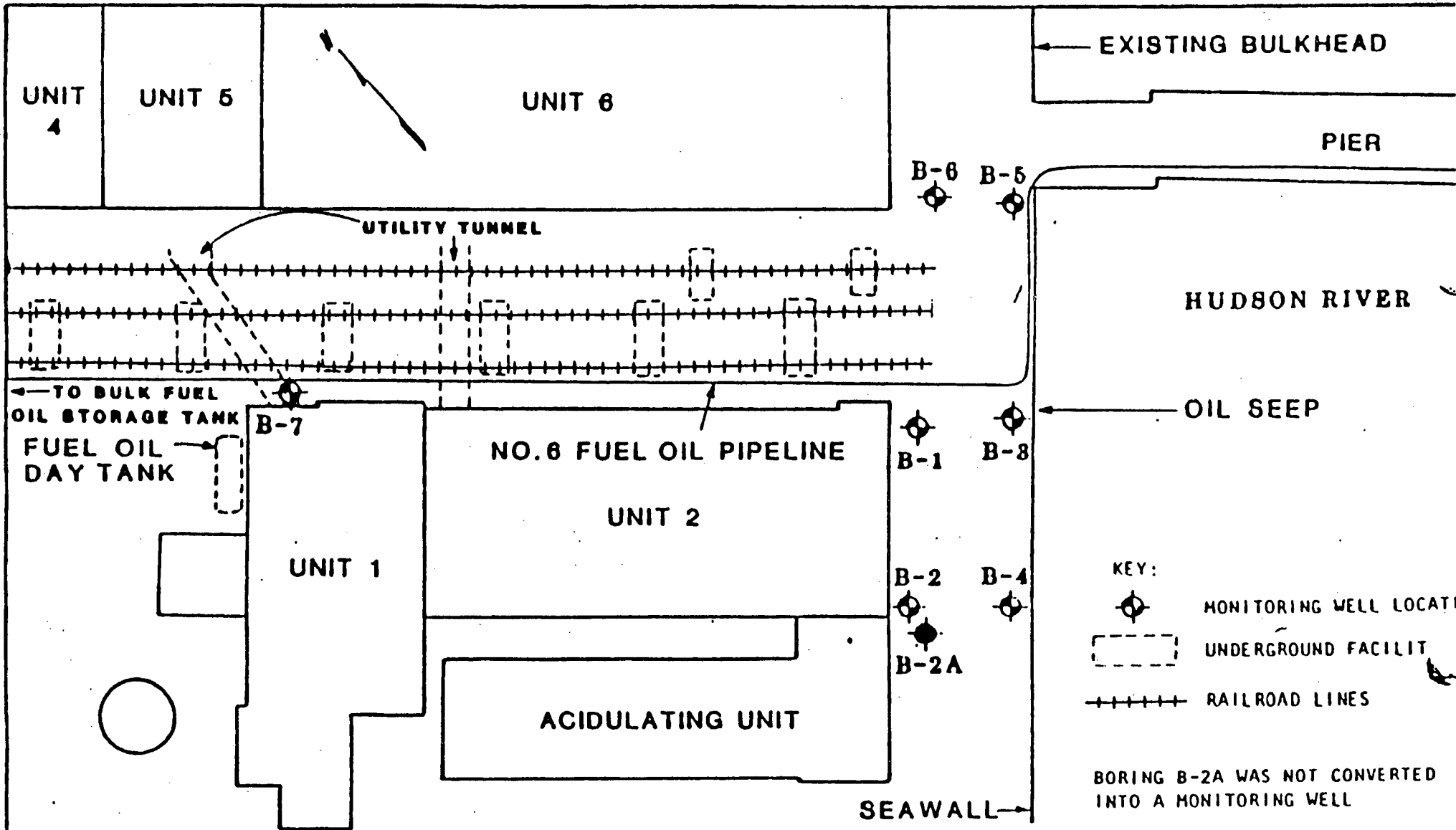
**WATER TABLE ELEVATION CONTOUR MAP
BASED ON 12/22/81 DATA**



NOTE: ELEVATIONS REFERENCE MEAN SEA LEVEL

LB 3.2016

DAMES & MOORE



LEVER BROTHERS SITE MAP
WITH MONITORING WELL LOCATIONS

0 40 80 FEET



January 12, 1982

Mr. Donald Supkow
Dames & Moore
6 Commerce Drive
Cranford, NJ 07016


Dear Mr. Supkow:

We at ETC are pleased to submit the attached laboratory reports in response to your testing requirements. As you know, the analyses were performed by Dr. Denis C.K. Lin and his staff, and we are confident that you will find the results are of the highest quality.

If you have any questions regarding your report, we encourage you to contact our Customer Service organization (201/225-5600) and they will coordinate your request with appropriate laboratory personnel. You are also invited to visit with either Sweb Davis or Henry Beal, Esq., if you have any questions regarding the regulatory or the legal aspects of your project. Dr. George Vander Velde is also available to assist you in defining the requirements for future testing programs.

All of us at ETC welcome your next call if we can be of further service to your organization in the future.

Sincerely,



T. L. Loucks
President

TLL:man
Attachments

TABLE OF CONTENTS

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Methodology

Results

Conclusions

Table 1: Quantitative Data

Chain-of-Custody Record

Appendix A

INTRODUCTION

On December 22, 1981, seven (7) water samples were submitted to ETC Corp. for analysis. The sample extracts were to be qualitatively analyzed by GC/FID for the presence of #6 Fuel Oil. If present, the #6 fuel oil would be quantitated. This would be accomplished by comparison of peaks in the samples with those present in a known amount of #6 fuel oil dissolved in methylene chloride. The method employed in the analysis, as well as the sample data, are presented. In addition, the above mentioned samples along with seven (7) soil samples were analyzed for the presence of oil & grease.

METHODOLOGY

The method employed in the analysis of the water samples for #6 fuel oil quantitation can be summarized as follows: A measured volume of sample, approximately 10 ml, is extracted with methylene chloride. The methylene chloride extract is dried and concentrated to 10 ml for injection into a gas chromatograph equipped with a flame ionization detection system. The GC operating parameters were as follows:

COLUMN:

6' X 2mm glass 1.0% SP-2250 Supelcoport 100/120 mesh

CARRIER FLOW:

30 ml/min. Helium

SEPTUM PURGE:

5ml/min. Helium

COLUMN TEMPERATURE:

75° C to 245° C at 8° C/min.

INJECTOR TEMPERATURE:

225° C

DETECTOR TEMPERATURE

250° C

RESULTS

LB 3.2021

The sample chromatograms were compared to chromatograms of #6 fuel oil for matching peaks. The data for ETC Sample No.'s 000648 to 000654 are presented in Table 1. The Chain-of-Custody record is included in this report after Table 1. Sample and standard chromatograms are included in the Appendix. Additionally, the results of the above mentioned samples plus the seven (7) soil samples (ETC Sample No.'s 000639 to 000645) analyzed for oil & grease are in Table 1.

CONCLUSIONS

#6 fuel oil was not found at or above the limit of detection.

TABLE 1: QUANTITATIVE DATA ON FUEL OIL #6

Levels of #6 Fuel Oil in ETC Sample No.'s 000648 to 000654

<u>Customer ID.</u>	<u>ETC Sample No.</u>	<u>#6 Fuel Oil Content in PPM</u>
B1	000648	<1035
B2	000649	<1035
B3	000650	<1035
B4	000651	<1035
B5	000652	<1035
B6	000653	<1035
B7	000654	<1035

TABLE 1: QUANTITATIVE DATA OF OIL & GREASE

Customer ID.	ETC Sample No.	Concentration mg/l	Method Detection Lim mg/l
B1	000648	4.2	1
B2	000649	11	1
B3	000650	26	1
B4	000651	33	1
B5	000652	21	1
B6	000653	17	1
B7	000654	210	10*

* Due to insufficient sample volume.

		Concentration mg/kg**	
B1 Sample 2	000639	700	100
B2 Sample 2A	000640	15100	100
B3 Sample 2	000641	1600	100
B4 Sample 2	000642	700	100
B5 Sample 2A	000643	630	100
B6 Sample 2B	000644	64700	100
B7 Sample 1A	000645	300	100

** Results calculated on dry weight basis.



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

LB 3.2024

MAILING ADDRESS
Captain of the Port
U.S. Coast Guard
Governors Island
New York, NY 10004

16465

LEVER BROS. INC.

Gentlemen:

On 23 JUNE 1983 Coast Guard Water Pollution Investigators visited your ~~vessel~~/facility at 101 RIVER ROAD to monitor your pollution incident. As long as oil has entered, continues to enter or poses a threat of entering any portion or tributary of the navigable waters of the United States, the Coast Guard will be monitoring the progress of your cleanup efforts.

The Captain of the Port is willing to provide assistance applicable to your situation. Initially, efforts should be directed towards immediate containment, control and removal of the oil which has reached the water in accordance with 33 CFR 153. Once this is accomplished, attention should be directed towards long term elimination of the source of the pollution. Should you have any questions concerning this pollution incident or cleanup, contact the COTP Water Pollution Office, 212-668-7920/21.

Coast Guard Investigators POWELL, BRYAN on this date at 1250 noted the following during LOW tide conditions:

① OBSERVED NUMEROUS Puddles of DIESEL oil along SHORELINE

② OBSERVED BRIGHT RAINBOW SHEEN COVERING AN AREA OF ABOUT 50ft by 100ft.

③ OBSERVED SATURATED SORBENT SWEEP along SHORELINE, AND CONTAINMENT BOOM SURROUNDING SWEEP

RECOMMENDATIONS: ① REPLACE SATURATED SWEEPS AND MAINTAIN CONTAINMENT BOOM.

COAST GUARD TO INSPECT

Charles A. Privaloff
Ensign, U.S. Coast Guard

M. J. Ryan

CCGD3-15 (R3-81)

Attachment C



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

LB 3.2025

MAILING ADDRESS
Captain of the Port
U.S. Coast Guard
Governors Island
New York, NY 10004

16465

LEVER BROS.

Gentlemen:

On 12 JUNE 1982, Coast Guard Water Pollution Investigators visited your ~~rental~~ facility at 101 RIVER RD. EDGEWATER N.J. to monitor your pollution incident. As long as oil has entered, continues to enter or poses a threat of entering any portion or tributary of the navigable waters of the United States, the Coast Guard will be monitoring the progress of your cleanup efforts.

The Captain of the Port is willing to provide assistance applicable to your situation. Initially, efforts should be directed towards immediate containment, control and removal of the oil which has reached the water in accordance with 33 CFR 153. Once this is accomplished, attention should be directed towards long term elimination of the source of the pollution. Should you have any questions concerning this pollution incident or cleanup, contact the COTP Water Pollution Office, 212-668-7920/21.

Coast Guard Investigators KOWALCHUK, SCOTT & CARNEY on this date at 1500 noted the following during _____ tide conditions:

OBSERVATIONS: (1) CONTAINMENT BOOM DEPLOYED AROUND STORM DRAIN WITH APPROXIMATELY A 10 FT GAP AT THE NORTH END OF BOOM, AND A 10 FT GAP AT THE WEST END OF BOOM. (2) SMALL AMOUNTS OF SHEEN ESCAPING AT NORTH END OF BOOM. (3) SHEEN AND PATCHES OF BROWN OIL ESCAPING AT WEST END OF BOOM. (4) APPROXIMATELY 50 GALLONS OF BROWN OIL WITHIN CONTAINMENT AREA, AND STORM DRAIN.

RECOMMENDATIONS: (1) REMOVE OIL FROM GROUND AT DEMOLITION AREA. (2) MAINTAIN COVERS ON STORM DRAINS WHILE WORKING IN DEMOLITION AREA. (3) FLUSH EFFECTED STORM DRAIN WITH WATER. (4) RE-DEPLOY & MAINTAIN CONTAINMENT BOOM, TO PREVENT OIL FROM ESCAPING. (5) CONTINUE CLEANUP WITH SORBENT MATERIAL.

C.G. TO REINSPECT.

M. E. Kowalchuk

CCGD3-15 (R3-81)

(Handwritten signature)



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS LB 3.2026
Captain of the Port
U.S. Coast Guard
Governors Island
New York, NY 10004
16465

• LEVER BROS.

Gentlemen:

On 24 JUNE 1983, Coast Guard Water Pollution Investigators visited your ~~plant~~ facility at EDGEWATER N.J. to monitor your pollution incident. As long as oil has entered, continues to enter or poses a threat of entering any portion or tributary of the navigable waters of the United States, the Coast Guard will be monitoring the progress of your cleanup efforts.

The Captain of the Port is willing to provide assistance applicable to your situation. Initially, efforts should be directed towards immediate containment, control and removal of the oil which has reached the water in accordance with 33 CFR 153. Once this is accomplished, attention should be directed towards long term elimination of the source of the pollution. Should you have any questions concerning this pollution incident or cleanup, contact the COTP Water Pollution Office, 212-668-7920/21.

Coast Guard Investigators HULLOCK, PIERCE, PARDES on this date at OPK noted the following during MID tide conditions:

OBSERVED CONTAINMENT BOOM DEPLOYED WITH NO SHEEN VISIBLE FROM SEEPAGE.

RECOMMENDATIONS: MAINTAIN CLEANUP AS NECESSARY.

[Handwritten signatures: J. V. Hullock, R. A. Parde, D. L. ...]

[Handwritten signature: Charles A. Conroy]



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS LB 3.2027

Captain of the Port
U.S. Coast Guard
Governors Island
New York, NY 10004

16465

LEVER BROTHERS

Gentlemen:

On 24 JUNE 1983, Coast Guard Water Pollution Investigators visited your vessel/facility at EDGEWATER, NJ to monitor your pollution incident. As long as oil has entered, continues to enter or poses a threat of entering any portion or tributary of the navigable waters of the United States, the Coast Guard will be monitoring the progress of your cleanup efforts.

The Captain of the Port is willing to provide assistance applicable to your situation. Initially, efforts should be directed towards immediate containment, control and removal of the oil which has reached the water in accordance with 33 CFR 153. Once this is accomplished, attention should be directed towards long term elimination of the source of the pollution. Should you have any questions concerning this pollution incident or cleanup, contact the COTP Water Pollution Office, 212-668-7920/21.

Coast Guard Investigators HALLOCK, PAREDES, AND PIERCE on this date at OYYS noted the following during MID tide conditions:

OBSERVED SATURATED SWEEP AND CONTAINMENT

BOOM DEPLOYED, OBSERVED SHEEN IN AREA

OF SWEEP AND CONTAINMENT BOOM, OBSERVED

SMALL AREA OF SHEEN OUTSIDE AREA ENCLOSED

BY CONTAINMENT BOOM DUE TO OPENINGS IN CONTAINMENT

BOOM. RECOMMENDATIONS: REMOVE SATURATED SWEEP AND

REPLACE. READJUST CONTAINMENT BOOM ALLOWING NO

TO ESCAPE

TO ESCAPE

TO ESCAPE

TO ESCAPE

CCGD3-15 (R3-81)

[Handwritten signature]
R. A. Pardo



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
TRENTON, NEW JERSEY 08625

John W. Gaston, Jr.
Director

September 7, 1983

Mr. Charles A. Carroll, Manager
Environmental Engineering
Lever Research, Incorporated
45 River Road
Edgewater, New Jersey 07020

Re: Lever Brothers, Inc.
Oil Absorbant Boom

Dear Mr. Carroll:

On August 25, 1983 a representative of the Division of Water Resources (DWR) conducted an inspection of the waterfront at Lever Research, Inc., located in Edgewater, NJ. Mr. Charles Spilewski accompanied Mr. Robert Pfeiffer of the Metro Region Enforcement Element staff during the inspection which revealed the following:

- a. The waterfront adjacent to discharge DIS - 001 contained a 10' x 20' area of oil which was brown in color. Several sections of an absorbant boom deployed in the area were submerged compromising the designed abatement potential of the entire boom. Absorbant mats were immediately ordered by Mr. Spilewski to facilitate removal of the remaining oil.
- b. The waterfront near monitoring well #B-3 contained a thin film of oil which appeared to be caused periodic by oil seepage rising from the river bottom. The oil absorbant boom deployed at this location also contained submerged sections. Absorbant mats were again ordered for this area by Mr. Spilewski.

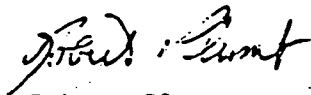
From the inspection and Mr. Pfeiffer's subsequent telephone conversation with you it is our understanding that the absorbant booms will be maintained in proper condition until the visible oil is no longer present. Mr. Pfeiffer is to be notified at (201) 648-2200 in advance of removing the boom in the

Attachment D

spillage area.

If you have any questions concerning the above, please contact the office at the number given above.

Very truly yours,



Robert Plumb
Assistant Chief
Metro Region
Enforcement Element

A4:G19

cc: T. Scott, WSCG

LEVER RESEARCH, INC.

48 RIVER ROAD, EDGEWATER, NEW JERSEY 07030 • (201) 942-7100 • LEVER EDGE TLX 640333

LB 3.2030

March 18, 1983

Assistant Director
NJDEP
Enforcement Element
Division of Water Resources
CN029
Trenton, NJ 08625

RE: Inadvertent Spill of Material in Vicinity of Outfall 001

Dear Sir:

This letter is to advise your office that Lever Brothers notified the US Coast Guard of a small spill of a chemical material in the vicinity of a NJDEP permitted stormwater outfall (#001) on Wednesday, March 16.

The material was subsequently analyzed and identified as Sodium Silicate, a raw material used in the product of powdered detergents.

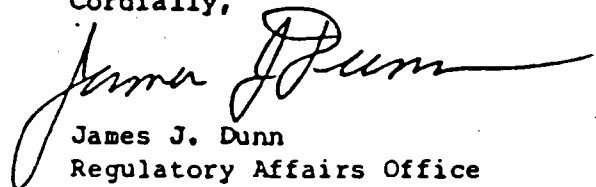
The amount of spilled material has been estimated at about 100 lbs. and is confined to a small radius in the vicinity of the outfall. Arrangements have been made to clean up the spilled material by Lever personnel.

Although the amount of material observed is small and poses no threat to the environment, we believe that the incident was reprotale nontheless. The source of the spill is unknown and cannot be attributed to the current production of detergent powder inasmuch as all clean-up water from this process, if any, is discharged to the sanitary sewer.

Since the Lever Edgewater Plant is being completely shut-down as of April 1, 1983, it is speculated that perhaps one of the employees scheduled to be let go precipitated this incident.

Lever will conduct a daily inspection of its shoreline between now and the actual closing of the plant to avoid future occurrences.

Cordially,


James J. Dunn
Regulatory Affairs Office

RECEIVED

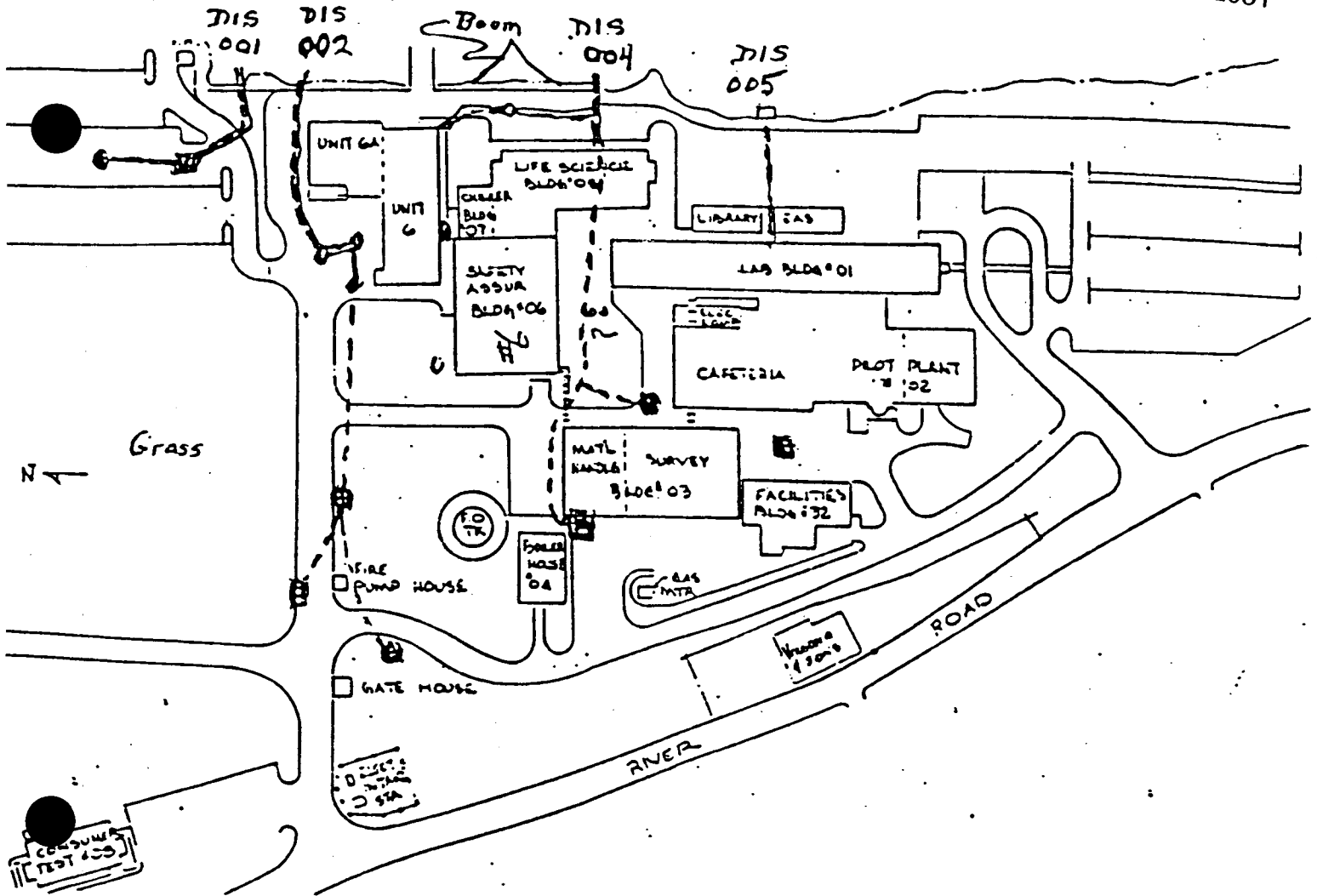
APR 04 1983

JJD:ka

DEPT. ENVIRONMENTAL PROTECTION
NEWARK OFFICE

(M34)83A301.001

Rogers



Ch. Spilner

By [Signature]

MEMO

TO Peter Lynch through Robert Plumb

LB 3.2032

FROM R. Pfeiffer *RJP*

DATE December 14, 1981

SUBJECT Lever Bros., Edgewater, NJ

A meeting was held at the Lever Bros. plant on December 10, 1981. Those present were:

Charles Carroll - Lever Bros. - Environmental Engineering Manager
Melvin Kurtz - Lever Bros. - Asst. General Counsel
Louis J. Apoldo, P.E. - Dames & Moore - Chief Engineer
Donald J. Supkow, Ph.D. - Dames & Moore - Senior Hydrologist
Vince Krisak - NJDEP - Hazard Management
Kathy McBride - NJDEP DWR Geologist
Robert Pfeiffer - NJDEP - Region I Enforcement

Lever Bros. after long consideration has decided to develop the present site in Edgewater. Most of the plant is now out of production, having moved their margarine, Spry and detergent operations elsewhere. These facilities were built in 1932. There are separate facilities for their Research Division built around 1950. Plans are to demolish all the production buildings and greatly expand the Research facilities.

The oil in ground water uncovered by excavation, seeps into the Hudson River under the sea wall near the #6 fuel oil pipeline, outside one of the production buildings.

The Company recently removed the rip-rap and excavated outside the sea wall, and exposed to observation the oil seeping through the gravel under the sea wall toward the river. They estimate it amounts to 1 gal/24 hrs. It is contained on the surface by a new boom.

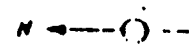
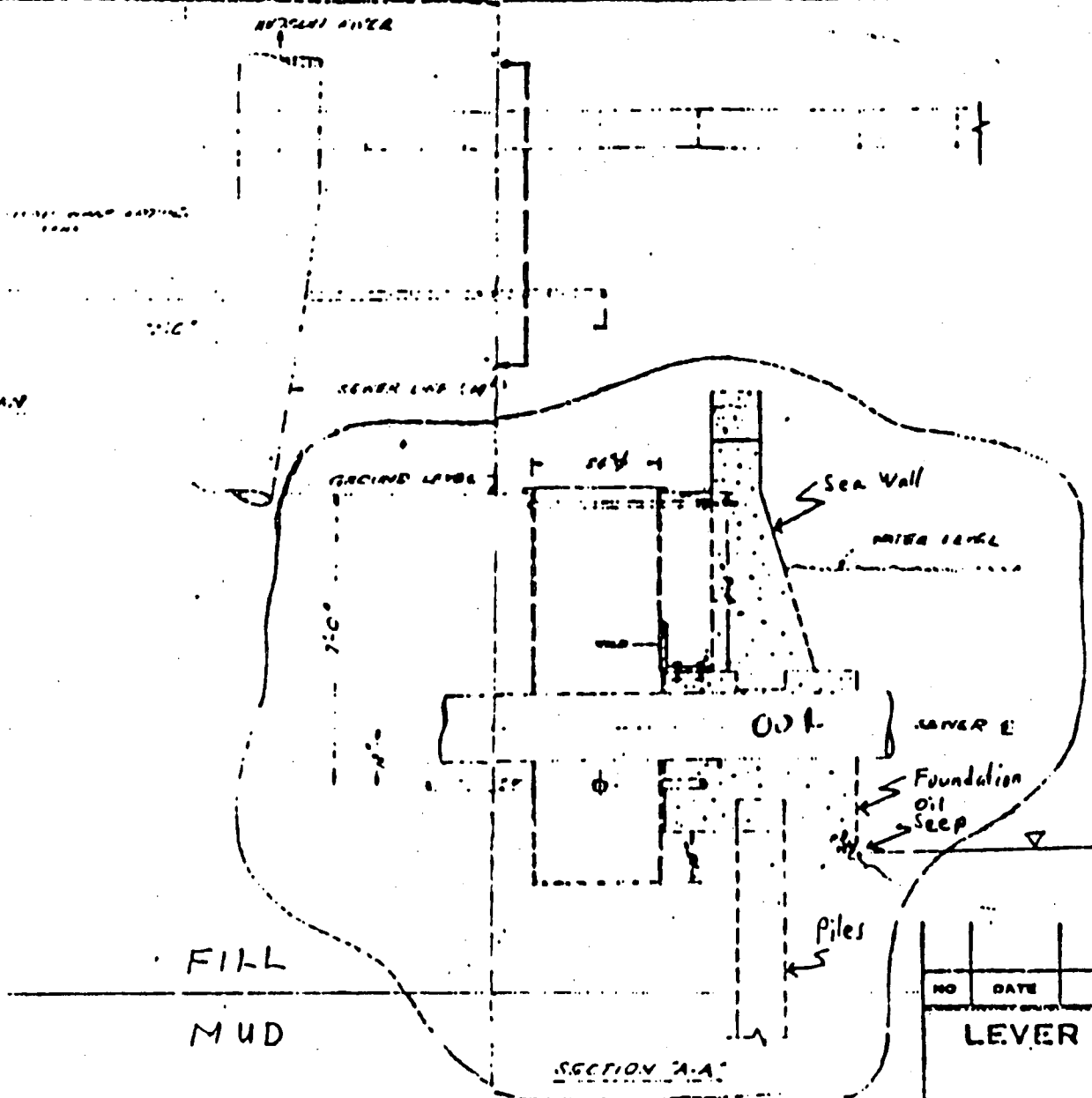
Dames and Moore proposed to make 6 test borings as per the attached sketch surrounding the contaminated area. They will analyze the soil samples as well as the water from the monitoring wells before making their recommendations to either A) contain the pollution by walls or piling, B) physically remove the polluted soil and oil or C) install pumps to extract the oil. They will split samples with NJDEP and call K. McBride in advance of drilling and sampling. They are of the opinion the problem is relatively small and can be corrected by these measures. The Company would like to "fast track" everything so they can start demolition in early January. The proposals were very similar to what the three NJDEP members had discussed in a pre-meeting, and we had no objections to the plans. Mr. Kurtz will write a letter to all confirming the discussions.

E69:G25

RECEIVED
DEC 16 1981

Dept. of Environmental Protection
Division of Water Resources
Water Quality Management

1995



Handwritten signature or initials

OFFICE SLAB

Clean Low Water

NO	DATE	REVISION

LEVER BROTHERS COMPANY
 EDGEWATER PLANT
 EDGEWATER, N. J.

RIVER FRONT DIVERSION SYSTEM

DATE	BY	CHK	A.P.P.	SCALE	REF
4-1-20				NO-SCALE	S-341-2

3 STORY & BASEMENT BRICK
MILL CONSTRUCTION

No. 1

URINE

FRAME SHED

2-STORY FRAME

RESTAURANT

LOCKER ROOM

BULKHEAD

COVERED WALKWAY
36'

PIER

PUMP
HOUSE

73'

25'

116.39' ±

142'

30.00'



150'

17'

17'

Approximate Location for
Proposed Observations wells

LAND UNDER WATER

Oil Retention 9.512 ACRES
800m

Area of
oil seep

Test pit with
standing water
and oil sheen

STONE MONUMENT

FIGURE 3

SIU
Statement of Basis

The applicant operates a Research and Development (R&D) facility which includes both R&D Laboratories and the pilot plants, in support of the manufacturing of: 1) Soap and other detergents, 2) Cosmetics and other toilet preparations, and 3) Margarine and other table oils. The applicant also carries out the perfume blendings at this site.

In a meeting held on September 21, 1983 at the company's site among the representatives of the company and Mr. Mohammad N. Shaikh of the DEP, the proposed permit conditions and limitations were discussed. On October 26, 1983 the company's attorney made a request to delay for three months the issuance of the draft permit. This request was made because of the expected considerable changes in the company's daily flows and possibly in flow characteristics. This was due to the proposed construction and operation of the R&D facility and demolition of the soap manufacturing facility.

This office considered the request and allowed the company sufficient time to gather and submit the representative data regarding their future operations and discharge in the sewer system.

On February 17, 1984 we received the company's response which we have considered in drafting this permit. The permittee is required to monitor the flow, BOD, COD, TSS, petroleum hydrocarbons, total toxic organic compounds, cyanide (total), and pH and conform with the discharge limitations as noted on the Table I of this permit. The said limitations and the monitoring frequencies are based upon the best engineering judgement, the Edgewater Borough's rules, the company's submittals and the recent telephone conversation with their representative, Mr. James Dunn. Mr. Dunn confirmed that he and the rest of the company's representatives are not in conflict with the said monitoring requirements and the discharge limitations.

Until now, no National Categorical Pretreatment Standards (NCPS) related to the company's operations have been promulgated by the USEPA. The permittee is required to conform to the applicable standards when they are promulgated.

This permit shall expire on November 30, 1986. This expiring date is in accordance with the expiring date of the company's existing permit for DSW. After that date both of the permits shall be consolidated and the then existing NCPS, if any, shall be incorporated.

WQM45:mer

198



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

LB 3.2036

MAILING ADDRESS

Captain of the Port
U.S. Coast Guard
Governors Island
New York, N.Y. 10004

16465

• LEVER BROS.

Gentlemen:

This is to inform you that a pollution incident was discovered at 101 RIVER RD. EDGEWATER N.J. on 22 JUNE 1983 for which your vessel/facility is considered responsible. Under Federal Statutes, the United States Government has an interest in this incident and further, may take appropriate action to minimize any damage which may be caused by this pollution.

The discharge of a harmful quantity of oil is a violation of the Federal Water Pollution Control Act, as amended (33 USC 1161). Under this Act, you are responsible for taking adequate action to remove the pollutant and adequately mitigate its effect. Removal is being done properly if it is in accordance with Federal and State Statutes and regulations and the procedures and criteria of the National Oil and Hazardous Substances Pollution Contingency Plan (Federal Register, volume 45, no. 55, 19 March 1980). The adequacy of your actions shall be determined by the U.S. Coast Guard On Scene Coordinator, Captain J.L. McDONALD, or his representative. As long as you are taking adequate action in this matter, Federal action will be to monitor progress of cleanup activities as well as to provide guidance as necessary.

If it is determined that you are not taking prompt and appropriate actions to contain, cleanup, and dispose of the pollutants, Federal response may be initiated. Your vessel/facility will be held responsible for all costs incurred by the Federal Government as set forth in Section 311(f) of the Federal Water Pollution Control Act. Should you require further information concerning this matter, you should contact the Water Pollution Control Office at (212) 668-7920.

Sincerely,

Received, this 22 day
of JUNE, 1983 by:

POLLUTION INCIDENT STATEMENT

STATEMENT MADE BY: Tom Scott

TIME & DATE OF INCIDENT: 10:45 am - June 22, 1983

TIME & DATE OF STATEMENT: 2:00 PM - June 22, 1983

I agree with statement made by Mr. C. Carroll, but would like to make a few additional comments.

Weeks prior to the physical demolition of the aforementioned tank farm, we were advised by Lever Bros. that all tanks had been drained and cleaned.

We were also advised by the same representatives of Lever Bros Co on the morning of 22nd prior to the accident and spillage of the fuel tank that it contained water only. Had we been advised of the contents we would have never started demolition.

[The following text is extremely faint and mostly illegible due to heavy noise and bleed-through from the reverse side of the page. It appears to contain a list of names and possibly a signature.]

SIGNATURE

Tom Scott

Witnessed By:

SIGNATURE

FILE COPY
COMPLETED

PRELIMINARY ASSESSMENT REVIEW FORM

LB 3.2038

SITE NAME: *Edgewater Terminal*
ALIASES: *Quarta*
ADDRESS: *163 River Rd.*
CITY: *Edgewater*
COUNTY: *Bergen*
STATE: *NJ*
PRIORITY RATING GIVEN: *None*
(BY STATE OR CONTRACTOR)

AGREE:
DISAGREE:
(CHECK ONE)

IF DISAGREE, WHY?

OTHER COMMENTS:

It is already an NPL site and actions are being taken.

RECOMMENDATION: *None*
FINAL (BY EPA)

REVIEWER: *Joyce Perdek*
DATE: *6/10/85*

IN THE MATTER OF
ONE RIVER ROAD, EDGEWATER,
NEW JERSEY:
ALLIED CORPORATION,
Respondent.
Proceeding Pursuant to §106
of the Comprehensive Environ-
mental Response, Compensation
and Liability Act, 42 U.S.C.
§9606

ORDER ON CONSENT
Index No. II-CERCLA-50108

JURISDICTION

This Administrative Order on Consent (Order) is issued by the United States Environmental Protection Agency (EPA) pursuant to the authority vested in the President of the United States by §106(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §9606(a), which authority was delegated to the Administrator of EPA by Executive Order 12316, 46 Fed. Reg. 42237 (August 20, 1981), and duly redelegated to the Regional Administrator, EPA Region II on March 17, 1983. Pursuant to that authority, EPA hereby makes the following Findings and Determination and issues the following Order on Consent. Pursuant to Section 106(a) of CERCLA, the State of New Jersey Department of Environmental Protection (NJDEP) has been notified of this Order.

The above-captioned respondent (hereinafter, "Respondent") has consented to the issuance of this Order without any adjudication of fact or law. Respondent's consent to this Order and the subsequent compliance by Respondent with the terms of this Order does not constitute, and shall not be construed as, an admission of liability of any kind, a waiver of any defense which may be available to Respondent in this or any other proceeding, or an admission by Respondent of any fact or conclusion of law (or of the applicability or inapplicability of any law).

EPA FINDINGS OF FACT AND LAW

EPA has made the following findings of fact and law:

1. Respondent is a person, as defined in §101(21) of CERCLA, 42 U.S.C. §9601(21), and is a former owner and operator of the facility which is the subject of this Order and a potentially responsible party under Sections 107(a)(1) and (a)(2) of CERCLA, 42 U.S.C. §§9607(a)(1) and (a)(2).
2. The hazardous substances referred to in this Order shall mean any substances meeting the definition of "Hazardous Substance" as defined in §101(14) of CERCLA, 42 U.S.C. §9601(14).
3. The facility which is the subject matter of this Order (hereinafter, "the facility" or "the site"), which has come to be known variously as the "Quanta Resources" facility, the "Edgewater Terminal", and the "One River Road Facility", is located at One River Road, Edgewater, New Jersey. The property, located in the Borough of Edgewater, County of Bergen, comprises Block 95, Lots 1, 2, and 3, on the Tax Map of the Borough of Edgewater. The Hudson River forms the eastern boundary of the property, which lies at a point approximately parallel to West 93rd Street, Manhattan. It is further bordered by the Celotex Industrial Park property on the north, an industrial facility on the south, and a railroad right of way and River Road, a primary commercial thoroughfare, to the west.
4. The site is adjacent to commercial facilities which process or are otherwise engaged in the handling of food intended for human consumption. River Road carries a continual stream of both commercial and non-commercial vehicular traffic. A portion of the New Jersey Palisades, which rises 500 yards to the west of the property, contains residential housing, including several high-rise condominium residences. The segment of the Hudson River bordering the facility to the east carries both commercial and pleasure traffic throughout the year.
5. If certain of the hazardous substances stored at the site were to be released to the environment, under certain conditions (e.g., fire), winds traveling west over the property (in a direction opposite to the direction of prevailing winds at the site) could carry airborne emissions of hazardous substances from the property into the surrounding area. Winds traveling east over the property could carry airborne emissions off the site.
6. Beginning at some time in the 1930s, the Barrett Division of Allied Chemical Corporation (now Respondent ALLIED CORPORATION) commenced operations at the site.

7. ALLIED CORPORATION (ALLIED) conducted coal tar processing operations at the facility for several decades thereafter. In or about March 1974, James Frola (Frola) and Albert Von Dohln (Von Dohln) purchased the facility from ALLIED.

8. In or about May 1977, Frola and Von Dohln leased the facility to E. R. P. Corporation (ERP). The lease specified that the property was to be utilized for the storage of oil and recycling of oil. At a time after May 1977, ERP assigned its lease to Edgewater Terminals, Inc., which, on or about July 29, 1980 re-assigned the lease to Quanta Resources Corporation (QRC). QRC was a wholly owned subsidiary of Quanta Holding Corp., which, in turn, was a wholly owned subsidiary of Waste Recovery, Inc. Waste Recovery, Inc. was a wholly owned subsidiary of A. G. Becker Paribas, Incorporated (formerly Warburg-Paribas-Becker, Inc.).

9. On or about August 6, 1980 QRC entered into an administrative consent order with the New Jersey Department of Environmental Protection (NJDEP). The consent order required QRC to perform environmental cleanup activities at the site and to operate thereafter only in conformance with enumerated State laws and regulations. Specifically, the activities which could be legally conducted at the site, and types of wastes which could be legally accepted by the operation at the facility, was limited to storage, reprocessing, reclamation, and recovery of special wastes consisting of waste oil, oil emulsions, and oil sludges. Acceptance of PCBs was completely prohibited. The August 6, 1980 NJDEP order was superseded by another NJDEP consent order with QRC dated May 29, 1981 and a Temporary Operating Authorization (TOA) also dated May 29, 1981.

10. Hudson Oil Refining Corporation, Newtown Oil, Polar Industries, Inc., Casco Equipment Corporation, and Oil Transfer Corporation offered to the public waste collection, transportation, and disposal services utilizing the tank capacity existing at the site.

11. Analyses of samples taken from tanks at the facility on or about June 23, 1981 indicated the presence of PCBs in the liquids in those tanks at concentrations exceeding 50 parts per million. Storage of PCBs constituted a violation of the TOA.

12. At the direction of NJDEP, operations at the facility ceased on July 2, 1981. NJDEP issued a formal order of cessation of operations on October 12, 1981. Six days earlier, on October 6, 1981, QRC filed for reorganization pursuant to Chapter 11 of the Bankruptcy Code, 11 U.S.C. §101 et seq. On November 12, 1981 the Chapter 11 Petition was converted into a Chapter 7 liquidation.

13. The facility contains 61 (SIXTY-ONE) above-ground storage tanks with a storage capacity of approximately 9 million gallons, in addition to approximately 10 underground storage tanks with a capacity of roughly 40,000 gallons. It covers an area of about 15 acres, with a perimeter of approximately 22,000 linear feet. Large quantities of chemically contaminated waste oil, oil sludges, tar, asphalt, process water, and as yet uncharacterized liquid chemicals have been abandoned in tanks at the site. In addition to the bulk liquids stored at the site, about 50 drums containing oils, sludges, contaminated absorbent materials, debris, and uncharacterized materials are staged at primarily three locations within the facility.
14. As a result of the long period of active operations at the site, soils at the site have become contaminated with asphaltic materials and with oils containing hazardous substances and chemicals, some of which may have been released from their containments during spills which occurred at the facility after its cessation of operations.
15. Large deposits of tar and asphalt have been identified in the soils of that part of the facility nearest the Hudson River, and the surface of the shallow portion of the Hudson River which borders on the facility is continually covered with a thick layer of weathered oily sludge attributable, at least in part, to discharges and releases from the facility.
16. Some of the substances presently being released and/or posing a threat of release from the facility to the environment have been delivered to the facility, were abandoned at the facility, or may have been generated, by Respondent or as a result of Respondent's ownership or operation of the facility.
17. As of March 29, 1985, there existed at least 750,000 gallons of chemically contaminated oil within the tanks at the facility. Oil in many of the facility's tanks has been identified as contaminated with PCBs in concentrations from 50 to 260 ppm. Approximately 266,000 gallons of oil have been found to be contaminated with PCBs near or above the level of 50 ppm.
18. As of March 29, 1985, a number of tanks at the facility contained hydrocarbons with flash points of approximately 140° F., and one tank contained 50,000 gallons of liquid hydrocarbon with a flash point of 125° F. Internal tank temperatures during summer weather can be expected to reach or exceed the flash point of the liquids in these tanks.

19. Volatile hydrocarbons including benzene, toluene, trichloroethane, ethyl benzene, and phenol have been identified in samples of oil taken at the facility.

20. As of March 29, 1985, approximately 4.2 million gallons of chemically contaminated aqueous liquids had been found to be abandoned at the facility. Analyses of portions of these wastes have indicated Chemical Oxygen Demand (COD) and Total Organic Carbon (TOC) concentrations as high as 150,000 ppm and 54,000 ppm, respectively. Levels of cyanide as high as 10 ppm and of lead as high as 59 ppm have been identified upon analysis of the water phase of the contents of tanks at the facility, in addition to chloroform and anthracene.

21. The chemical contaminants referenced in Paragraph 20, supra, including but not limited to benzene, cyanide, toluene, phenol, and PCBs, are considered to have high toxicity.

22. As of March 29, 1985, significant amounts of contaminated sludges had been abandoned at the facility. It was estimated that on that date, the site stored approximately 500,000 gallons of such contaminated sludges.

23. EPA has conducted limited air monitoring at the site. Organic Vapor Analyzer (OVA) readings of over 400 ppm have been obtained while measuring vapors released from liquids being pumped from storage tanks during December 1982. Positive tests for benzene and phenol in air have been obtained using Draeger tubes and Lomotte Sampling Kits.

24. Among the hazardous substances listed above, PCBs, benzene, cyanide and lead, inter alia, have been determined by EPA to cause adverse human health effects.

25. Certain hazardous substances found at the site, if released to the environment in a manner providing vectors of exposure to the general public, could be responsible for adverse human health effects from ingestion, inhalation, or direct contact.

26. Wastes detected in analyses of samples taken from tanks at the facility indicate a potential fire hazard due to the low flashpoint of the constituents of those wastes.

27. A fire at the facility involving some of the substances listed in paragraph 21, supra, could result in creation of toxic by-products including, but not limited to, chlorinated dibenzofurans and dioxins from the burning of PCBs. One such chlorinated dioxin is tetrachlorodibenzodioxin, one of the most acutely toxic substances known.

28. A federal Centers for Disease Control (CDC) representative visited the facility on March 15, 1985 and determined that the facility constitutes a significant hazard and threat to public health. The CDC has recommended immediate removal from the facility of those highly toxic materials found at the site.

29. A release of hazardous substances from the property traveling west could reach River Road. A release of hazardous substances from the property traveling east could enter the Hudson River. A sudden spill (e.g., from transfer equipment failure or from failure of deteriorating containment structures) could travel west from the site toward River Road and an active industrial railroad spur. In the event of a spill reaching River Road, vehicular traffic, if not diverted, could spread contamination from the site over additional portions of River Road or other public thoroughfares in the Edgewater area. A spill from the site traveling east could travel directly to the Hudson River either through underground piping and drain systems on the site or through storm drain lines located on the property immediately to the south of the site.

30. The present owners of the facility, James Frola and Albert Von Dohn, hired a contractor in the fall of 1982. From that time until the summer of 1983, the contractor attended to small spills at the facility, maintained a containment boom along the eastern property boundary with the Hudson River, dismantled sections of transfer piping, installed emergency clay diking, constructed an overland discharge line from the facility oil-water separator to the Hudson River, and arranged for the disposal of 200,000 gallons of contaminated aqueous solution from a leaking tank. 776,000 gallons of oil were removed from the facility and sold during that time. No major cleanup or stabilization of the site was achieved, however, and no steps were taken to eliminate the occurrence of releases and the threat of releases from the facility to the environment or to abate the existence of a threat posed by the facility to the public health, welfare, or the environment.

31. In November 1983 the property owners entered into an administrative consent order with NJDEP. That order detailed steps required for a cleanup of the site. The requirements of that order were not satisfied, and the property owners remain in violation of that order.

32. In or about July 1984, EPA commenced an action pursuant to 40 C.F.R. Part 112 against certain alleged owners and operators of the site for failure of the facility to have prepared, maintained, and implemented a Spill Prevention Control and Countermeasure (SPCC) Plan. The deficiencies noted in that administrative action were not corrected, and that action, including the matter of a proposed penalty of \$200,000, remains unresolved.

33. During the period September 1984 until March 1985, EPA, the owners of the facility, and representatives of some of the potentially responsible parties at the facility attempted to negotiate a plan to initiate cleanup of the facility. The interests with whom EPA was negotiating failed to come forward with such a plan.

34. EPA has determined that the release of material containing hazardous substances from the facility into the environment constitutes a release of hazardous substances from a facility to the environment.

35. Hazardous substances, pollutants, and contaminants threaten to continue to be released from the facility into the environment absent the taking of appropriate actions at the facility.

36. The continued releases and threatened releases of hazardous substances, pollutants, and contaminants from the facility to the environment presents an imminent and substantial endangerment to the public health, welfare and the environment. EPA believes that corrective actions, as contemplated by §§300.65 and 300.67 of the NCP, are appropriate at the facility to prevent and/or mitigate immediate and significant risk of harm to human health and/or the environment.

The foregoing FINDINGS have been made by EPA. By consenting to this Order, or by taking any actions under this Order, Respondent does not concede the correctness of these FINDINGS. This Order, and compliance with the terms hereof by Respondent, does not constitute, and shall not be construed in any way, as an admission of any fact or conclusion of law (or of the applicability or inapplicability of any law) or an admission of liability on the part of Respondent or as a waiver of any defense by Respondent. Respondent contests the FINDINGS and reserves the right to challenge them in this or in any other proceeding in which they may arise. However, Respondent specifically agrees not to contest the authority or the jurisdiction of the Regional Administrator, EPA Region II, to issue this Order, and also agrees not to contest the terms of this Order in any action to enforce its provisions. It is further the intention of the parties hereto that neither the terms of this Order, including the FINDINGS made herein, nor the act of performance hereunder, shall be used against Respondent as a collateral estoppel in any other case with EPA, with any other governmental agency, or with any other person.

DETERMINATION

LB 3.2046

Based upon the FINDINGS set forth above and the entire administrative record, EPA has determined that the release and threat of release of hazardous substances to the environment from the facility may present an imminent and substantial endangerment to the public health, welfare, and the environment within the meaning of §106(a) of CERCLA, 42 U.S.C. §9606(a).

ORDER

Based upon the foregoing FINDINGS and DETERMINATION, IT IS HEREBY ORDERED that certain actions be taken to abate the release and threat of release of hazardous substances, pollutants, and contaminants at and from the facility into the environment. A Removal Program, as set forth in greater detail in Attachment A hereto, must be implemented at the facility. The Work Plan resulting from Attachment A shall be deemed incorporated herein and made a part hereof.

IT IS FURTHER ORDERED:

1. Not later than the effective date of this Order, Respondent shall select a coordinator, to be known as the Designated Coordinator, and shall submit the name, address, and telephone number of the Designated Coordinator to the EPA On-Scene Coordinator (OSC). As of the effective date of this Order, the name, address and telephone number of the EPA Region II On-Scene Coordinator is: Mr. John Witkowski, On-Scene Coordinator, Response and Prevention Branch, EPA Region II, Edison, New Jersey 08817, 201-321-6739. In the event the OSC is changed, EPA will promptly inform Respondent.

2. Respondent shall implement the Removal Program set forth in Attachment A hereto pursuant to the schedule contained therein. Performance of the Removal Program shall be complete not later than 28 (TWENTY-EIGHT) months from the effective date of this Order.

3. As appropriate during the course of implementation of the Removal Program at the facility, Respondent or its consultants or contractors, acting through the Designated Coordinator, may confer with the OSC concerning the Removal Program. Based upon new circumstances or new information not in the possession of EPA on the date of this Order, the Designated Coordinator may request in writing approval of a modification of the Removal Program as incorporated in Attachment A hereto from the Director, Emergency and Remedial Response Division.

Respondent shall provide written notification to EPA of any circumstances which have caused, or which Respondent believes are likely to cause, a delay of performance. Such written notice, which shall be provided as soon as possible after occurrence of the delay or discovery of circumstances which Respondent believes are likely to cause a delay, but in no event later than 10 (TEN) days after the date when Respondent knew of the occurrence of such circumstances, shall be accompanied by such documentation as may be specified by the OSC, including, if required by the OSC, a plan of action taken, or to be taken, by Respondent to minimize any delay and a projection of the date(s) on which delayed activities will be completed.

If approved by the Director, Emergency and Remedial Response Division, such modification shall be implemented immediately by Respondent and shall also be deemed a modification of this Order.

4. In the event of an inability or anticipated inability of Respondent to perform any of the activities required by the Removal Program, the Designated Coordinator shall immediately inform the OSC of the reason for, and date and length of, any anticipated inability to perform, and the actions taken or to be taken by Respondent to avoid or mitigate the impact of such inability to perform, including the proposed schedule for such actions.

5. In the event of a significant change in conditions at the facility, the Designated Coordinator shall notify the OSC immediately at the following emergency telephone numbers: 201-548-8730 or 201-321-6670. Until the OSC provides direction, Respondent may, at its discretion, take reasonable measures under the circumstances. Respondent shall remain liable for any adverse consequences of such measures. In the event the Director, Emergency and Remedial Response Division determines that the activities under the Removal Program, or significant changes in conditions at the facility, pose a substantial threat of immediate and significant risk of harm to human life or health or the environment, EPA may order Respondent to stop further implementation of the Removal Program or to take other and further actions reasonably necessary to abate the emergency. This provision is not by way of limitation to any rights EPA may have under §§300.65 or 300.67 of the NCP or any other applicable provision of the NCP, or under any other applicable law or regulation.

6. EPA acknowledges that the work specified by and set forth in Attachment A is consistent with the National Contingency Plan, and agrees to certify the work, if properly performed, as having been performed consistently with the NCP.

All actions and activities carried out by Respondent pursuant to this Order shall be done in accordance with all applicable federal, State, and local laws, regulations and requirements and with applicable provisions of the NCP.

7. Failure of the Respondent to expeditiously and completely carry out the terms of this Order may result in EPA taking the required actions unilaterally, pursuant to §104(a)(1) of CERCLA, 42 U.S.C. §9604(a)(1).

8. Respondent's Designated Coordinator shall provide written weekly progress reports to EPA with respect to all actions and activities undertaken pursuant to this Order. All submittals, deliverables, and notifications to EPA pursuant to this Order shall be made to the OSC and, in triplicate, to the Chief, Site Investigation and Compliance Branch, Emergency and Remedial Response Division, ATTN: Quanta Project Coordinator, unless otherwise provided herein.

9. Respondent shall assure that with respect to any premises, other than the facility, which Respondent or its contractors or consultants may use in connection with implementation of this Order, unimpeded access to such premises shall be provided to EPA and to EPA's duly authorized employees, contractors, and consultants.

Any contract between Respondent and a third party for removal and/or disposal of waste from the facility or for performance of laboratory analytical work shall provide for unimpeded EPA access to either a waste storage or disposal site used in connection with such removal and/or disposal of wastes from the site or an analytical laboratory used to perform work in connection with implementation of the Removal Program.

10. Employees of EPA shall have full access to all technical records and contractual documents maintained or created by Respondent or its contractors in connection with implementation of the Removal Program.

11. With respect to all chemical analyses and all disposal operations conducted in compliance with this Order, Respondent shall provide the OSC with the identity of and, if applicable, licensing identification numbers of (e.g., with respect to waste haulers or disposal facilities) all persons or entities performing such work within 2 (TWO) working days of selection of such persons, companies, or facilities, for purposes of establishing that all such activities have been performed in accordance with EPA approved methodology and that all wastes ultimately disposed are disposed at properly licensed and EPA-approved hazardous waste disposal facilities. However, Respondent may burn as fuel or recycle as product any removed waste, provided that such burning or recycling is performed in compliance with all applicable federal, state and local statutes and regulations and EPA Off-Site Disposal Policy then in effect.

12. All removal work performed pursuant to this Order shall be performed under the direction and supervision of one or more registered or otherwise appropriately licensed professional engineers, geologists, or hydrologists, if appropriate to the task being performed.

13. All chemical analyses shall conform to EPA Quality Assurance/Quality Control procedures and in conformance with Section 10 and 1.3, respectively, of the EPA publication entitled "Test Methods for Evaluating Solid Waste" (SW-846) and "Guidance for Preparation of Combined Work/Quality Assurance Project Plans for Water Monitoring."

14. Upon request by the OSC, Respondent and/or its contractors shall provide split samples of any material sampled in connection with implementation of the Removal Program.

15. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondent or Respondent's employees, agents, contractors, or consultants, in carrying out any action or activity pursuant to this Order, nor shall the United States be held as a party to any contract entered into by Respondent or by its officers, employees, agents, contractors, or consultants in carrying out any action or activity pursuant to this Order.

16. Nothing contained in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties, which parties are not respondents to this Order, or with respect to any other persons whom EPA has notified are deemed potentially responsible parties in relation to the facility. EPA acknowledges Respondent's right of contribution and other remedies of Respondent against any responsible party not participating in this Order, except to the extent Respondent has affirmatively waived such right of contribution or access to remedies.

17. Respondent's activities under this Order shall be performed within the time limits set forth herein or in the Work Plan unless performance is delayed by events which constitute force majeure. For purposes of this Order, force majeure is defined as any event arising from causes beyond the control of Respondent. Financial considerations of Respondent and other persons mentioned in this paragraph shall not be considered circumstances beyond the control of Respondent. In the event of a force majeure, Respondent shall be obligated to perform the affected activities within an additional time period which shall not exceed the time period of the delay attributed to the force majeure, provided, however, that no deadline shall be extended beyond a period of time that is reasonably necessary.

Respondent shall orally notify the OSC as soon as possible following Respondent's awareness that circumstances constituting a force majeure have occurred or are likely to occur. If the OSC cannot be contacted, Respondent, through the Designated Coordinator, shall attempt to leave a message at his or her office and shall immediately proceed to notify the EPA Quanta Project Coordinator by phone. In addition, Respondent shall notify the Director, Emergency and Remedial Response Division in writing, through the Designated Coordinator, as soon as possible, but not later than 5 (FIVE) days after Respondent becomes aware that circumstances constituting a force majeure have occurred.

Such written notice shall be accompanied by all available pertinent documentation, including but not limited to third-party correspondence, and shall contain the following: 1) a description of the circumstances, and Respondent's rationale for interpreting such circumstances as being beyond its control; 2) the actions (including pertinent dates) that Respondent has taken and/or plans to take to minimize any delay; and 3) the date by which or the time period within which Respondent proposes to complete the delayed activities.

Respondent's failure to timely notify EPA as required by this Paragraph shall render the remaining provisions of this Paragraph null and void insofar as they may entitle Respondent to an extension of time.

18. Respondent shall use its best efforts to avoid or minimize any delay or prevention of performance of its obligations under this Order. Any delay situations which arise as a result of changed circumstances pursuant to Paragraph 3, supra, or conditions deemed by EPA to constitute force majeure, shall be treated as modifications of the Removal Program pursuant to Paragraph 3, supra.

19. Respondent agrees not to make any claims pursuant to §112 of CERCLA, 42 U.S.C. §9612, directly or indirectly, against the "Hazardous Substance Response Trust Fund" with respect to the costs of work performed under the terms of this Order.

20. Violation of this Order as a result of Respondent's failure to comply with any provision herein shall be enforceable pursuant to §§106(b) and 113(b) of CERCLA, 42 U.S.C. §§9606(b) and 9613(b). Respondent may also be subject to cost recovery by the United States, civil penalties and/or punitive damages as provided in §§106(b), 107(a), and 107(c)(3) of CERCLA, 42 U.S.C. §§9606(b), 9607(a), and 9607(c)(3), for failure to comply with the terms of this Order. Nothing herein

shall preclude EPA from taking such additional actions as may be necessary to prevent or abate an imminent and substantial danger to the public health, welfare or the environment arising from conditions at the facility and recovering the costs thereof, nor shall anything herein preclude NJDEP from taking legal action pursuant to State law.

21. Respondent's consent to and compliance with this Order does not constitute, and shall not be construed as, a waiver of any defenses which Respondent may wish to raise in other aspects of this proceeding or in any other proceeding. Nothing contained in this Order shall constitute or be construed as an admission by Respondent with respect to any factual or legal matter. Neither the terms of this Order, including the FINDINGS made herein, nor the act of performance hereunder by Respondent, shall be used against Respondent as a collateral estoppel in any other case with EPA, with any other governmental agency, or with any other person. However, Respondent specifically agrees not to contest the authority or the jurisdiction of the Regional Administrator, EPA Region II, to issue this Order, and also agrees not to contest the terms of this Order in any action to enforce its provisions.

22. Within 60 (SIXTY) days of Respondent's receipt of a documented demand from EPA for payment of costs incurred by the United States in connection with the facility after 12:01 a.m. June 15, 1985, and prior to 12:01 a.m. of the date on which Respondent commences performance of the Removal Program under this Order, Respondent, Respondent in conjunction with other potentially responsible parties at the facility, or other potentially responsible parties acting on behalf of and for the benefit of themselves and Respondent, shall forward a certified check in the amount of the demand, payable to the order of the "Hazardous Substances Response Trust Fund," to EPA-Superfund, Box 371003M, Pittsburgh, Pennsylvania 15251, together with a cover letter specifying the name and index number of the matter for which payment is being forwarded and what obligation the payment is intended to satisfy. A copy of the cover letter shall be sent to the EPA Project Coordinator, as set forth in Paragraph 8, *supra*. Such payment shall constitute a payment pursuant to §107 of CERCLA, 42 U.S.C. §9607, in reimbursement to the United States of costs incurred under CERCLA, at and in connection with the facility.

23. Within 60 (SIXTY) days following Respondent's completion of the requirements of this Order, the Director, Emergency and Remedial Response Division, EPA Region II, shall issue a determination and, if appropriate, an acknowledgment that the requirements of this Order, including all requirements of Attachment A hereto, have been completed in compliance with the requirements of this order and in compliance with the NCP.

Upon issuance of such determination and acknowledgment, Respondent shall be deemed released by EPA from any further requirements or duty to perform under this Order for surficial response action at the site, and from any further obligation to perform actions or activities in furtherance of the attached Work Plan for performance of removal activities at or on the facility.

The provisions of this paragraph do not release Respondent from liability for the performance of acts or the payment of money which may arise as a result of conditions relating to surficial pollution or contamination or releases or threatened releases to the environment resulting therefrom, which conditions are unknown or undetected at the facility on the effective date of this Order, with respect to any surficial site condition posing an imminent and substantial endangerment to the public health, welfare or the environment which may occur or arise at the facility on or after the effective date of this Order, or where additional information unavailable on the effective date of this Order indicates that conditions at the facility, regardless of compliance with the terms of this Order, may pose an imminent and substantial endangerment to the public health, welfare or the environment.

Nothing in this Order shall be deemed to release, discharge, or otherwise relieve Respondent from the obligation to perform such further or additional response actions or activities at the facility (other than the activities performed in furtherance of the attached Work Plan), or such other response actions as may be required as a result of the generation, storage, handling, transportation, treatment, or disposal of hazardous substances, pollutants or contaminants resulting from the performance of the Removal Action pursuant to Attachment A, as may be deemed necessary pursuant to CERCLA or other applicable laws.

Nothing in this Order shall be deemed a release of Respondent with respect to surficial response actions at the site (including the removal of visibly contaminated soils) which may initially be required by EPA of potentially responsible parties other than Respondent.

Nothing in this Order shall be deemed a release of Respondent with respect to claims by the United States or any State for natural resources damages attributable to the ownership or operation of the facility or releases to the environment from the facility.

Except as otherwise provided in this paragraph or Paragraph 22, supra, nothing in this Order shall be deemed to release, discharge, or otherwise relieve Respondent from liability for the payment of money to EPA or to the United States

pursuant to 42 U.S.C. §9607 or other federal laws for costs incurred by the EPA or the United States as a result of performance of, or involvement by the United States in, actions or activities taken in connection with the facility.

In the event that EPA pursues injunctive or monetary relief judicially with respect to response actions or costs incurred at or relating to the facility against potentially responsible parties other than Respondent, and such potentially responsible parties attempt to join or otherwise assert claims against Respondent, EPA will request the Department of Justice to support Respondent's efforts to persuade the court that it should take no action to defeat the purposes of this Consent Order and, if necessary, to argue to the court that in adjusting equities among responsible parties, positive consideration should be given to Respondent, who voluntarily agreed to undertake the work specified herein.

In the event that EPA pursues injunctive or monetary relief judicially with respect to the facility against potentially responsible parties other than Respondent, Respondent agrees that such claims, and the satisfaction of any judgments arising therefrom, shall be superior to any claims which are or which could be asserted by Respondent against any such potentially responsible parties.

24. Except as otherwise provided by law, nothing in this Order shall be construed to confer upon Respondent any right, title or interest to real or personal property.

25. This Order, and Respondent's obligation to perform the requirements of Attachment A hereto, shall become effective on the first business day of the first week following the week on which a trust in the amount of \$5,000,000 (FIVE MILLION DOLLARS) created by potentially responsible parties other than Respondent, the corpus of which shall be payable to Respondent in consideration of work performed under this Order, shall be funded as provided for in the trust document denominated "ONE RIVER ROAD (EDGEWATER, N.J.) SITE TRUST FUND AGREEMENT," and in the document denominated "COVENANT NOT TO SUE," entered into, or to be entered into, between certain potentially responsible parties at the facility and EPA. EPA will notify Respondent of the date on which EPA is informed by the Trustee that the Trust has been funded in the required amount.

Respondent shall complete performance of the requirements of this Order and Attachment A hereto not later than 28 (TWENTY-EIGHT) months from the effective date of this Order.

All times for performance of actions or activities to be performed under this Order and Attachment A hereto shall be calculated from the effective date, as defined in this paragraph, except as elsewhere provided to the contrary.

Date of Issuance: SEPTEMBER 30, 1985

By: *Christopher J. Daggett*
CHRISTOPHER J. DAGGETT
REGIONAL ADMINISTRATOR

ALLIED CORPORATION

By: *Alan Belzer* *JC* September 26, 1985
(signature) *SR* DATE
Alan Belzer
(printed name of signatory)
Executive Vice President and
President, Chemical Sector
(signatory's title or designation of
authority showing signatory to be
an officer of Respondent)

By: *Edward W. Callahan* *ole* September 26, 1985
(signature) *SR* DATE
Edward W. Callahan
(printed name of signatory)
Vice President-Health, Safety &
Environmental Science
(signatory's title or designation of
authority showing signatory to be
an officer of Respondent)

ATTACHMENT ASCOPE OF WORK TO BE PERFORMED BY RESPONDENTS IN THE IMPLEMENTATION OF THE REMOVAL PROGRAM

The detailed scope of work to be performed by Respondent in implementing/performing the activities in this Consent Order under the Removal Program at the facility is as follows.

Development of Detailed Workplan

Within 15 days of the effective date of this Order, Respondent shall submit a detailed outline of a Work Plan to address the removal of the waste remaining at the site. The detailed outline of the Work Plan shall include, but not necessarily be limited to, the following:

- a. a detailed time schedule for performance of the specific tasks set forth in this Order and in this Scope of Work, and a detailed description of how these tasks will be accomplished;
- b. a description of all sampling locations and the number, types, and frequency of samples to be obtained at each sampling location;
- c. an overall Site Operations Plan for performance of tasks specified in this Order, including identification (or provision for later advance identification) of contractors and subcontractors and specification of such contractors' and subcontractors' respective responsibilities;
- d. a Health and Safety Plan;
- e. a contingency plan for conducting site activities.

Until such time as the detailed Work Plan, including a Health and Safety Plan, is approved by EPA, Respondent shall follow EPA's Work Plan, as previously supplied to the PRPs' Steering Committee, and with EPA's Health and Safety Plan, which shall be supplied.

Removal of Physical Obstructions

Extraneous piping and associated hardware, if any, which pose a safety hazard to either personnel or equipment brought on site shall be dismantled and stored in an isolated portion of the site, or disposed of as appropriate to the nature of the material and the contaminants with which it has been in contact. Empty tanks will be decontaminated and removed, as necessary, to facilitate surface cleanup.

Boom Deployment/Oil Collection

The containment boom currently installed along the Hudson River shall be maintained as necessary to prevent discharge of oil to the Hudson River. The boom shall be maintained so as to contain waste oil escaping from the facility to the Hudson River in as narrow an area adjacent to the property as possible. Contained oils shall be removed during every tidal cycle and disposed of properly. A filter box or sorbent pads may be placed perpendicular to the bulkhead to absorb oil moving parallel to the bulkhead at the approach of low tide. The filter box shall be maintained, and/or the sorbent pads replaced, as necessary.

Repair and Upgrading of Spill Containment Walls/Berms

All containment walls/berms shall be inspected by qualified personnel for damage or deterioration. Defects which might affect the ability of these barriers to contain spills shall be corrected.

NJPDES Monitoring

Sampling shall be conducted in accordance with the existing NJPDES permit to characterize: 1) the discharge from the underground drainage line, and 2) discharge quality of the oil/water separator effluent.

Contaminants to be characterized for the facility NJPDES permit shall include the following characteristics specified by the State of New Jersey, including:

- | | | |
|---------|--------|----------------|
| Phenols | TOC | Oil and Grease |
| TSS | PCB | Chromium |
| COD | Barium | Cyanide |
| | | GC/MS Scan |

Ambient Monitoring

Sampling shall be conducted to characterize air quality in breathing spaces, so that the proper level of personnel protection may be determined and maintained.

Oil/Water Separator Maintenance

Improvements of the oil/water separator shall be made as necessary to insure compliance with the NJPDES Permit. The separator shall be maintained and the effluent pipeline inspected and repaired as necessary. Sampling and testing of the effluent shall be conducted as required by the permit.

Underground Pipeline

The underground drainage line which extends from the oil/water separator towards the Hudson River bulkhead shall be investigated and sealed with concrete, if needed, and its surface drainage ports shall be sealed if it is determined that off site areas would not be adversely effected by these actions. It may be necessary to bypass the line if off site areas are found to be adversely affected.

Underground Tanks

All underground tanks known to be present at the facility on the effective date of the Order shall be emptied of hazardous wastes, cleaned, and either removed or their inlet ports rendered inoperable to prevent them from being used. All other underground tanks at the facility shall be identified, emptied, cleaned, and either removed or their inlet ports rendered inoperable in the same manner.

Rail Siding Maintenance

The rail siding shall be maintained to permit the safe and orderly transfer of waste materials to railroad cars for off site disposal.

Covering of Tanks

The process of covering tanks with damaged roofs, which may have been begun on-site by EPA, shall be continued as deemed necessary. This action is intended to prevent precipitation from entering those tanks and becoming contaminated. Contaminated materials shall be removed as appropriate.

Waste Analysis

Waste analysis tests shall be performed on all liquid phases of all tanks, and on all sludge in all tanks, including the sludge contained in the large cut-off tank, prior to bulk removal. The following minimum analyses are prescribed:

Water

Oil and grease
Cyanides, Lead
COD, TOC, pH
Priority Pollutants

Oil

PCB
Priority Pollutants
& Solids, Water, Ash
Total Halogens (ppm)
Flashpoint

Waste Disposal

Materials contained in bulk storage tanks shall be removed from those storage tanks. Any materials Respondent determines can not be utilized as a source of energy or recycled as product in accordance with all applicable federal, state, and local laws and regulations shall be removed from the site and disposed of at appropriate waste disposal facilities in accordance with the then applicable EPA Off-Site Removal Policy. Drummed material shall be properly disposed of or may be discharged in accordance with the facility's NJPDES permit.

All material removed from the facility as a hazardous waste shall be handled and manifested accordingly.

A. Aqueous Waste Disposal

Based on the results of chemical analyses performed to date and any subsequent analyses performed on aqueous wastes at the facility, such aqueous wastes shall be removed from all tanks and disposed of either on site in accordance with the facility's NJPDES permit or in an appropriately permitted off-site disposal facility.

B. Non-PCB Oil Disposal

If future analyses indicate that the fuel value of the oil containing less than 50 ppm of PCB's (non-PCB oil) is great enough (>8,000 BTU/lb) and the bottom solids plus water is low enough, the non-PCB oil not otherwise utilized in the waste disposal process shall be removed from the site, but may be used as a fuel source.

C. PCB Oil Disposal

There are approximately 266,000 gallons of PCB contaminated (>50 ppm) oil now stored at the facility. The available analyses indicate that the average PCB concentration is 101 ppm. The PCB-contaminated oil shall be transported to an appropriately permitted facility for either disposal, incineration, or burning in an appropriately permitted high-efficiency boiler. PCB oil removed from the facility for incineration or use as an energy source shall be burned within 30 (THIRTY) days of their arrival at the location of burning.

D. Non-PCB Sludge Disposal

Review of the tank inventory conducted in May 1985 indicates that there are approximately 5,800 tons of sludge present in the inventoried tanks on-site. Chemical analyses have not been performed on the sludge materials to date.

Sludges shall either be disposed of in an appropriately permitted disposal facility or used as an energy source. Sludges removed from the facility for use as an energy source shall be burned within 30 (THIRTY) days of their arrival at the location of burning unless such sludges are shipped to a facility owned by Respondent, in which case all requirements of the Resource Conservation and Recovery Act, as amended (RCRA), 42 U.S.C. §6901 et seq., applicable regulations promulgated thereunder, and other applicable federal, state and local laws and regulations shall be met.

E. PCB Sludge Disposal

The PCB-contaminated sludge shall be removed from the tanks and disposed of. PCB-contaminated sludge may be incinerated on site, as provided below. Respondent may employ other suitable methods of handling and disposing of such sludge so long as Respondent complies with all applicable federal, state and local laws and regulations.

F. Clean-up of Sludge-Containing Tanks

Sludge shall be removed from the large cut-off tank and disposed. The tank shall be cleaned and altered so rainwater will not accumulate and cause contaminated oil to enter the facility yard in the event the cut-off tank is used as a holding tank during the removal operation.

G. On-Site Incineration

Waste may be incinerated on site provided appropriate permits have been obtained by Respondent in such a manner as to permit disposal of those materials intended to be incinerated within the time limits established in the approved detailed Work Plan.

H. Drum Removal

All drums, pails, or other small containers of wastes shall be staged prior to removal from the site. All such materials shall be held at the staging area for a minimum of 48 (FORTY-EIGHT) hours prior to removal of those wastes from the site. During that 48 hour period, EPA and New Jersey Department of Environmental Protection personnel may inspect the wastes and their containers and record by any method the labelling on those containers or other information which those agencies believe pertinent.

Site Security

Site security shall be maintained to prevent unauthorized entry to the site.

Records

The following records, at a minimum, shall be created and maintained by Respondent and provided to the OSC at any time upon his request:

- a. days and times of operation of all activities under this Removal Program;
- b. inspection and replacement and/or maintenance dates for deployed sorbent boom and/or filter box;
- c. daily weather records;
- d. daily quantity of aqueous solution removed, specification of tanks from which removed, and destination of all aqueous waste loads removed from the facility. Copies of all manifests with respect to hazardous wastes, and copies of all bills of lading, invoices, and gate receipts with respect to all materials removed from the facility, shall be maintained at the facility;
- e. daily quantity of hydrocarbon removed, specification of tanks from which removed, and destination of all hydrocarbon waste loads removed from the facility. Copies of all manifests with respect to hazardous wastes, and copies of all bills of lading, invoices, and gate receipts with respect to all materials removed from the facility, shall be maintained at the facility;
- f. daily readings for air quality determinations at the facility and location of taking of all such readings;
- g. identification of all operational problems and their resolution;
- h. drum disposal records, including specification of any bulking performed, disposal date and disposal location.

Submittal of the detailed outline of the Work Plan to EPA shall be accomplished in the same manner as is provided for submittal of deliverables in Paragraph 8 of the Order.

EPA will review and comment on the detailed outline of the Work Plan. EPA will address its comments to the reasonableness of the time period set forth for completion of the removal activities enumerated in the detailed outline of the Work Plan and to conformance of the detailed outline of the Work Plan with sound management, engineering, and scientific practices, technological feasibility, established environmental monitoring procedures, and utilization of environmentally sound and acceptable waste disposal practices.

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Within 30 days of Respondent's receipt of EPA's comments on the detailed outline, Respondent shall submit a final Work Plan as required by those comments, or as otherwise directed by EPA, and shall submit the final document to EPA. EPA remains the final arbiter in any dispute regarding the adequacy and sufficiency of the substance or form of the final Work Plan. At such time as EPA determines that the final Work Plan is acceptable, EPA will transmit to Respondent a written statement to that effect.

Respondent shall perform the Removal Program commencing on the effective date of the Order to which this Scope of Work is attached. Performance of the Removal Program shall be in conformance initially with the EPA Work Plan and Site Operations Plan, and, following EPA approval of Respondent's detailed outline of the Work Plan, with that approved detailed outline of the Work Plan and Site Operations Plan, pursuant to the schedule set forth in the detailed outline of the Work Plan.

Implementation of the approved detailed outline of the Work Plan, and cessation of Respondent's performance of EPA's Work Plan, shall commence within 5 (FIVE) calendar days of Respondent's Designated Coordinator's receipt of approval of Respondent's detailed outline of the Work Plan by EPA.

Implementation of the final Work Plan, and cessation of Respondent's performance of the approved detailed outline of the Work Plan, shall commence within 5 (FIVE) calendar days of Respondent's Designated Coordinator's receipt of approval of Respondent's final Work Plan by EPA.

ENVIRONMENTAL PROTECTION AGENCY
Region II
26 Federal Plaza
New York, New York 10278

Unifed

LB 3.2062

FILE 60101

IN THE MATTER OF :
ONE RIVER ROAD, EDGEWATER, :
NEW JERSEY: :
JAMES FROLA, GEORGE KNOTT, :
RUSSELL MABLER, CHARLES STRAWAY, :
and ALBERT VON DOHLN, :

Index No. II-CERCLA-60101

Individuals, and :

AAXON INDUSTRIAL, INC. :
ALCAN ALUMINUM CORPORATION :
ALL COUNTY ENVIRONMENTAL :
AMERICAN PIPE & TANK :
BORNE CHEMICAL CO., INC. :
BROOKSIDE APARTMENTS :
BROWNING-FERRIS INDUSTRIES :
D. CALLEIA, INC., d/b/a :
TANKS-A-LOT :
CHEMICAL MANAGEMENT, INC. :
CONSOLIDATED RAIL CORPORATION :
CONTINENTAL CAN COMPANY, INC. :
DEPALMA OIL COMPANY :
EASTERN OIL SERVICE :
EXIDE CORPORATION :
FILMAR TANK & MACHINE COMPANY, :
LTD. :
KEN'S MARINE SERVICE :
LARRY'S WASTE OIL SERVICE :
LOEFFEL'S WASTE OIL SERVICE :
LUZON OIL CO., INC. :
McALLISTER BROTHERS, INC. :
MIDDLETOWN PUBLIC SCHOOL :
NED'S WASTE OIL SERVICE :
ROBERT MORE WASTE OIL SERVICE :
NEW ENGLAND MARINE CONTRACTORS, :
INC. :
NORTHEAST OIL SERVICE :
PEABODY INTERNATIONAL CORP. :
PETROLEUM TANK CLEANING :
POWER/MATE CORP. :

FINDINGS OF FACT,
DETERMINATION AND ORDER

RA-MAR CORPORATION :
 REFINE-MET INTERNATIONAL CO., :
 as successor to AG-MET :
 REFINING CO. :
 SARGE OIL CO. :
 S & M WASTE OIL, INC. :
 STATE FAYETTE GARDENS :
 STOKES MOLDED PRODUCTS :
 STUYVESANT FUEL SERVICE CORP. :
 SUNRISE OIL CO. :
 TEXACO INC. :
 THE LANDSDELL COMPANY :
 THE PREAKNESS HOSPITAL :
 TOTAL RECOVERY, INC. :
 TURBO PRODUCTS INTERNATIONAL :
 INCORPORATED and :
 WITCO CHEMICAL CORPORATION, :

Respondents. :

Proceeding Pursuant to §106 :
 of the Comprehensive Environ- :
 mental Response, Compensation :
 and Liability Act, 42 U.S.C. :
 §9606 :

JURISDICTION

This Administrative Order (Order) is issued by the United States Environmental Protection Agency (EPA) pursuant to the authority vested in the President of the United States by §106(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), 42 U.S.C. §9606(a), which authority was delegated to the Administrator of EPA by Executive Order 12316, 46 Fed. Reg. 42237 (August 20, 1981), and duly redelegated to the Regional Administrator, EPA Region II on March 17, 1983. Pursuant to that authority, EPA hereby makes the following Findings and Determination and issues the following Order. Pursuant to §106(a) of CERCLA, the State of New Jersey Department of Environmental Protection (NJDEP) has been notified of this Order.

FINDINGS

1. Each Respondent is a person, as defined in §101(21) of CERCLA, 42 U.S.C. §9601(21), and is either an owner or operator of the facility which is the subject of this Order, a generator or transporter of hazardous substances disposed of and remaining at the facility which is the subject of this Order, or otherwise a potentially responsible party under Sections 107(a)(1), (2), (3) or (4) of CERCLA, 42 U.S.C. §§9607(a)(1), (2), (3) or (4).

2. The hazardous substances referred to in this Order shall mean any substances meeting the definition of "Hazardous Substance" as defined in §101(14) of CERCLA, 42 U.S.C. §9601(14).

3. The facility which is the subject matter of this Order (hereinafter, "the facility" or "the site"), which has come to be known variously as the "Quanta Resources" facility, the "One River Road" facility, or the "Edgewater Terminal", is located at One River Road, Edgewater, New Jersey. The property, located in the Borough of Edgewater, County of Bergen, comprises Block 95, Lots 1, 2, and 3, on the Tax Map of the Borough of Edgewater. The Hudson River forms the eastern boundary of the property, which lies at a point approximately parallel to West 93rd Street, Manhattan. It is further bordered by the Celotex Industrial Park property on the north, an industrial facility on the south, and a railroad right of way and River Road, a primary commercial thoroughfare, to the west.

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4. The site is adjacent to commercial facilities which process, or are otherwise engaged in the handling of, food intended for human consumption. River Road carries a continual stream of both commercial and non-commercial vehicular traffic. A portion of the New Jersey Palisades, which rises 500 yards to the west of the property, contains residential housing, including several high-rise condominium residences. The segment of the Hudson River bordering the facility to the east carries both commercial and pleasure traffic throughout the year.

5. If certain of the hazardous substances stored at the site were to be released to the environment, under certain conditions (e.g., fire), winds traveling west over the property (in a direction opposite to the direction of prevailing winds at the site) could carry airborne emissions of hazardous substances from the property into the surrounding area. Winds traveling east over the property could carry airborne emissions off the site.

6. Beginning at some time in the 1930s, the Barrett Division of Allied Chemical Corporation (now Allied Corporation, hereinafter, "Allied") commenced operations at the site.

7. Allied conducted coal tar processing operations at the facility for several decades thereafter. In or about March 1974, Respondents JAMES FROLA (FROLA) and ALBERT VON DOHLN (VON DOHLN) purchased the facility from Allied.

8. In or about May 1977, Frola and Von Dohln leased the facility to E. R. P. Corporation (ERP). The lease specified that the property was to be utilized for the storage of oil and recycling of oil. At a time after May 1977, ERP assigned its lease to Edgewater Terminals, Inc., which, on or about July 29, 1980 re-assigned the lease to Quanta Resources Corporation (QRC). QRC was a wholly owned subsidiary of Quanta Holding Corp., which, in turn, was a wholly owned subsidiary of Waste Recovery, Inc. Waste Recovery, Inc. was a wholly owned subsidiary of A. G. Becker Paribas, Incorporated (formerly Warburg-Paribas-Becker, Inc.).

9. On or about August 6, 1980 QRC entered into an administrative consent order with the New Jersey Department of Environmental Protection (NJDEP). The consent order required QRC to perform environmental cleanup activities at the site and to operate thereafter only in conformance with enumerated State laws and regulations. Specifically, the activities which could be legally conducted at the site, and types of wastes which could be legally accepted by the operation at the facility, was limited to storage, reprocessing, reclaiming, and recovery of special wastes consisting of waste oil, oil emulsions, and oil sludges. Acceptance of polychlorinated

biphenyls (PCBs) was completely prohibited. The August 6, 1980 NJDEP order was superseded by another NJDEP consent order with Respondent QRC dated May 29, 1981 and a Temporary Operating Authorization (TOA) also dated May 29, 1981.

10. Hudson Oil Refining Corporation, Newtown Oil, Polar Industries, Inc., Casco Equipment Corporation and Oil Transfer Corporation offered to the public waste collection, transportation, and disposal services utilizing the tank capacity existing at the site.

11. The substances presently being released and/or posing a threat of release from the facility to the environment have been delivered to the facility, and/or may have been generated, by, or as a result of the arrangements made by, certain of the Respondents.

12. Analyses of samples taken from tanks at the facility on or about June 23, 1981 indicated the presence of PCBs in the liquids in those tanks at concentrations exceeding 50 parts per million. Storage of PCBs constituted a violation of the TOA.

13. At the direction of NJDEP, operations at the facility ceased on July 2, 1981. NJDEP issued a formal order of cessation of operations on October 12, 1981. Six days earlier, on October 6, 1981, QRC filed for reorganization pursuant to Chapter 11 of the Bankruptcy Code, 11 U.S.C. §101 et seq. On November 12, 1981 the Chapter 11 Petition was converted into a Chapter 7 liquidation.

14. The facility contains 61 (SIXTY-ONE) above-ground storage tanks with a storage capacity of approximately 9 million gallons, in addition to approximately 10 underground storage tanks with a capacity of roughly 40,000 gallons. It covers an area of about 15 acres, with a perimeter of approximately 22,000 linear feet. Large quantities of chemically contaminated waste oil, oil sludges, tar, asphalt, process water, and as yet uncharacterized liquid chemicals have been abandoned in tanks at the site. In addition to the bulk liquids stored at the site, about 50 drums containing oils, sludges, contaminated absorbent materials, debris, and uncharacterized materials are staged at primarily three locations within the facility.

15. As a result of the long period of active operations at the site, soils at the site have become contaminated with asphaltic materials and with oils containing hazardous substances and chemicals, some of which may have been released from their containments during spills which occurred at the facility after its cessation of operations.

16. Large deposits of tar and asphalt have been identified in the soils of that part of the facility nearest the Hudson River, and the surface of the shallow portion of the Hudson River which borders on the facility is continually covered with a thick layer of weathered oily sludge attributable, at least in part, to discharges and releases from the facility.

17. As of March 29, 1985, there existed at least 750,000 gallons of chemically contaminated oil within the tanks at the facility. Oil in many of the facility's tanks has been identified as contaminated with PCBs in concentrations from 50 to 260 ppm. Approximately 266,000 gallons of oil have been found to be contaminated with PCBs near or above the level of 50 ppm.

18. As of March 29, 1985, a number of tanks at the facility contained hydrocarbons with flash points of approximately 140° F., and one tank contained 50,000 gallons of liquid hydrocarbon with a flash point of 125° F. Internal tank temperatures during summer weather can be expected to reach or exceed the flash point of the liquids in these tanks.

19. Hazardous substances consisting of volatile hydrocarbons including benzene, toluene, trichloroethane, ethyl benzene, and phenol have been identified in samples of oil taken at the facility.

20. As of March 29, 1985, approximately 4.2 million gallons of chemically contaminated aqueous liquids had been found to be abandoned at the facility. Analyses of portions of these wastes have indicated Chemical Oxygen Demand (COD) and Total Organic Carbon (TOC) concentrations as high as 150,000 ppm and 54,000 ppm, respectively. Levels of cyanide as high as 10 ppm and of lead as high as 59 ppm have been identified upon analysis of the water phase of the contents of tanks at the facility, in addition to chloroform and anthracene.

21. The hazardous substances comprising chemical contaminants of the liquids referenced in Paragraph 20, supra, including but not limited to benzene, cyanide, toluene, phenol, and PCBs, are considered to have high toxicity.

22. As of March 29, 1985, significant amounts of contaminated sludges had been abandoned at the facility. It was estimated that on that date, the site stored approximately 500,000 gallons of such contaminated sludges.

23. EPA has conducted limited air monitoring at the site. Organic Vapor Analyzer (OVA) readings of over 400 ppm have been obtained while measuring vapors released from liquids being pumped from storage tanks during December 1982. Positive tests for benzene and phenol in air have been obtained using Draeger tubes and Lomotte Sampling Kits.

24. Among the hazardous substances listed above, PCBs, benzene, cyanide and lead, inter alia, have been determined by EPA to cause adverse human health effects.

25. Certain hazardous substances found at the site, if released to the environment in a manner providing vectors of exposure to the general public, could be responsible for adverse human health effects from ingestion, inhalation, or direct contact.

26. Wastes detected in analyses of samples taken from tanks at the facility indicate a potential fire hazard due to the low flashpoint of the constituents of those wastes.

27. A fire at the facility involving some of the substances listed in paragraph 21, supra, could result in creation of toxic by-products including, but not limited to, chlorinated dibenzofurans and dioxins from the burning of PCBs. One such chlorinated dioxin is tetrachlorodibenzodioxin, one of the most acutely toxic substances known.

28. A federal Centers for Disease Control (CDC) representative visited the facility on March 15, 1985 and determined that the facility constitutes a significant hazard and threat to public health. The CDC has recommended immediate removal from the facility of those highly toxic materials found at the site.

29. A release of hazardous substances from the property traveling west could reach River Road. A release of hazardous substances from the property traveling east could enter the Hudson River. A sudden spill (e.g., from transfer equipment failure or from failure of deteriorating containment structures) could travel west from the site toward River Road and an active industrial railroad spur. In the event of a spill reaching River Road, vehicular traffic, if not diverted, could spread contamination from the site over additional portions of River Road or other public thoroughfares in the Edge-water area. A spill from the site traveling east could travel directly to the Hudson River either through underground piping and drain systems on the site or through storm drain lines located on the property immediately to the south of the site.

30. The present owners of the facility, James Frola and Albert Von Dohn, hired a contractor in the fall of 1982. From that time until the summer of 1983, the contractor attended to small spills at the facility, maintained a containment boom along the eastern property boundary with the Hudson River, dismantled sections of transfer piping, installed emergency clay diking, constructed an overland discharge line from the facility oil-water separator to the Hudson River, and arranged

for the disposal of 200,000 gallons of contaminated aqueous solution from a leaking tank. 776,000 gallons of oil were removed from the facility and sold during that time. No major cleanup or stabilization of the site was achieved, however, and no steps were taken to eliminate the occurrence of releases and the threat of releases from the facility to the environment or to abate the existence of a threat posed by the facility to the public health, welfare, or the environment.

31. In November 1983 the property owners entered into an administrative consent order with NJDEP. That order detailed steps required for a cleanup of the site. The requirements of that order were not satisfied, and the property owners remain in violation of that order.

32. In or about July 1984, EPA commenced an action pursuant to 40 C.F.R. Part 112 against certain alleged owners and operators of the site, including some Respondents to this Order, for failure of the facility to have prepared, maintained, and implemented a Spill Prevention Control and Countermeasure (SPCC) Plan. The deficiencies noted in that administrative action were not corrected, and that action, including the matter of a proposed penalty of \$200,000, remains unresolved.

33. During the period September 1984 until March 1985, EPA, the owners of the facility, and representatives of some of the Respondents, attempted to negotiate a plan to initiate cleanup of the facility. The interests with whom EPA was negotiating failed to come forward with such a plan.

34. On April 3, 1985, following a written notification to the then identified potentially responsible parties which failed to secure a binding commitment of private parties to perform a removal action at the facility, EPA commenced performance of an Immediate Removal Action at the facility pursuant to 42 U.S.C. §9604 and 40 C.F.R. §300.65.

35. On September 30, 1985, EPA executed with Allied a Consent Order pursuant to 42 U.S.C. §9606. Under the terms of that Order, Index No. II-CERCLA-50108, Allied, following the occurrence of certain conditions precedent, will perform the uncompleted elements of a Removal Action at the facility, with the exception of those actions enumerated in the Scope of Work attached to this Order. Work to be performed by Allied will be funded in part by Allied and in part by other cooperating responsible parties, whose names appear on Attachment B hereto. EPA has agreed to enter into a Covenant Not To Sue with these cooperating responsible parties concerning the site as a result of their agreement to partially fund Allied's performance of the aforesaid Consent Order. Hereinafter, these responsible parties are collectively known as the "Settling Parties."

36. EPA has determined that the release of material containing hazardous substances from the facility into the environment constitutes a release of hazardous substances from a facility to the environment.

37. Hazardous substances, pollutants, and contaminants threaten to continue to be released from the facility into the environment absent the taking of appropriate actions at the facility.

38. The continued releases and threatened releases of hazardous substances, pollutants, and contaminants from the facility to the environment presents an imminent and substantial endangerment to the public health, welfare and the environment. EPA believes that corrective actions, as contemplated by §§300.65 and 300.67 of the NCP, are appropriate at the facility to prevent and/or mitigate immediate and significant risk of harm to human health and/or the environment.

DETERMINATION

Based upon the FINDINGS set forth above and the entire administrative record, EPA has determined that the release and threat of release of hazardous substances to the environment from the facility may present an imminent and substantial endangerment to the public health, welfare, and the environment within the meaning of §106(a) of CERCLA, 42 U.S.C. §9606(a).

ORDER

Based upon the foregoing FINDINGS and DETERMINATION, IT IS HEREBY ORDERED that Respondents take certain actions to abate the release and threat of release of hazardous substances, pollutants, and contaminants at and from the facility into the environment. Elements of a Removal Program, as set forth in greater detail in Attachment A hereto, must be implemented at the facility. The Work Plan resulting from Attachment A shall be deemed incorporated herein and made a part hereof.

In carrying out any and all activities required of Respondents under the terms of this Order, Respondents shall fully participate in the efforts of, and cooperate with, the Settling Parties, and shall take no action inconsistent with the actions being taken by Allied and by the Settling Parties through Allied, in furtherance of Allied's compliance with the

terms of EPA Order Index No. II-CERCLA-50108. The full participation by a Respondent in the actions to be taken by Allied, including the sharing of any costs incurred in performing the actions required by this Order and by Order Index No. II-CERCLA-50108, shall be deemed compliance by such Respondent with this Order.

IT IS FURTHER ORDERED:

1. Not later than 15 (FIFTEEN) days from the effective date of this Order, Respondents shall select a coordinator, to be known as the Designated Coordinator, and shall submit the name, address, and telephone number of the Designated Coordinator to the EPA On-Scene Coordinator (OSC). The name, address and telephone number of the EPA Region II On-Scene Coordinator is: Mr. John Witkowski, On-Scene Coordinator, Response and Prevention Branch, EPA Region II, Edison, New Jersey 08817, 201-321-6739.
2. Respondents shall implement the Removal Program of which the Scope of Work is set forth in Attachment A hereto pursuant to the schedule contained therein and to be developed thereunder.
3. As appropriate during the course of implementation of the Removal Program at the facility, Respondents or their consultants or contractors, acting through the Designated Coordinator, may confer with the OSC concerning the Removal Program. Based upon new circumstances or new information not in the possession of EPA on the date of this Order, the Designated Coordinator may request in writing the approval of a modification of the Removal Program, as incorporated in Attachment A hereto, from the Director, Emergency and Remedial Response Division, EPA Region II.

Respondents shall provide written notification to EPA of any circumstances which have caused, or which Respondents believe are likely to cause, a delay of performance. Such written notice, which shall be provided as soon as possible after occurrence of the delay or discovery of circumstances which Respondents believe are likely to cause a delay, but in no event later than 10 (TEN) days after the date when Respondents knew of the occurrence of such circumstances, shall be accompanied by such documentation as may be specified by the OSC, including, if required by the OSC, a plan of action taken, or to be taken, by Respondents to minimize any delay and a projection of the date(s) on which delayed activities will be completed.

If approved by the Director, Emergency and Remedial Response Division, such modification shall be implemented immediately by Respondents and shall also be deemed a modification of this Order.

4. In the event of an inability or anticipated inability of Respondents to perform any of the activities required by the Removal Program, the Designated Coordinator shall immediately inform the OSC of the reason for, and date and length of, any anticipated inability to perform, and the actions taken or to be taken by Respondents, or any of them, to avoid or mitigate the impact of such inability to perform, including the proposed schedule for such actions. Neither notification pursuant to this Paragraph, nor notification pursuant to Paragraph 3 of this Order, supra, shall itself relieve Respondents of any obligation to comply with the provisions of this Order.

5. In the event of a significant change in conditions at the facility, the Designated Coordinator shall notify the OSC immediately at the following emergency telephone numbers: 201-548-8730 or 201-321-6670. Until the OSC provides direction, Respondents may, at their discretion, take reasonable measures under the circumstances. Respondents shall remain liable for any adverse consequences of such measures. In the event the OSC determines that the activities under the Removal Program, or significant changes in conditions at the facility, pose a substantial threat of immediate and significant risk of harm to human life or health or the environment, EPA may order Respondents to stop further implementation of the Removal Program or to take other and further actions reasonably necessary to abate the emergency. This provision is not by way of limitation to any rights EPA may have under §§300.65 or 300.67 of the NCP or any other applicable provision of the NCP, or under any other applicable law or regulation.

6. EPA acknowledges that the work specified by and set forth in Attachment A is consistent with the National Contingency Plan, and will certify the work, if properly performed, as having been performed consistently with the NCP. All actions and activities carried out by Respondents pursuant to this Order shall be done in accordance with all applicable federal, State, and local laws, regulations and requirements and with applicable provisions of the NCP.

7. Failure of the Respondents to expeditiously and completely carry out the terms of this Order may result in EPA taking the required actions unilaterally, pursuant to §104(a)(1) of CERCLA, 42 U.S.C. §9604(a)(1). Should such unilateral action become necessary, Respondents may be held liable for 4 (FOUR) times the cost of such actions to the United States pursuant to 42 U.S.C. §§9607(a) and 9607(c)(3).

8. Respondents' Designated Coordinator shall provide written weekly progress reports to EPA with respect to all actions and activities undertaken pursuant to this Order. All submittals, deliverables, and notifications to EPA pursuant to this Order shall be made to the OSC and, in triplicate, to the Chief, Site Investigation and Compliance Branch, Emergency and Remedial Response Division, ATTN: Quanta Project Coordinator, unless otherwise provided herein.

9. Respondents shall assure that with respect to any premises, other than the facility, which any Respondent or its contractor or consultant may use in connection with implementation of this Order, unimpeded access to such premises shall be provided to EPA and to EPA's duly authorized employees, contractors, and consultants.

Any contract between a Respondent and a third party, or between two or more Respondents, for removal and/or disposal of waste from the facility or for performance of laboratory analytical work shall provide for unimpeded EPA access to either a waste storage or disposal site used in connection with such removal and/or disposal of wastes from the site or an analytical laboratory used to perform work in connection with implementation of the Removal Program.

10. Employees of EPA shall have full access to all technical records and contractual documents maintained or created by Respondents or their contractors in connection with implementation of the Removal Program.

11. With respect to all chemical analyses and all disposal operations conducted in compliance with this Order, the complying Respondent(s) shall provide the OSC with the identity of and, if applicable, licensing identification numbers of (e.g., with respect to waste haulers or disposal facilities) all persons or entities performing such work within 2 (TWO) working days of selection of such persons, companies, or facilities, for purposes of establishing that all such activities have been performed in accordance with EPA approved methodology and that all wastes ultimately disposed are disposed at EPA-approved hazardous waste disposal facilities.

12. All removal work performed pursuant to this Order shall be performed under the direction and supervision of one or more registered or otherwise appropriately licensed professional engineers, geologists, or hydrologists, as appropriate to the task being performed.

13. All chemical analyses shall conform to EPA Quality Assurance/Quality Control procedures and shall conform with Sections 10 and 1.3, respectively, of the EPA publications entitled "Test Methods for Evaluating Solid Waste" (SW-846) and "Guidance for Preparation of Combined Work/Quality Assurance Project Plans for Water Monitoring."

14. Upon request by the OSC, Respondents and/or their contractors shall provide split samples of any material sampled in connection with implementation of the Removal Program.

15. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or any of them, or Respondents' employees, agents, contractors, or consultants, in carrying out any action or activity pursuant to this Order, nor shall the United States be held as a party to any contract entered into by Respondents, or any of them, or by their officers, employees, agents, contractors, or consultants in carrying out any action or activity pursuant to this Order.

16. Nothing contained in this Order shall affect any right, claim, interest, defense, or cause of action of any party hereto with respect to third parties, which parties are not Respondents to this Order, or with respect to any other persons whom EPA has notified are deemed potentially responsible parties in relation to the facility.

17. Respondents shall use their best efforts to avoid or minimize any delay or prevention of performance of their obligations under this Order.

18. Violation of this Order as a result of Respondents' failure to comply with any provision herein shall be enforceable pursuant to §§106(b) and 113(b) of CERCLA, 42 U.S.C. §§9606(b) and 9613(b). Respondents may also be subject to cost recovery by the United States, civil penalties and/or punitive damages as provided in §§106(b), 107(a), and 107(c)(3) of CERCLA, 42 U.S.C. §§9606(b), 9607(a), and 9607(c)(3), for failure to comply with the terms of this Order. Nothing herein shall preclude EPA from taking such additional actions as may be necessary to prevent or abate an imminent and substantial danger to the public health, welfare or the environment arising from conditions at the facility and recovering the costs thereof, nor shall anything herein preclude NJDEP from taking legal action pursuant to State law.

19. Respondents will be held liable for all response and oversight costs incurred by the United States in connection with the site prior to 12:01 a.m. June 15, 1985, as well as for all enforcement costs incurred in connection with the site. Respondents may also be liable to other responsible parties or to the United States for some or all costs incurred on and after 12:01 a.m. June 15, 1985. Upon Respondents' failure to carry out the requirements of this Order, Respondents shall be liable for any costs incurred by the United States in connection with necessary response actions resulting from such failure, and such costs shall be subject to collection by the United States in an action commenced pursuant to §107 of CERCLA, 42 U.S.C. §9607.

20. Following Respondents' completion of the requirements of this Order, Respondents may apply to the Director, Emergency and Remedial Response Division, EPA Region II, for a determination and acknowledgment that the requirements of this Order, including all requirements of Attachment A hereto, have been completed in compliance with the requirements of this Order and in compliance with the NCP. Said Director's determination, and, if appropriate, acknowledgment, on Respondents' application will be issued within 60 (SIXTY) days of receipt of Respondents' application.

The provisions of this paragraph do not release Respondents, or any of them, from liability for the performance of acts, or the payment of money, which may arise as a result of conditions at the site relating to surficial pollution or contamination, or releases or threatened releases to the environment resulting therefrom, which conditions were unknown or undetected at the facility on the effective date of this Order, with respect to any surficial site condition posing an imminent and substantial endangerment to the public health, welfare, or the environment which may occur or arise at the facility on or after the effective date of this Order, or where additional information unavailable on the effective date of this Order indicates that conditions at the facility, regardless of compliance with the terms of this Order, may pose an imminent and substantial endangerment to the public health, welfare or the environment.

Nothing in this Order shall be deemed to release, discharge, or otherwise relieve Respondents from the obligation to perform such further or additional response actions or activities at the facility (other than the activities performed in furtherance of Attachment A), or such other response actions as may be required, whether at the facility or elsewhere, as a result of the generation, storage, handling, transportation, treatment, or disposal of hazardous substances, pollutants or contaminants resulting from the performance of the Removal Action conducted pursuant to Attachment A, as may be deemed necessary pursuant to CERCLA or other applicable laws.

Nothing in this Order shall be deemed a release of Respondent with respect to claims by the United States or any State for natural resources damages attributable to the ownership, operation or use of the facility, or releases to the environment from the facility.

Except as otherwise provided in this paragraph, nothing in this Order shall be deemed to release, discharge, or otherwise relieve Respondents from liability for the payment of money to EPA or to the United States pursuant to 42 U.S.C. §9607 or other federal laws for costs incurred by the EPA or the United States as a result of performance of, or involvement by the United States in, actions or activities taken in connection with the facility.

21. This Order shall apply to and be binding upon Respondents and Respondents' officers, directors, employees, agents, servants, receivers, trustees, successors, and assignees and upon all persons, including but not limited to firms, corporations, subsidiaries, contractors, and consultants, acting under or for Respondents.

22. This Order shall be effective at 12:01 a.m. on November 12, 1985. All times for performance of actions or activities to be performed under this Order shall be calculated from the effective date, except as elsewhere provided to the contrary and except as such dates may be inconsistent with dates for performance of actions identical to actions required to be performed by Allied in EPA Order Index No. II-CERCLA-50108, which dates shall control.

23. A conference will be held at 10 a.m. on October 28, 1985 in Room 238 at 26 Federal Plaza, New York, New York to discuss this Order, including its applicability, the Findings upon which the Order is based, the appropriateness of any action or activity required to be undertaken herein, or any other issues or contentions directly relevant to the issuance of this Order which any Respondent may have regarding this Order. Such conference is not, and shall not be deemed to be, an adversary proceeding or part of a proceeding to challenge this Order, and no official or unofficial stenographic record, or other recording of such proceeding, shall be kept or permitted. Any Respondent may appear at such conference in person or through an officer, attorney-in-fact, engineer, environmental consultant, or other designated representative. All attendees will be required to complete a sign-in form.

Any communication concerning this Order shall be directed to Mr. Henry Gluckstern, Assistant Regional Counsel, Office of Regional Counsel, United States Environmental Protection Agency, Region II, 26 Federal Plaza, Room 437, New York, New York 10278, telephone (212) 264-4430.



CHRISTOPHER J. DAGGETT
Regional Administrator
U.S. Environmental Protection Agency
Region II

OCTOBER 16, 1985
DATE

ATTACHMENT ASCOPE OF WORK TO BE PERFORMED BY RESPONDENTS
IN THE IMPLEMENTATION OF THE REMOVAL PROGRAM

All activities to be performed by Respondents shall be coordinated through the Designated Coordinator of Allied Corporation (Allied), as that Designated Coordinator was established under EPA Order Index No. II-CERCLA-50108, so as to assure that Respondents' actions shall not interfere with Allied's performance of the requirements of that Order.

The detailed scope of work to be performed by Respondents in implementing/performing the activities in this Unilateral Order under the Removal Program at the facility is set forth below.

Development of Detailed Workplan

Within 30 (THIRTY) days of the effective date of this Order, Respondents shall submit the first draft of a detailed Work Plan to address the tasks described below. The detailed Work Plan shall include, but not necessarily be limited to, the following:

- a. a detailed time schedule for performance of the specific tasks set forth in this Order and in this Scope of Work, and a detailed description of how these tasks will be accomplished;
- b. an overall Site Operations Plan for performance of tasks specified in this Order, including identification (or provision for later advance identification) of contractors and subcontractors, and specification of such contractors' and subcontractors' respective responsibilities;
- c. a Health and Safety Plan;
- d. a contingency plan for conducting site activities.

Sampling and Analysis of Waste

A sampling and analysis plan shall be developed by the respondents in consultation with the OSC. The plan shall provide for sampling of soils at and around the facility, oily waste from the surface of the Hudson River inside the boomed area, Hudson River sediments, the contents of tanks D-29 and

D-30 (unless otherwise specified by Allied's Designated Coordinator) and the contents of all underground tanks identified by Allied (unless otherwise specified by Allied's Designated Coordinator). Additional samples shall be taken and analyses performed, from time-to-time, as may be designated by the OSC. All samples except air samples shall be analyzed for Priority Pollutants, unless otherwise indicated by the OSC. Unless otherwise provided herein, all samples shall be taken within 30 (THIRTY) days of the date of this Order. Sampling results shall be reported to EPA within 30 days of the date of sampling. EPA shall be provided with splits of any samples taken, at the option of the OSC. Forty-eight hours minimum advance notice shall be provided to the OSC that a sampling episode is to occur.

Hudson River sediments shall be sampled along an area extending 500 (FIVE HUNDRED) feet north and south of the facility, and 300 (THREE HUNDRED) feet east of the facility. Samples shall be collected on a grid with a maximum distance between centers of 100 (ONE HUNDRED) feet. Sample cores shall be taken to a depth at which no visual contamination exists. The depth and location of each core shall be noted.

Quarterly air monitoring shall be performed to determine air quality at and adjacent to the site. The first monitoring shall occur within 60 (SIXTY) days of the effective date of this Order. A minimum of 4 (FOUR) samples shall be taken along the perimeter of the facility, and a minimum of 1 (ONE) sample shall be taken within the A and D tank farms, respectively, unless the OSC determines that additional samples shall be taken or additional locations monitored. At a minimum, the following characteristics shall be analyzed and quantified:

coal tar derivatives
toluene
cyanides

benzene and its compounds
phenols

Waste Removal/Disposal

Any materials required to be removed from or disposed of from the site which Respondents determine can not be utilized as a source of energy or recycled as product in accordance with all applicable federal, state, and local laws and regulations shall be removed from the site and disposed of at appropriate waste disposal facilities in accordance with the then applicable EPA Off-Site Removal Policy (i.e., the Policy as of the date on which a particular shipment physically leaves the facility).

All material removed from the facility as a hazardous waste shall be handled and manifested accordingly.

Boom Deployment/Oil Collection

The containment boom currently installed along the Hudson River shall be maintained as necessary to prevent discharge of oil to the Hudson River. The boom shall be maintained so as to contain waste oil escaping from the facility to the Hudson River in as narrow an area immediately adjacent to the property as possible. Contained oils shall be removed during every tidal cycle and disposed of properly. A filter box or sorbent pads may be placed perpendicular to the bulkhead to absorb oil moving parallel to the bulkhead at the approach of low tide. The filter box shall be maintained, and/or the sorbent pads replaced, as necessary.

Removal of Tanks D-29 and D-30

After consultation with Allied's Designated Coordinator, Respondents shall clean and remove from the site tanks D-29 and D-30, which are adjacent to the Hudson River. Allied may, at its option, clean and/or remove said tanks, in which event Respondents shall be deemed relieved of liability for such removal under this Order. Allied's removal of said tanks shall not relieve Respondents of any liability they may have to Allied under applicable law to compensate Allied for its costs in performing such removal. All waste, including the tanks, shall be disposed of as set forth above.

Repair and Maintenance of Facility Fire Protection System

Respondents shall provide a minimum of 5 (FIVE) working fire hydrants within the facility. A sufficient quantity of fire hose shall be provided and distributed within the facility to reach any location within the site. Fog nozzles shall be provided for each hose. Respondents shall also maintain a minimum of 250 gallons of foam at the site in a vehicle or vehicles moveable to any location at the site without the use of mechanized equipment.

Decommissioning of Tanks

After consultation with Allied's Designated Coordinator, all above and below ground tanks, including tanks adjacent to the River and on both sides of the facility perimeter dike, shall be emptied, cleaned, and decommissioned. Decommissioning shall include placing holes in the bottom of each tank so that any liquid which enters the tank will not collect in the tank. Allied may, at its option, perform such decommissioning, in which event Respondents shall be deemed relieved of liability

for decommissioning under this Order. Allied's performance of decommissioning shall not relieve Respondents of any liability they may have to Allied under applicable law to compensate Allied for its costs in performing decommissioning. All waste created during decommissioning shall be disposed of as set forth above.

Removal of Visibly Contaminated Soil

Respondents shall develop a plan, which must be approved by the OSC, to remove all visibly contaminated soil from the site. The OSC shall determine the extent of soil removal necessary and whether or not replacement with clean soil or regrading of any area of the site is necessary. All contaminated soil shall be disposed of consistent with waste disposal provisions of this Scope of Work.

Records

The following records, at a minimum, shall be created and maintained by Respondents and provided to the OSC at any time upon his request:

- a. days and times of operation of all activities under this Removal Program;
- b. inspection and replacement and/or maintenance dates for deployed sorbent boom and/or filter box;
- c. daily weather records;
- d. daily quantity of aqueous solution removed, specification of tanks from which removed, and destination of all aqueous waste loads removed from the facility. Copies of all manifests with respect to hazardous wastes, and copies of all bills of lading, invoices, and gate receipts with respect to all materials removed from the facility, shall be maintained at the facility;
- e. daily quantity of hydrocarbon removed, specification of tanks from which removed, and destination of all hydrocarbon waste loads removed from the facility. Copies of all manifests with respect to hazardous wastes, and copies of all bills of lading, invoices, and gate receipts with respect to all materials removed from the facility, shall be maintained at the facility;
- f. daily readings for air quality determinations at the facility and location of taking of all such readings;

POTENTIAL HAZARDOUS WASTE
PRELIMINARY ASSESSMENT

FREE COPY

LB 3.2081

NJ 10000606443

280

Edgewater Terminal (aka Quanta)

Site Name

Site ID Number

163 River Road

Edgewater, Bergen Co., NJ

Address

City, State

Date of Off-Site Reconnaissance March 26, 1985

SITE DESCRIPTION

Quanta Resources Corporation purchased the property and assets at 163 River Road, a hazardous waste treatment and storage facility, from Edgewater Terminals in 1979. Quanta Resources operated this site as a recovery, processing and cleaning center for waste lube oils until late 1981 when it was closed after the discovery of 387,000 gallons of PCB-contaminated oil in some of the plant's tanks. Severely contaminated soil was also noted. Quanta Resources filed for bankruptcy in 1982. The site is located along the Hudson River on 10 to 20 feet of permeable fill over a sandstone formation, enabling ground and surface water contamination. In October 1982, the site was scored on the hazardous ranking system.

PRIORITY FOR FURTHER ACTION: High Medium Low None

RECOMMENDATIONS

No action is recommended for Edgewater Terminal (alias Quanta Resources) since the site was scored on the Hazardous Ranking System in 1982. The site should be removed from the list of sites in need of remediation. Action has been taken to correct deficiencies and clean up any spills. Raw scores derived from the ranking are: Sm=12.61 Sgw=0 Ssw=21.82 Sa=0 Sfe=0 Sdc=66.67.

Prepared by: Nicholas C. Rotonda

Date: March 30, 1985

Of: Yurasek Associates



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

I. IDENTIFICATION	
01 STATE NJ	02 SITE NUMBER 280

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Edgewater Terminal (aka Quanta Res)		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 163 River Road			
03 CITY Edgewater		04 STATE NJ	05 ZIP CODE 07020	06 COUNTY Bergen	07 COUNTY CODE
09 COORDINATES LATITUDE 40 48 18.5		LONGITUDE 73 59 28.3		BLOCK 95 LOT 1,2,3	

10 DIRECTIONS TO SITE (Starting from nearest public road) Route 46 east to Grand Avenue Exit (Route 93). Take Rt. 93 south to Edgewater Avenue, make left. Make right on Archer Street, go to 163 River Road, approx. 1 mile on left.

III. RESPONSIBLE PARTIES

01 OWNER (if known) Quanta Resources		02 STREET (Business, mailing, residence) 163 River Road			
03 CITY Edgewater		04 STATE NJ	05 ZIP CODE 07020	06 TELEPHONE NUMBER ()	
07 OPERATOR (if known and different from owner)		08 STREET (Business, mailing, residence)			
09 CITY		10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER ()	
13 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A. PRIVATE <input type="checkbox"/> B. FEDERAL <input type="checkbox"/> C. STATE <input type="checkbox"/> D. COUNTY <input type="checkbox"/> E. MUNICIPAL <input type="checkbox"/> F. OTHER _____ (Specify) <input type="checkbox"/> G. UNKNOWN					

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

A. RCRA 3001 DATE RECEIVED: _____ MONTH DAY YEAR B. UNCONTROLLED WASTE (RCRA 103a) DATE RECEIVED: _____ MONTH DAY YEAR C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION <input checked="" type="checkbox"/> YES DATE 10/22/82 <input type="checkbox"/> NO		BY (Check all that apply) <input type="checkbox"/> A. EPA <input type="checkbox"/> B. EPA CONTRACTOR <input checked="" type="checkbox"/> C. STATE <input type="checkbox"/> D. OTHER CONTRACTOR <input type="checkbox"/> E. LOCAL HEALTH OFFICIAL <input type="checkbox"/> F. OTHER _____ (Specify)			
CONTRACTOR NAME(S)					
02 SITE STATUS (Check one) <input type="checkbox"/> A. ACTIVE <input checked="" type="checkbox"/> B. INACTIVE <input type="checkbox"/> C. UNKNOWN		03 YEARS OF OPERATION BEGINNING YEAR 1930 ENDING YEAR 1981 <input type="checkbox"/> UNKNOWN			

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Hydrocarbons including benzene, toluene, trichloroethene, ethyl benzene, phenol and cyanide along with large quantities of PCB-contaminated oil wastes exist on-site. (Attachments D,F)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Since site is located along the Hudson River on permeable fill and sandstone, there is a high potential for contamination of soil, ground water, and surface water.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Site Information and Part 3 - Description of Hazardous Conditions and Incidents)
 A. HIGH (Inspection required promptly) B. MEDIUM (Inspection required) C. LOW (Inspection on time available basis) D. NONE (No further work needed, complete current assessment form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT Fred Schmitt		02 OF (Agency/Organization) NJDEP/BEERA		03 TELEPHONE NUMBER (609)-292121	
04 PERSON RESPONSIBLE FOR ASSESSMENT Nicholas C. Rotonda		05 AGENCY	06 ORGANIZATION Yurasek Ass.	07 TELEPHONE NUMBER (201)-3277404	08 DATE 3/30/85 MONTH DAY YEAR



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION	
01 STATE NJ	02 SITE NUMBER 280

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

<input type="checkbox"/> A. SOLID	<input type="checkbox"/> E. SLURRY
<input type="checkbox"/> B. POWDER, FINES	<input type="checkbox"/> F. LIQUID
<input type="checkbox"/> C. SLUDGE	<input type="checkbox"/> G. GAS
<input type="checkbox"/> D. OTHER	(Specify)

02 WASTE QUANTITY AT SITE
(The sum of waste quantities must be reconciled)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS (Check all that apply)

<input type="checkbox"/> A. TOXIC	<input type="checkbox"/> E. SOLUBLE	<input type="checkbox"/> I. HIGHLY VOLATILE
<input type="checkbox"/> B. CORROSIVE	<input type="checkbox"/> F. INFECTIOUS	<input type="checkbox"/> J. EXPLOSIVE
<input type="checkbox"/> C. RADIOACTIVE	<input type="checkbox"/> G. FLAMMABLE	<input type="checkbox"/> K. REACTIVE
<input type="checkbox"/> D. PERSISTENT	<input type="checkbox"/> H. IGNITABLE	<input type="checkbox"/> L. INCOMPATIBLE
		<input type="checkbox"/> 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 cited 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, sample analysis, reports)



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

1. IDENTIFICATION	
01 STATE NJ	02 SITE NUMBER 280

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 <input type="checkbox"/> A. GROUNDWATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> B. SURFACE WATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> C. CONTAMINATION OF AIR	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> D. FIRE/EXPLOSIVE CONDITIONS	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> E. DIRECT CONTACT	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> F. CONTAMINATION OF SOIL	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ <i>(Area)</i>		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> G. DRINKING WATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> H. WORKER EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	
01 <input type="checkbox"/> I. POPULATION EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____		04 NARRATIVE DESCRIPTION	



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

I. IDENTIFICATION	
01 STATE NJ	02 SITE NUMBER 280

II. HAZARDOUS CONDITIONS AND INCIDENTS *(See attached)*

01 <input type="checkbox"/> J. DAMAGE TO FLORA 04 NARRATIVE DESCRIPTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> K. DAMAGE TO FAUNA 04 NARRATIVE DESCRIPTION <i>(Include comments if occurs)</i>	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> L. CONTAMINATION OF FOOD CHAIN 04 NARRATIVE DESCRIPTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> M. UNSTABLE CONTAINMENT OF WASTES <i>(Spills / Leaks / Standing liquids / Leaking drums)</i> 03 POPULATION POTENTIALLY AFFECTED: _____	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> N. DAMAGE TO OFFSITE PROPERTY 04 NARRATIVE DESCRIPTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs 04 NARRATIVE DESCRIPTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
01 <input type="checkbox"/> P. ILLEGAL/UNAUTHORIZED DUMPING 04 NARRATIVE DESCRIPTION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS			

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

No action is recommended for Edgewater Terminal (aka Quanta Resources) since site was scored on the Hazardous Ranking System in 1982. Action has been taken to correct deficiencies and clean up any spills. (Attachment I)

V. SOURCES OF INFORMATION *(Cite specific references, e.g. STRO files, SOGAP analysis, reports)*

NJDEF/HSMA and USEPA Files: Attachments A through I



QUANTA RESOURCES
 (C) EDGEMATER TERMINAL

QUAD CENTRAL PARK, NY
 SITE 280

LAT 40° 49' 18.5" LONG 073° 59' 28.3"

State of New Jersey

5/29/81

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENVIRONMENTAL QUALITY
SOLID WASTE ADMINISTRATION
32 EAST HANOVER STREET, TRENTON, N. J. 08625

LB 3.2087

JACK STANTON
DIRECTOR

LINO F. PEREIRA
ADMINISTRATOR
SOLID WASTE MANAGEMENT

(IN THE MATTER OF)
(QUANTA RESOURCES CORPORATION)

ADMINISTRATIVE CONSENT ORDER

The following ADMINISTRATIVE CONSENT ORDER is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "the Department") and duly delegated to the Assistant Director for Enforcement, Division of Environmental Quality, pursuant to her authority under the Solid Waste Management Act, N.J.S.A. 17:27-1 et seq.

FINDINGS

1. Quanta Resources Corporation (hereinafter "the Corporation") has purchased certain property and assets located at 163 River Road, Borough of Edgewater, County of Bergen, State of New Jersey, being lots 1, 2 and 3, Block 95 on the tax map of Edgewater Borough. This property was the site of a hazardous waste treatment and storage facility formerly operated by Edgewater Terminals pursuant to a Temporary Operating Authorization (hereinafter "TOA" issued by the Department on December 28, 1979.
2. Officials of the Department's Bureau of Hazardous Waste have inspected the above premises and have determined that this hazardous waste treatment and storage facility is continuing to operate on the site. The facility does not have a requisite T.O.A. to operate. Furthermore, it has been found that the facility is in need of maintenance and general clean-up of accumulated materials due to chronic spills and leaks.
3. The Corporation has applied for a T.O.A. representing that the operation of the facility will be conducted in accordance with the terms of the T.O.A. issued on December 28, 1979 to Edgewater Terminals, and manifesting a desire to remedy the above noted conditions present on the site.

ORDER

NOW, THEREFORE, by agreement of the parties, it is hereby ORDERED that the Corporation, its principals, agents, employees, successors, and assigns

New Jersey Is An Equal Opportunity State

ATTACHMENT A A-1

- a) Remove all sludges and other accumulations from ~~the~~ run off trenches by July 1, 1981.
- b) Remove all drums containing waste on site by July 1, 1981.
- c) Remove all sludges and other accumulations from all diked areas of tank farms by March 31, 1982.
- d) Remove all drums and spilled substances from the platform located behind the processing building by July 1, 1981.
- e) Submit a proposal for approval by the Bureau of Hazardous Waste, for the removal of all sludges and accumulations from the approximately nine (9) abandoned tanks on site by July 1, 1981. The tanks have been cut down resulting in the fact that only the bottom and a few feet of side wall remain. The plan shall specify the beginning date of work, method for removal, and the scheduled completion date. The plan shall also detail the proposed disposal of the wastes, including an accurate identification of any and all substances in each tank. The excavation shall include the remaining portions of the actual tank vessel.
- f) Remove all sludges, rusted drums, building rubble and other solid waste from the facility grounds by July 1, 1981.
- g) Dispose of all sludges and other waste materials required to be disposed of under (a) through (f) above in accordance with all applicable state and federal rules and regulations by utilizing a properly registered collector/hauler, properly completed special waste manifest(s) and an authorized hazardous waste disposal facility.

RE: TEMPORARY OPERATING AUTHORIZATION

The attached T.O.A. issued to Quanta Resources Corporation, 163 River Road, Edgewater, New Jersey 07020, is hereby incorporated into this ADMINISTRATIVE CONSENT ORDER by reference as if fully set out herein, and shall be effective as of the effective date of this ORDER. The T.O.A. is issued expressly contingent upon the performance of all the requirements contained in this ORDER by the Corporation; and shall become void, null, and of no effect upon the breach of any of the requirements or conditions contained herein. Upon such a breach, the Department may thereafter revoke the T.O.A. without prior hearing.

FORCE MAJEURE

If any event occurs which purportedly causes or may cause delays in the achievement of any provision of this ADMINISTRATIVE CONSENT ORDER, the Corporation shall notify DEP in writing within five (5) days of the delay or anticipated delay, as appropriate, describing the anticipated length, precise cause or causes, measures taken or to be taken and the time required to minimize the delay. The Corporation shall adopt all reasonably necessary measures to prevent or minimize delay. Failure by

If the delay or anticipated delay has been or will be caused by fire, flood, riot, strike, or other circumstances alleged to be beyond the control of the Corporation, then the time for performance hereunder shall be extended for a period no longer than the delay resulting from such circumstances. However, if the events causing such delay are not found to be beyond the control of the Corporation, failure to comply with the provisions of this ADMINISTRATIVE CONSENT ORDER shall not be excused as herein provided and shall constitute a breach of the ORDER'S requirements. The burden of proving that any delay is caused by circumstances beyond the Corporation's control and the length of such delay attributable to those circumstances shall rest with the Corporation. Increases in the costs or expenses incurred in fulfilling the requirement contained herein shall not be a basis for an extension of time; similarly, delay in an interim requirement shall not justify or excuse delay in the attainment of subsequent requirements.

RESERVATION OF RIGHTS

This ADMINISTRATIVE CONSENT ORDER shall be fully enforceable in the New Jersey Superior Court having jurisdiction over the subject matter and the signatory parties; it shall also constitute an Administrative Order pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and shall not preclude the Department from taking whatever action it deems appropriate to enforce the Solid Waste Management Laws of the State of New Jersey in any manner not inconsistent with the terms of this ADMINISTRATIVE CONSENT ORDER; and shall not prohibit, prevent or otherwise preclude the Department from seeking the remedies available to it by law for the operation of a hazardous waste treatment and storage facility without authorization, upon a determination by the Department that the Corporation has failed to comply with any requirement of this ORDER.

Upon the satisfaction of this ORDER, the Department waives its right to seek the remedies available to it by law for the unauthorized operation of a hazardous waste facility except in accordance with the condition set forth hereinabove; and the Corporation hereby waives its right to a hearing on this ORDER as provided hereinabove.

5/29/81
ATE

[Signature]
Edward J. Londres
Assistant Director

5/29/81
ATE

[Signature]
Signature

Eugene I Prochler
Name (Print or Type)

Chairman of the Board
Title

Throughout the property we noted areas where a tar-like material was coming up through the surface soil.

Examination of observation wells BH #4 located in northeast corner and BH #5 located in the east central part of the property indicates no observable oil when dipped.

Observations conducted within and throughout the "D" tank farm indicates saturated and contaminated soil conditions. Mr. Mansfield noted that this area and tanks are not in use. Oil/water/sludge puddles in this area are numerous.

Examination of the oil/water separator indicates that absorbent materials in last section to be saturated and in need of maintenance.

Observations conducted along the pier front along the Hudson River indicates minor multi colored oil globules ranging in size from <1 inch dia to <12 inch dia floating on surface within the boom. It was noted that the tidal fluctuation is causing the north termination point of the boom to become hung up on the pier allowing the escape of floating surface oils.

Observation of BH #3 observation well which was located adjacent to the pier indicates on observable oils.

It is noted that during the inspection of these premises we observed an accumulation of asbestos-like material in Bldg. #48 (former boiler house). The material consisted of a pile of white fibrous like powder and pieces of pipe insulation sections strewn about the floor in piles three feet high.

A sample of black, viscous, syrup-like material was collected along the fence line separating Quantus from Spencer Kellogg. The material was seeping from Kellogg property to Quantus property. This material was observed seeping and spilling from brick work of Kellogg tall brick stack.

Attached with this report are two copies of Hazardous Waste Manifests obtained from Mr. Mansfield. These manifests indicate that the liquids are being sent to American Recovery, Inc. located in Baltimore, Maryland and the solids/sludges are being sent to Cecos Inc. located in Niagara Falls, New York.


Various photographs were taken throughout the site.


Conclusions:


Although significant improvements in maintenance and cleanup are noted within the main processing area and final product storage area the major land area of this property remains unkept with soil contamination abundant. The subject company is currently shut down performing only modest maintenance and cleanup activities.

Recommendations:

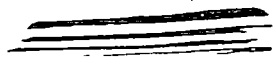
All drains and oil puddles throughout the Quantus property should be pumped out. Filter absorbent materials in oil/water separator should be maintained on a more frequent schedule. Dikes should be installed around all tanks. Should install test wells in tank farm D. Oil/water separator should be upgraded. Permanent boom on riser should be installed.


Edward Faillie
Supervising Env. Tech.


Vince Krisak
Senior Env. Specialist


Charles Krauss
Supervising Env. Speciali

Inc
Attachment



International Specialists in the Environmental Sciences

December 18, 1981

Mr. Fred N. Rubel, Chief
Emergency Response and Hazardous
Materials Inspection Branch
U.S.E.P.A Region II
Woodbridge Avenue
Edison, New Jersey 08817

Subject: SPCC Inspection, Quanta Resources Corporation, Edgewater, New Jersey

Dear Mr. Rubel:

In accordance with Technical Direction Document 2-8112-03, an SPCC inspection was conducted at the Quanta Resources Corporation facility in Edgewater, New Jersey on December 10, 1981.

Observations:

The Edgewater, New Jersey facility is one of three waste oil reprocessing facilities owned by Quanta Resources Corporation. Quanta has filed for bankruptcy, and the Edgewater facility is currently inactive. The NJDEP has issued an Administrative Consent Order to the owners of the facility which requires them to provide for the security of the site and the containment of PCB contaminated oil stored on the grounds. A draft copy of the ACO is attached.

On December 10, 1981, M. Skirka and H. Wheat of the TAT met with Mr. Kenneth Mansfield, Plant Manager, to review the SPCC plan and inspect the facility. This inspection was undertaken mainly to evaluate the current site security with special attention to the potential for a spill which might be caused by vandalism or structural failure should the facility remain inactive for an extended period of time.

Mr. Mansfield reported that he and one other worker are the only personnel present at the facility on a daily basis. Both are on the facility grounds from 8 AM until 4 PM, with Mr. Mansfield sometimes remaining until 5 PM. There is no security guard on site between 5 PM and 8 AM. A six foot chain link fence topped with barbed wire surrounds the site. All access gates are padlocked and Mr. Mansfield indicated that he was the only person to possess keys to all the locks. The fencing was in excellent condition, but a hole had been smashed in the eastern portion of the cement block dike wall of the "A" tank farm. This is the only place where potential vandals could easily enter the facility. That portion of the dike, however, is near a security guard building for the Celotex Company, which borders Quanta to the North. Although no formal cooperative agreement exists between Quanta and that security guard, his presence is beneficial to the Quanta facility. Quanta and Celotex share a common access road from River Road. The Celotex guard is positioned on that access road and is present on a 24 hour

ATTACHMENT C

C-1

per day basis, seven days per week. After the Calotex Company closes the access road for the day, the guard closes the access road with an eight foot rolling chain link fence. Potential for "midnight dumping" at this inactive facility would seem remote, given these circumstances. As with any facility, really determined vandals could enter without serious problems. LB 3.2094

The facility itself is fairly large. Forty-eight above ground tanks of various sizes are on site. The NJDEP has sealed all valves to all tanks within the facility. According to the SPCC plan, the storage capacity of the facility is over six million gallons. A tank farm inventory recorded on December 9, 1981 indicates the presence of about 2.8 million gallons of stored liquids on site. A copy of that inventory is attached and includes product identification.

Tank farms "A" and "B" are located ^{partially} within Area I as depicted on the site map. A considerable amount of oil, water and PCB contaminated oil is stored in this area. Tank A3 has a potentially collapsed wood roof. Tank A1 has old style valve ports running vertically up the side of the tank at four foot intervals. Rust is visible at the points where these ports meet the tank wall. Tank A7 shows a very small water leakage at its base. Mr. Mansfield indicated that tank B2 contained about 33,000 gallons of water and heavy metals and would definitely rupture during the winter if not attended to soon. Tank farms "A" and "B" are not adequately diked. The SPCC plan and accompanying engineering drawing indicate a proposed wall to be erected on the southern and western edges of the tank farms. At the time of our inspection, there was no containment wall in those locations. If a major spill occurred in area "A", it is possible for oil to flow onto the adjacent railroad tracks toward River Road. A spill here would probably not threaten the Hudson River unless the spill reached a drainage sump behind the Centrifuge Building which leads to an oil water separator and a direct water effluent pipe to the river. Even if such a catastrophic spill occurred, a large area of the bordering Hudson has been boomed off and the spill would be contained by that boom. Tank farm "D" is adequately diked.

Under NJDEP direction, tank farm "C" (area II on site map) has been set aside for the storage of confirmed PCB contaminated oil. Tank farm inventory records show that about 537,000 gallons of PCB contaminated oil is stored in this area. The area is adequately diked. There are three tanks outside of this diked tank farm which also contain PCB contaminated oil. These are tanks B7 (13,544 gallons), B9 (10,000 gallons), and D9 (24,495 gallons) as indicated on the site map. All tanks containing PCB contaminated oil are properly labelled with PCB signs.

Site drainage, including drainage from the tank farm areas, flows through a series of underground channels to a common eight inch underground pipe leading to an oil water separator. The separator is a bit old and its efficiency may be questionable. Sorbant material has been placed beyond the effluent port of the separator to catch any oil which may pass through it. Water passing through the separator flows directly into the Hudson River. In several locations between tank farms "C" and "D", holes in the ground have exposed the eight inch underground drainage pipe. The pipe in these areas has been punctured and if oil were to spill over this portion of the facility grounds it would enter the pipe and flow to the separator very quickly.

During the course of the site tour, Mr. Mansfield detailed remedial actions which he felt were essential to the prevention of spills during the winter. These actions included the following:

Winterization of all pipelines, that is, the removal of water from all lines and the refilling of the lines with oil to prevent rupture due to freezing and thawing.

Transfer of the contents of tank B2 to one of the A tanks.

Sealing of all steam lines entering full tanks. This would prevent oil from flowing out of the tanks through the lines should the lines rupture within the tanks.

The solitary worker remaining on site was in the process of sealing steam lines during the time of our inspection. Mr. Mansfield also would like to transfer the PCB contaminated oil from tanks B7, B9, and D9 to tank farm C. He estimated that he could accomplish all of these suggested tasks for the securing of the site in two to three weeks, but that he could do absolutely nothing involving oil transfer without NJDEP approval.

Information Update: In a phone call to Mr. Mansfield on December 21, it was learned that the NJDEP had granted permission for the winterization of all pipelines and the emptying of tank B2. Transfer of PCB contaminated oil from tanks B7, B9, and D9 was not permitted at this time, but Mr. Mansfield indicated that he felt the State would probably allow him to make the transfer in a few weeks. In addition, Mr. Mansfield indicated that a security guard from Management Safeguard, Inc. would be hired to be present on the facility grounds from 8 PM- 4 AM. This would occur soon after Christmas. Mr. Mansfield also stated that Federal Court had subpoenaed all his records.

Recommendations:

At this time, the NJDEP has taken a prudent step in allowing Quanta to commence with the winterization of the Edgewater facility. The transfer of PCB contaminated oil now outside of tank farm "C" to within that tank farm should also be allowed. The completion of the proposed dike at tank farms "A" and "B" is necessary to completely contain a spill due to failure in that area. State and Coast Guard personnel seem well aware of conditions at the facility. Although no imminently dangerous condition exists within the facility which would warrant an immediate Coast Guard 311 action, the Coast Guard would be well advised to formulate a plan of attack for possible trouble at the site. It is further recommended that Mr. Mansfield be kept at the facility as long as possible. He is the only person who is totally familiar with the workings of the facility. In addition to serving as caretaker, his knowledge would be essential if trouble surfaces at Edgewater in the future.


Michael A. Skirka

- Enclosure 1 - SPCC Inspection Checklist
- Enclosure 2 - Quanta Resources SPCC Plan
- Enclosure 3 - Facility maps and engineering drawings
- Enclosure 4 - Tank Farm Inventory
- Enclosure 5 - Key people connected to the facility
- Enclosure 6 - Copy of NJDEP Administrative Consent Order
- Enclosure 7 - Photographic documentation to be forwarded upon development

rich

COMPLETED ANALYSIS BEFORE

PROJECT NAME: GUANTIA RESOURCES

EXPLANATION OF REMARK CODES

MARK CODE	EXPLANATION
B	RESULTS BASED UPON COLONY COUNTS OUTSIDE ACCEPTABLE RANGE
J	ESTIMATED VALUE
R	ACTUAL VALUE KNOWN TO BE LESS THAN VALUE GIVEN
L	ACTUAL VALUE KNOWN TO BE GREATER THAN VALUE GIVEN
M	PRESENCE OF MATERIAL VERIFIED BUT NOT QUANTIFIED
I	SAMPLED BUT NOT ANALYZED DUE TO LAB ACCIDENT
U	REPORTED VALUE LESS THAN CRITERIA OF DETECTION
C	MATERIAL ANALYZED FOR, BUT NOT DETECTED

LOCATION CODES FOR IDENTIFICATION OF SAMPLING POINTS AT INDUSTRIAL/SANITARY FACILITIES, LANDFILLS, HAZARDOUS WASTE SITES.

CODE NUMBERS	SAMPLING POINTS
001 - 1000	EFFLUENT PIPE NUMBER 001 TO 000
051 - 1099	OTHER EFFLUENTS SUCH AS COOLING TOWER DISCHARGE, DISCHARGE FROM HOLDING PONDUS ETC
100 - 1249	IN PLANT SAMPLES - DURING PROCESS
200 - 1214	IN PLANT SAMPLES AFTER PROCESS AND BEFORE TREATMENT OR DISCHARGE
215 - 1424	IN PLANT SAMPLES - DURING TREATMENT
435 - 1434	SEPARATE INFLUENT POINTS/WATER SOURCES
5XX	INFLUENT ASSOCIATED WITH EFFLUENT 10XX
000	BLANK FOR VOLATILE ORGANICS
XXX	AUTO SAMPLER BLANK AT SAMPLE POSITION 1XXX
1000 - 3099	GROUND WATER FROM WELL 01 TO 99
3100 - 3199	SEDIMENT SAMPLE (WATER BOTTOM)
3200 - 3299	SOIL SAMPLE
3300 - 3399	STREAM WATER SAMPLE
3400 - 3499	LAGOON SAMPLE
3500 - 3599	STORAGE TANK SAMPLE
3600 - 3699	LEACHATE SAMPLE
3700 - 3799	OTHER TYPE SAMPLE

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PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK
34621 2,4,6-TRICHLOROPHENOL	UG/L	TOTAL	
34452 P-CHLORO-M-CRESOL	UG/L	TOTAL	
34526 2-CHLOROPHENOL	UG/L	TOTAL	
34501 2,4-DICHLOROPHENOL	UG/L	TOTAL	
34606 2,4-DIMETHYLPHENOL	UG/L	TOTAL	62.0000
34551 2-NITROPHENOL	UG/L	TOTAL	
34545 4-NITROPHENOL	UG/L	TOTAL	
34616 2,4-DINITROPHENOL	UG/L	TOTAL	
34657 4,6-DINITRO-O-CRESOL	UG/L	TOTAL	
39632 PENTACHLOROPHENOL	UG/L	TOTAL	
34594 PHENOL	UG/L	TOTAL	330.000
34205 ACENAPHTHENE	UG/L	TOTAL	130.000
39120 BENZIDENE	UG/L	TOTAL	
34551 1,2,4-TRICHLOROBENZENE	UG/L	TOTAL	
39700 HEXACHLOROBENZENE	UG/L	TOTAL	
34396 HEXACHLOROETHANE	UG/L	TOTAL	
34273 BIS(2-CHLOROETHYL) ET.	UG/L	TOTAL	
34521 2-CHLORONAPHTHALENE	UG/L	TOTAL	
34536 1,2-DICHLOROBENZENE	UG/L	TOTAL	
34566 1,3-DICHLOROBENZENE	UG/L	TOTAL	
34571 1,4-DICHLOROBENZENE	UG/L	TOTAL	
34631 3,3'-DICHLOROBENZIDENE	UG/L	TOTAL	
34611 2,4-DINITROTOLUENE	UG/L	TOTAL	
34626 2,6-DINITROTOLUENE	UG/L	TOTAL	
34346 1,2-DIPHENYLHYDRAZINE	UG/L	TOTAL	
34376 FLUORANTHENE	UG/L	TOTAL	
34641 4-CHLOROPHENYL PHENYL ET.	UG/L	TOTAL	910.000
34636 4-BROMOPHENYL PHENYL ET.	UG/L	TOTAL	
34283 BIS(2-CHLOROISOPROPYL) ET.	UG/L	TOTAL	
34278 BIS(2-CHLOROETHOXY) METH.	UG/L	TOTAL	
39702 HEXACHLOROBUTADIENE	UG/L	TOTAL	
34386 HEXACHLOROCTCLOPENTADIENE	UG/L	TOTAL	
34408 ISOPHORONE	UG/L	TOTAL	
34596 NAPHTHALENE	UG/L	TOTAL	130.000
34447 NITROBENZENE	UG/L	TOTAL	
34438 N-NITROSODIMETHYLAMINE	UG/L	TOTAL	
34433 N-NITROSODIPHENYLAMINE	UG/L	TOTAL	
34426 N-NITROSODI-N-PROPYLAMINE	UG/L	TOTAL	
39100 BIS(2-ETHYLHEXYL) PHTHAL.	UG/L	TOTAL	720.000
34292 BUTYL BENZYL PHTHALATE	UG/L	TOTAL	
39110 DI-N-BUTYLPHTHALATE	UG/L	TOTAL	

REPORT
ANALYSIS RESOURCES

REPORT DATE: 02/02/20

PROJECT DATE: 02/02/16 LB 3.2098

PARAMO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE & REMARK
		UG/L	TOTAL	U
34550	DI-N-OCTYL PHTHALATE	UG/L	TOTAL	U
34336	DIETHYL PHTHALATE	UG/L	TOTAL	U
34341	DIMETHYL PHTHALATE	UG/L	TOTAL	250.000
34526	1,2-BENZANTHRACENE	UG/L	TOTAL	58.0000
34247	BENZO A PYRENE	UG/L	TOTAL	U
34230	3,4-BENZOFLUORANTHENE	UG/L	TOTAL	U
34242	1,12-BENZOFLUORANTHENE	UG/L	TOTAL	140.000
34320	CHRYSENE	UG/L	TOTAL	24.0000
34200	ACENAPHTHYLENE	UG/L	TOTAL	73.0000
34220	ANTHRACENE	UG/L	TOTAL	65.0000
34521	1,12-BENZOPENTYLENE	UG/L	TOTAL	220.000
34351	FLUORENE	UG/L	TOTAL	1200.00
34461	PHENANTHRENE	UG/L	TOTAL	U
34556	1,2:5,6-DIBENZANTHRACENE	UG/L	TOTAL	91.0000
34403	INDENO(1,2,3-CD) PYRENE	UG/L	TOTAL	020.000
34469	PYRENE	UG/L	TOTAL	U
34675	TCDD	UG/L	TOTAL	U
34715	ISOMERS M/P DICHLOROBENZENE	UG/L	TOTAL	U
34709	ISOMERS CHRYS/BENZ(A)ANTH	UG/L	TOTAL	U
81945	ISOMERS PHENANTHRENE	UG/L	TOTAL	190.000
34711	ISOMERS BENZO(B/K)FLUORAN	UG/L	TOTAL	9.00000 K
01077	SILVER	UG/L	TOTAL	20.0000
01002	ARSENIC	UG/L	TOTAL	1.90000
01012	BERYLLIUM	UG/L	TOTAL	2.00000
01027	CAESIUM	UG/L	TOTAL	10.0000
01034	CHROMIUM	UG/L	TOTAL	140.000
01042	COPPER	UG/L	TOTAL	0.200000 K
71900	MERCURY	UG/L	TOTAL	1600.00
01051	LEAD	UG/L	TOTAL	160.000
01067	NICKEL	UG/L	TOTAL	60.0000 K
01097	ANTIMONY	UG/L	TOTAL	2.00000 J
01147	SELENIUM	UG/L	TOTAL	0.700000 J
01059	THALLIUM	UG/L	TOTAL	1100.00
01092	ZINC	UG/L	TOTAL	5.00000
34030	BENZENE	UG/L	TOTAL	U
32102	CARBON TETRACHLORIDE	UG/L	TOTAL	U
34301	CHLOROBENZENE	UG/L	TOTAL	U
32103	1,2-DICHLOROETHANE	UG/L	TOTAL	45.0000
34500	1,1,1-TRICHLOROETHANE	UG/L	TOTAL	U
34455	1,1-DICHLOROETHANE	UG/L	TOTAL	U
34511	1,1,2-TRICHLOROETHANE	UG/L	TOTAL	U
34516	1,1,2,2-TETRACHLOROETHANE	UG/L	TOTAL	U
34311	CHLOROETHANE	UG/L	TOTAL	U
34260	BIS(CHLOROMETHYL) ET.	UG/L	TOTAL	U
34570	2-CHLOROETHYL VINYL ET.	UG/L	TOTAL	13.0000
32100	CHLOROFORM	UG/L	TOTAL	U
34501	1,1-DICHLOROETHYLENE	UG/L	TOTAL	U

NO	PARAMETER NAME	UNITS	CHEMISTRY	VALUE	REMARK
34546	1,2-TRANS DICHLOROETHYLENE	UG/L	TOTAL		U
34541	1,2-DICHLOROPROPANE	UG/L	TOTAL		U
34561	1,3-DICHLOROPROPYLENE	UG/L	TOTAL		U
34371	ETHYLBENZENE	UG/L	TOTAL	5.00000	
34423	METHYLENE CHLORIDE	UG/L	TOTAL	200.000	
34418	METHYL CHLORIDE	UG/L	TOTAL		U
34413	METHYL BROMIDE	UG/L	TOTAL		U
32104	BROMOFORM	UG/L	TOTAL		U
32101	DICHLOROBROMOMETHANE	UG/L	TOTAL		U
34429	TRICHLOROFLUOROMETHANE	UG/L	TOTAL		U
34332	DICHLORODIFLUOROMETHANE	UG/L	TOTAL		U
32105	CHLORODIBROMOMETHANE	UG/L	TOTAL		U
34475	TETRACHLOROETHYLENE	UG/L	TOTAL	3.00000	
34010	TOLUENE	UG/L	TOTAL	50.0000	
39180	TRICHLOROETHYLENE	UG/L	TOTAL	22.0000	
39175	VINYL CHLORIDE	UG/L	TOTAL		U
34210	ACROLEIN	UG/L	TOTAL		U
34215	ACRYLONITRILE	UG/L	TOTAL		U

01077	SILVER	UG/L	TOTAL	9.00000	K
01002	ARSENIC	UG/L	TOTAL	17.0000	
01012	BERYLLIUM	UG/L	TOTAL	1.00000	J
01027	CAESIUM	UG/L	TOTAL	0.00000	J
01034	CHROMIUM	UG/L	TOTAL	20.0000	J
01042	COPPER	UG/L	TOTAL	5.00000	J
71900	MERCURY	UG/L	TOTAL	0.200000	K
01051	LEAD	UG/L	TOTAL	70.0000	K
01067	NICKEL	UG/L	TOTAL	1300.00	
01097	ANTIMONY	UG/L	TOTAL	240.000	
01147	SELENIUM	UG/L	TOTAL	5.00000	
01054	TALLIUM	UG/L	TOTAL	0.400000	K
01092	ZINC	UG/L	TOTAL	670.000	

James V. [Signature]

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

M E M O R A N D U M

TO: Donna Kelly, DAG DATE: April 21, 1982

FROM: Dan Toder
Geologist
Solid Waste Administration

SUBJ: QUANTA RESOURCES OIL RECOVERY SITE

On April 19, 1982, Kathy McBride (DWR), Frank Gagliano (Bureau of Hazardous Substances), and I inspected the above referenced facility.

GENERAL SITE CONDITIONS:

As you know, this facility has been used for waste oil recycling for many years and it is evident that contamination of ground water and the Hudson River has been occurring for quite awhile. Fortunately, people living in the area rely on municipal waster supply for their potable water needs and private homes and apartment buildings are located upgradient with respect to groundwater flow. Industries located along the Hudson River adjacent to Quanta have probably also contributed (at one time or another) to contamination in this area. In any event, Quanta is in need of an effective ground surface clean-up program. There are tanks that have been cut-off at the base, presently filled with oil sludge and there are various areas where oil has been spilled on the surface. Many of the tanks existing on site are in need of repair, which could begin to leak at any time.

GEOLOGY AND HYDROLOGY:

Quanta Resources lies on at least 10-20 feet of permeable fill material consisting of wood fragments, cinders, brick fragments, boulders, etc. The fill material overlies the Stockton (sandstone) formation which is located immediately adjacent to and to the east of the Palisades (diabase) Sill. The permeability of the fill material and the proximity of the water table to the ground surface enables contamination to easily enter the ground water underlying the site.

Groundwater flow directions are basically to the south and east (toward Spencer-Kellog Company and the Hudson River, respectively). This has been confirmed by taking water level readings in the existing monitoring wells. It is obvious that groundwater under the site and the Hudson River has been contaminated by Quanta due to the presence of an oil sheen on the water surface in most of the wells and in the Hudson River.

ATTACHMENT E

PROJECT

Planned Removal Request for the ~~Quant~~ Resources Corporation Site,
Edgewater, New Jersey - ACTION MEMORANDUM

LB 3.2101

FROM:

John Witkowski, OSC
Emergency Response Branch

NOT DATED,

POST - WINTER 89

IS SUSPECTED

11/13/89

TO:

Dick Dewling
Acting Regional Administrator

THRU:

William J. Librizzi, Director
Office of Emergency and Remedial Response

↓
fcl

I. PURPOSE:

This is a request for authorization to proceed with a Planned Removal Action at the Quanta Resources Corporation site in Edgewater, New Jersey in the event that formal Enforcement action is unsuccessful. The site is not on the National Priorities List. The New Jersey Department of Environmental Protection (NJDEP) has concluded, as should we, that the public and the environment will be at risk from exposure to hazardous substances if a cleanup response is substantially delayed at this site. The State of New Jersey intends to enter into a contract with EPA for the cleanup. The request of the Governor's representative, and 10% cost sharing commitment has been received.

II. BACKGROUND:

A. Site Setting/Description:

The current Quanta site has a history which dates back to the 1930's. At that time, Allied Chemical-Asphalt Division began operations at the property. Allied held the property for several decades whereupon the facility was acquired by the Hudson Oil Company which later became Quanta Resources Corporation. Hudson Oil and Quanta Resources Corporation were involved in the recovery and reprocessing of waste oil and other hazardous waste products. The New Jersey Department of Environmental Protection stopped the operations of Quanta Resources Corporation on July 2, 1981, when they learned that oil stored in tanks at the facility contained PCB's as high as 260 ppm. Quanta filed for bankruptcy on October 6, 1981. Principal operating personnel for Quanta have been charged with hazardous waste violations in New York, New Jersey, Pennsylvania, and Massachusetts and in one case a jail sentence was served. Since Quanta lapsed into bankruptcy, the facility has been largely unattended. Extensive deterioration of bulk storage tanks, transfer lines and drainage systems has occurred.

ATTACHMENT F

F-1

022

River Road, Edgewater, New Jersey (Lots 1, 2, and 3, Block 95 on the Tax Map of Edgewater Borough, see attached map). The facility is located directly west of Manhattan along the Hudson River, about midway between the George Washington Bridge and Lincoln Tunnel crossings. Various size industrial facilities surround the Quanta site along the waterfront. A fresh produce distribution warehouse borders the site to the north and a fertilizer distribution facility borders the site to the west. River Road is Edgewater's major vehicular thoroughfare. Several large condominiums are located within 1/2 mile of the site. Residential housing overlooks the site from atop the Palisades, several hundred feet west of River Road.

The Quanta facility contains 61 aboveground storage tanks with a total storage capacity of approximately 9 million gallons, plus as many as 10 below ground tanks with an approximate storage capacity of 40,000 gallons. Large quantities of chemically contaminated waste oil, sludge, tar, asphalt, process water and unknown liquids remain in tanks throughout the site. About 200 drums containing oils, sludges, contaminated sorbents and debris, and unknowns are staged on the site. Soils throughout the site have become heavily contaminated with chemically contaminated oil and other materials released through recent spills from tanks or previous poor housekeeping at the facility. Large deposits of tar and asphalt have been identified in the soil near the Hudson River.

There has been almost no upkeep of the Quanta facility since October of 1981. Many of the aboveground storage tanks have developed extensive rust around seams and valves. Many leaks have developed at tank seams, valves, and transfer lines. Numerous underground transfer lines have not been tested for integrity or destination. Several of these lines may provide a spill pathway to the Hudson River. Most of the largest tanks on site have either no roofs or partially collapsed wooden roofs. Leaks in 2 underground tanks have been identified and leaks in other underground tanks are suspected. The onset of winter causes special problems at the facility. Fluctuating winter temperatures causes water stored in many of the bulk tanks to freeze and thaw, resulting in extensive damage to tank valves and transfer-line joints and causing more leaks and spills. Temporary emergency clay diking was recently installed at the facility, however, the integrity, capacity, and reliability of this diking is suspect. A major area of concern at the site is the status of the facility drainage system. The facility oil/water separator is in extremely poor condition and is incapable of achieving discharge specifications required under a NJPDES Discharge Permit. As a result, NJDEP has refused to allow rainwater to be processed through this separator and discharged to the Hudson River and large areas of the facility are frequently flooded for extended periods. This compounds the leakage problem at the site. The underground discharge line from the separator to the Hudson River was found to be heavily contaminated with residual contaminated oils, asphalt and tars.

~~Water from the Hudson River freely enters this area and carries~~
out quantities of these chemically contaminated oily products with
the rising and falling tides. This results in numerous sporadic
contaminated oily discharges to the Hudson River. Landowners have
installed containment boom along the Hudson, however the boom is
not actively maintained and is ineffective in containing the
contaminated oily discharges. Contaminated oil which accumulates
behind the boom is not collected and usually escapes to the waters
of the Hudson on out-going tides.

1 B 3.2103

The NJDEP has identified the Hudson River as an active Striped Bass nursery area. Wharf pilings, piers, and other waterfront structures along the New Jersey coastline of the river have been particularly cited as important habitat for the Striped Bass. Fingerling Striped Bass have been sited in the waters around a dilapidated pier structure at the Quanta waterfront. Palisades Interstate Park is located 3 miles north of the site along the New Jersey Shore of the Hudson River. Several municipal marinas are located near the Quanta property.

B. Quantity and Types of Substances Present:

Approximately 750,000 gallons of chemically contaminated oil is contained in tanks on the site. Oil stored in many of the facility's tanks has been identified as being contaminated with PCB's which range from below 50 ppm to about 265 ppm. The approximate volume of oil found to be contaminated with PCB's close to or above 50 ppm is 266,000 gallons. Various volatile hydrocarbons have been identified in oil samples including benzene, toluene, trichloroethene, ethyl benzene and phenol. Facility tanks also contain about 4.2 million gallons of contaminated aqueous liquids. Much of this has been shown to have very high COD and TOC levels. Cyanides have also been identified in the water phase of many tanks (see Table 1). In addition to oil and water, a considerable amount of sludge is also stored on site.

During the past year, EPA has conducted limited air monitoring at the site. Organic Vapor Analyzer (OVA) readings of over 400 ppm have been obtained while measuring vapors released from liquids being pumped from storage tanks by TAT during December of 1982. Positive tests for benzene and phenol in air have been obtained using Drager tubes and LaMotte Sampling Kits.

TABLE 1

LB 3.2104

EDGEWATER TANK INVENTORY SUMMARY
 (Paulson Engineering, Inc. - January 12, 1984)

PCB Oil

<u>PCB Level (mg/l)</u>	<u>Gallons</u>	<u>Average PCB Content (mg/l)</u>
>100	39,100	175
50-100	226,430	82.4
<50	484,830	11.7
TOTAL	750,360	

Contaminated Water

<u>PCB Level (ug/l)</u>	<u>TOC Range (mg/l)</u>	<u>Gallons</u>	<u>Average PCB/TOC</u>
>1	Up to 54,000	1,909,200	18.5 ug/l PCB
<1	>1,000	753,770	2775 mg/l TOC
<1	100 - 1,000	144,730	355 mg/l TOC
<1	<100	1,401,900	18.6 mg/l TOC
	TOTAL	4,209,600	

<u>Substance</u>	<u>Statutory Source for Designation Under CERCLA</u>
PCB	Clean Water Act, Section 311(b)(4)
Benzene	Clean Water Act, Section 311(b)(4)
Toluene	Clean Water Act, Section 311(b)(4)
Trichloroethene	Clean Water Act, Section 311(b)(4)
Ethyl Benzene	Clean Water Act, Section 311(b)(4)
Phenol	Clean Water Act, Section 307(a)
Cyanide	Clean Water Act, Section 307(a)

- C. The Quanta Resources Corporation site is not on the Interim Priority List or the Expanded Eligibility List.

III. THREAT:

A. Threat of Exposure to Public or the Environment:

At the present time, the temporary emergency clay diking provided around the perimeter of the facility may not be sufficient to contain a major spill from one of the large bulk tanks on site. The deteriorated condition of many of the tanks and transfer lines provides a real potential for serious spills at the site, especially during a severe winter weather cycle. Three major storage tanks containing PCB's greater than 50 ppm are found outside a securely diked area. Based upon the known illegal disposal practices undertaken by Quanta in the past, and the lack of extensive analytical data on much of the actual contents of some of the tanks on site, it is believed that highly toxic materials other than PCB's will be discovered in some of the tanks. Three major spill pathways exist leading off the site. A sudden, large spill could travel west from the site toward River Road and an active industrial railroad spur. This would pose a direct contact threat to large numbers of persons who utilize River road. Vehicular traffic could spread contamination over wide areas, including the produce warehouse immediately north of Quanta.

directly to the Hudson River. Spills could also enter the property bordering the south and reach the Hudson River via storm drain lines on that property. The tanks on the site are not protected from fires by any type of automatic foam system. Although the oil products on site are not highly flammable, lack of absolute site security provides the potential for vandalism and arson. A fire in a tank containing hazardous materials would create a plume containing numerous highly toxic compounds, placing the nearby population at risk.

The material contained in this document supports a conclusion by EPA, as lead agency, consistent with paragraph 300.67(a)(2) of the National Contingency Plan, that the public and the environment will be at risk from exposure to hazardous substances if response is delayed at this site which is not on the NPL. Direct contact with hazardous substances by nearby population is threatened. The site contains hazardous substances in drums and bulk storage containers that are known to pose a serious threat to public health and the environment. Weather conditions may cause substances to migrate and pose a serious threat to public health and the environment.

B. Evidence of Extensive Release:

Recurring oily discharges onto the Hudson River from this facility have been documented for several years by the U.S. Coast Guard, EPA, and NJDEP. A spill of several thousand gallons of oil onto the Quanta grounds occurred from Tank D10 in November of 1983 due to overflow as a result of rainwater entering the tank through a partially collapse wooden roof.

C. Previous Actions to Abate Threat:

EPA and NJDEP have combined efforts to force responsible parties to cleanup and institute spill prevention actions at the site for over 1 year without adequate results.

Under threat of Federal and state cleanup action, the landowners hired a contractor in the Fall of 1982. Between that time and the Summer of 1983, the contractor tended to small spills, maintained the containment boom, dismantled sections of transfer line, installed emergency clay diking, constructed an overland discharge line from the separator to the Hudson River and arranged for the disposal of 200,000 gallons of contaminated water from a leaking facility tank. About 776,000 gallons of saleable oil were removed from the site during 1982 through early 1983. Despite being provided with a detailed list of cleanup items which EPA/NJDEP required to be implemented, and aided by frequent technical assistance by EPA/NJDEP, the landowners and their contractor did not accomplish the major portion of those cleanup or stabilization goals.

After the period of July-August 1983, during which no cleanup activities occurred at the site, EPA and NJDEP again formally notified responsible parties that if renewed cleanup actions did not begin at the site, a combined Federal/State cleanup of the site would be initiated to insure that the facility would be secure for the Winter of 1983-84. The NJDEP and the landowners signed an Administrative Consent Order in November of 1983 which detailed complete cleanup. The landowners hired three separate contractors who assumed responsibility for portions of a renewed round of activities. The facility's oil/water separator is being evaluated for repair and operation under NJPDES Permit. New profile samples have been obtained from all tanks (see Table 1). Containment boom and sorbent were installed in the Hudson but are no longer being maintained. No real cleanup activity has occurred at the site since February of 1984. CWA 311 monies are available to undertake limited actions relating to any uncontaminated oil. The major hazard posed by this site has to do with hazardous substances present, and therefore must be funded under the CERCLA Act.

IV. ENFORCEMENT:

See attachment.

V. PROPOSED PROJECT AND COSTS:

A. Objective of the planned removal action are as follows:

1. The existing facility separator will be redesigned and upgraded so that it can treat facility drainage to meet a specification set by NJPDES Permit. The contractor will replace the existing separator with a new unit should redesign be impossible or more costly than total replacement. All drainage lines leading to the separator will be cleaned or redesigned to insure that all areas of the facility will be adequately drained and that oily materials accumulated in lines due to past poor housekeeping will not be constantly flushed into the separator. The underground discharge line from the separator to the Hudson River will be sealed so that discharge to the river through the line is impossible and also so that the tidal waters from the river cannot enter the line. All discharge to the Hudson River will be via a newly constructed above-ground discharge line.
2. All necessary applications and documentation required to obtain a NJPDES Discharge Permit for the facility will be prepared and submitted.

~~Quanta waterfront. All accumulated oils will be collected and properly disposed of.~~

LB 3.2108

4. Bulk storage tanks will be sampled, if necessary, to identify specific chemical contents and contaminants, product phase layering and total volume in order to determine disposal options.
5. Disposal strategies will be developed for environmental or health threatening materials (oil, contaminated water, PCB contaminated oil) stored in bulk tanks. These materials will be removed from the storage tanks and disposed of at approved waste disposal facilities.
6. After removal and disposal of sludge from the two cut-off tanks in the facility yard, the tanks will be cleaned and altered so future rainwater will not accumulate within them and cause contaminated oil to enter the yard.
7. Two underground tanks near the A Tank Farm will be emptied, cleaned and filled with inert material. Five underground tanks in the vicinity of the oil/water separator will also be emptied, cleaned and filled with inert material. Any other underground tanks will be identified.
8. The dike wall surrounding the C Tank Farm will be repaired to insure complete integrity. The floor of Tank Farm C within the dike will also be inspected and repaired to insure containment integrity. Transfer lines with the C Tank Farm will be dismantled and the drainage effluent valve for the tank farm will be repaired to insure complete drainage control. The inner surface of the dike wall and the tank farm floor will be cleaned so that heavy oil staining is removed.
9. Perimeter diking around the facility will be inspected periodically. An engineering assessment will be made of the adequacy of dike design parameters. Redesign and repairs shall be instituted to insure that all possible spills of remaining materials will be contained on the facility's property.
10. To insure site safety and remove potential physical hazards from the site, where necessary recyclable metals and solid wastes shall be removed from the site and disposed of in an approved manner.
11. All contaminated drums now stored on the site will be disposed of in an approved manner.

Separator/Drainage Design and NJPDES Compliance	\$ 175,000
Boom Deployment/Oil Collection	20,000
Potential Resampling for Disposal Options	50,000
Search for "Cost-Free" Removal of uncontaminated Oil from Site by Potential Users	25,000
On-Site Contaminated Water Treatment	360,000
Cut-Off Tank Sludge Disposal	30,000
Underground Tank Removal and Disposal	80,000
Tank Farm C Improvements	20,000
Facility Diking Improvements	30,000
Drum Disposal	20,000
Disposal of Materials Presenting Physical Hazards	20,000
TAT Costs	120,000
Intramural Costs (HQ & Region)	50,000
TOTAL PROJECT CEILING -	\$1,000,000

C. Project Schedule:

Project initiation date pends finalization of State/EPA Contract Agreement (see Figure 1). It is estimated that the planned removal action will be completed within 10 months. The extensive remediation measures required at this site to eliminate immediate risks to the public health and the environment, anticipated weather related disruptions in operations, and the determination that assistance to mitigate the immediate risks will not otherwise be provided on a timely basis all serve as criteria for exceeding the 6 month time limit. The criteria for a waiver of the six month limit under Section 104(e)(i) of CERCLA are as follows: 1) Continued actions are immediately required to prevent, limit and/or mitigate an emergency; 2) there continues to be an immediate risk to public health; and 3) such assistance is not being otherwise provided on a timely basis.

Since conditions at the Quanta Resources Corporation site meet the NCP Section 300.67 criteria for a planned removal, I recommend your approval of the planned removal request with an exemption to the six month limit for a removal action, contingent upon the continued failure of responsible parties to take adequate action following issuance of appropriate notice or orders pursuant to the CERCL Act. The estimated total project costs are \$1,000,000, of which \$830,000 are for extramural mitigation contractor costs. Please indicate your approval or disapproval of this request by signing below. This approval also authorizes an exemption to the 6 month time limit for this removal action. LB 3.2110

APPROVE: _____ DATE: _____

DISAPPROVE: _____ DATE: _____

cc: W. Hedeman, WH-548
H. Crump, WH-548B
W. Librizzi, 2OERR
F. Rubel, 2OERR-ER
M. Sadat, NJDEP
W. Mugdan, 2ORC-WTS
R. Ogg, 2OERR-HW
R. Gherardi, 2OPM-FIN
P. Flynn, 2AWM-AF
H. Gluckstern, 2ORC

25 SEP 1984

TO: SUE SAVOCA, OFFICE OF REGULATORY SERVICES

THROUGH: LEN ROMINO, SECTION CHIEF, BSM

FROM: BOB SOBOLESKI

SUBJECT: ACO COMPLIANCE BY JAMES FROLA AND ALBERT VON DOHLS, PROPERTY OWNERS OF QUANTA RESOURCE CORP. SITE

The letter will serve to advise of the property owners' compliance with Orders 26 through 48 contained in the Administrative Consent Order of 11-4-83. All information contained herein has been determined through a preliminary site inspection on September 10 by the writer, and a subsequent inspection on September 17, 1984 and October 10, 1984 by the writer, Dennis Prince, HSMA, and John Witkowski, EPA.

26. The oil water separator is currently is operational condition (observed); reported compliance November 21, 1983.
27. The property owners have received a final NJPDES/DSW Permit dated September 4, 1984, effective October 15, 1984 through October 14, 1989. [The details, if any, of the plans for the conveyance system to the oil/water separator will be checked with Ed Post, Section Chief, Industrial Permits.] Actual submission date unknown.
28. This office has in its possession results summary by Paulson Engineering, Inc. dated January 12, 1984, based on Stablex-Reutter sampling and analysis, which we also maintain in our files.
29. through 33
- No oil, water, or sludge material had been removed from the site as ordered by the deadlines of December 31, 1983 or January 31, 1984 as described under the ACO.
34. To my knowledge, no specific security requirements have been established for the site, i.e. security guard service. The site is enclosed by a fence, but access can be gained from a number of points. This does not, however, appear to be a serious problem. In discussions with John Witkowski (EPA, Edison), the lighting of the facility was to have been upgraded particularly in the C farm tank area. This has not been accomplished.
35. The property owner has provided and maintained the boom and sweep along the length of the property abutting the Hudson River. However, it is suspected that oil is being discharged through saturated soil resulting in an uncontrolled discharge to the Hudson River.
36. According to Chris Nelson, Paulson Engineering, two of the underground tanks have been emptied, and the third has been sampled.

ATTACHMENT G

G-1

37. A written spill contingency plan has not been submitted to the DEP. A draft is currently being prepared as a result of the meeting with E.P.A. regarding SPCC violations.
38. Mr. Greg Picht is on-site on a daily basis and is available to inspect and repair the dikes as necessary.
39. The containment floor and wall have not been addressed. There is a crack in the containment wall along the north wall. The perimeter of the tanks at the bottom of the floor are not adequately sealed to prevent leakage. The removal of transfer lines is this farm had been started, but is far from completed.
40. The cut-off tank materials have been removed from the site. There are tank remnants/materials at the tank bases not yet addressed, which catch rainwater and overflow. Based on the most recent visit (10-10-84) work was being done manually to address this item.
41. There remain on the site numerous drums at various locations throughout the site.
42. The subsurface tank in the vicinity of the oil/water separator has reportedly been analyzed but not disposed of as prescribed.
43. The Department has not received any plan for the design and operation of a ground water monitoring system on-site. Seven such wells were located on site, there are reportedly 12. They are not to standards and in all likelihood, are not permitted wells drilled by a licensed driller. There may be 5 additional wells which have yet to be identified. Because of the lack of permits, any data obtained from sampling of these wells is useless.
44. The site is currently clear of virtually all such obstruction. However, the disposal of such materials has not been accomplished in a timely manner. Roll-off boxes (3) were still present at the time of the first inspections as well as 10-10-84. These containers have been on site since January of 1984, and those which were removed was only owing to the fact that the contractor required these equipment be placed elsewhere.
45. The materials contained herein, i.e. booms, sweeps, protective clothing, etc., have been placed in the containers as described in paragraph 44.
46. There is no record of ever having received the bi-monthly reports required by this section.
47. There is no record of ever having received the schedules of work on the dates specified.

Notes

1. Based on conversations with Greg Picht, foreman at the Quanta site, compliance with the sampling requirements for water discharged from the oil/water separator is not understood. From my brief conversations with Greg, he will be essentially taking samples in glass jars and held for 30 days until

the State comes to perform required analysis. This would not fulfill the requirements of the permit, and it is therefore necessary to explain them, perhaps through their attorney, these requirements. This point was brought to Chris Nelson's attention 10-10-84.

2. During the period 7-31-84 through 8-26-84, Ra-Mar has removed approximately 57,650 gallons and 95,950 gallons of oil from tanks A-1 and A-2 respectively to Lionetti and Noble Oil. Approximately 35,725 gallons and 28,550 gallons remain in these tanks, respectively. The property owners have expressed a desire to begin removal operations on the contents of the D tank farm. These are the oldest tanks on site. However, as a condition of any further oil removals, we must specify:
 1. Water removed from the tanks to access oil phase must be disposed of, rather than transferred to other tanks.
 2. The disposal analysis must be performed for oil and aqueous phases and results submitted to this office.

Summary and Recommendations

Whether or not the property owners have made a sincere effort to comply with the ACO is at this point, inconsequential. The bottom line to the entire proceedings is that the time and effort already committed to this project by the property owners have produced minimal results, to wit:

1. A minimal amount of oil has been removed, and no water has been removed under the ACO. Most of the work done in this regard has been the transfer of oil and water from the tanks in poor conditions to better tanks.
2. The work which has been performed, i.e. well installation, debris removal from the site, maintenance of boom and sweeps, dike construction, etc. is of questionable quality and has involved a minimal amount of expenditure in relation to the entire project cost.
3. The property owners have reportedly spent close to \$700,000 to date, of which approximately half has been paid. There are at least two lawsuits pending currently in this regard. The property owners have been through some seven contractors thus far, and apparently have achieved a recognition as not meeting their financial obligations, which means that it would be difficult, if not impossible, to convince anyone to work for them.

At the present time, we are expecting receipt of plans for our review for the removal of oils from the D tank farm; and expect that the SPCC violations cited by the EPA will be addressed.

I would leave it to your judgement as to a final determination whether or not the numerous ACO violations should be pursued through the courts, in light of the movement we are currently seeing. Another factor is the potential sale of Becker et. al. to Merrill Lynch. Again, it is important to bear in mind that, up to this point in time, there has been little concrete movement on the

part of the property owners to comply with the provisions of the ACO, and that which has been done is not acceptable in a number of areas. Therefore, my own recommendation would be to persue these matters through the courts and let the judge ultimately decide the progress in this regard. At the very least a new ACO should be developed with certain deadlines by which failure to meet such deadlines would result in court action. Additionally, we may be in a position such that EPA approval for the planned removal of the tank contents could be initiated. I do not believe we can lose sight of the fact that this is a bad site in terms of potential leakage/discharge and fire/explosion episodes, not to mention severely contaminated soils and strongly suspected ground water contamination, and as of this late date in 1984, this report reflects the unsatisfactory compliance, in this writer's opinion, by the property owner to remedy the conditions which continue to exist.

Naturally, I will be happy to assist you in providing any additional information you require in this matter.

HS88:elw

cc: Tony Farro
Marja Van Ouwerkirk
Ted Metzger
Dennis Prince
Lance Miller
John Witkowski
Bill Librizzi



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION
CN 028, Trenton, N.J. 08625

MARWAN M. SADAT, P.E.
DIRECTOR

JORGE H. BERKOWITZ, PH.D.
ADMINISTRATOR

William J. Librizzi, Director
Emergency & Remedial Response Division
United States Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

JAN 10 1985

RE: Quanta Planned Removal Comments

Dear Mr. Librizzi:

In response to your letter of November 13, 1984, the following are our comments with respect to the draft planned removal contract for the planned removal request at the Quanta site. These comments have been verbally indicated to John Witkowski on November 29.

With regard to the oil/water separator and NJPDES permit discussed on page 3, paragraph 3, the following is a more accurate description of present conditions. The oil/water separator system has been reconditioned, such that a NJPDES permit was granted from October 15, 1984 for 1 year. As of November 29, 1984, no sampling and analysis has been performed by the property owner, which quite naturally is in violation of the conditions of the permit. As a result, we are not in a position to determine whether the separator is able to meet the discharge criteria. This matter has been referred to Bob Pfeiffer, NJDEP Industrial Permits Section for enforcement action.

Without belaboring this point, it is important to note that this situation typifies the inability of the property owner to perform adequately, if at all, any of the required programs for the site, and as such, is one of the most compelling reasons giving rise to our request.

On page 6, paragraph 1, "No real cleanup activity has occurred..." is changed to "Minimal cleanup activity...". At the time this section was written, this was quite correct. In deference to certain activities which have since been performed, only owing to the issuance of a \$200,000 SPCC violation by the EPA, this wording is changed. Please refer to the attached listing of materials removed since February, 1984.

Under Section V, Proposed Project and Costs, section A, please note that the sealing of the discharge line from the oil/water separator to the Hudson River was included as an activity to be performed as specified in the application for a NJPDES permit. Similarly, the containment boom currently in place is not in accordance with submitted drawings. Finally, the installation of additional

ATTACHMENT H

berms in the "A" tank farm is not in place as indicated in the permit application.

Within this section, it is understood that the proposed elements of the project may be changed as outlined in the contract document, under section C (Parties and Responsibilities) Item 5.

C. It is understood that the Project Schedule is changed from 10 months duration to six months. Figure 1, the proposed schedule of events should be revised to reflect this change. While most of the project elements appear to be achievable within this time frame, the removal of uncontaminated oil and on site water treatment may potentially extend beyond six months.

The contract language under C, "Parties and Responsibilities", item 4 should include "or designated representative" in addition to the State Project Coordinator. Rick Engel has previously submitted revisions to the contract which we anticipate will be reflected in the final contract.

We appreciate your consideration of this action and anticipate a favorable response in the near future.

Very truly yours,

**ORIGINAL SIGNED BY
JORGE BERKOWITZ, Ph. D.**

Dr. Jorge Berkowitz
Administrator

BS88:elw

H-2

Facility Name: QUANTA RESOURCES CORPORATION

Location: 1 RIVER ROAD, EDGEWATER, N.J.

EPA Region: II

Person(s) in Charge of the Facility: ANTHONY FARRO

FRANK GABLIANO

Name of Reviewer: EDWARD PUTNAM Date: 10/27/82

General Description of the Facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

THE FACILITY FORMERLY RECYCLED WASTE LUBE OILS, THE COMPANY HAS FILED FOR BANKRUPTCY, LEAVING 380,000 gallons of PCB contaminated oils. The facility contains dilapidated tank and piping, many presently leaking. Hudson River is receiving surface and groundwater runoff resulting in a heavy sheen. Contaminated soils present throughout site.

Scores: $S_M = 12.61$ ($S_{GV} = 0$ $S_{SV} = 21.82$ $S_A = 0$)
 $S_{FE} = 0$
 $S_{DC} = 66.67$

ERS COVER SHEET

ATTACHMENT I I-1

GROUND WATER ROUTE WORK SHEET						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
1 Observed Release	0 45	1		45	3.1	
If observed release is given a score of 45, proceed to line 4 . If observed release is given a score of 0, proceed to line 2 .						
2 Route Characteristics					3.2	
Depth to Aquifer of Concern	0 1 2 3	2		6		
Net Precipitation	0 1 2 3	1		3		
Permeability of the Unsaturated Zone	0 1 2 3	1		3		
Physical State	0 1 2 3	1		3		
Total Route Characteristics Score				15		
3 Containment	0 1 2 3	1		3	3.3	
4 Waste Characteristics					3.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1		18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				26		
5 Targets					3.5	
Ground Water Use	0 1 2 3 4 8 8 10 12 16 18 20 24 30 32 35 40	3	○	9		
Distance to Nearest Well/Population Served		1	○	40		
Total Targets Score				0	49	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			○	57.330		
7 Divide line 6 by 57.330 and multiply by 100 S _{gw} =						

I-2

SURFACE WATER ROUTE WORK SHEET

LB 3.2119

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	0 (45)	1	45	45	4.1
If observed release is given a value of 45, proceed to line 4 . If observed release is given a value of 0, proceed to line 2 .					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	0 1 2 3	1		3	
1-yr. 24-hr. Rainfall	0 1 2 3	1		3	
Distance to Nearest Surface Water	0 1 2 3	2		6	
Physical State	0 1 2 3	1		3	
Total Route Characteristics Score				15	
3 Containment	0 1 2 3	1		3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 (8)	1	8	8	
Total Waste Characteristics Score				26	26
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	0 1 2 (3)	2	6	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40	
Total Targets Score				12	55
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				14040	64,350
7 Divide line 6 by 64,350 and multiply by 100				S _{sw} = 21.82	

AIR ROUTE WORK SHEET

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Rel. (Section)
1 Observed Release	0	1		45	5.1
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S = 0. Enter on line 5 . If line 1 is 45, then proceed to line 2 .					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
Total Targets Score				39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100					S _a = 0

	s	s ²
Groundwater Route Score (S _{gw})	0	0
Surface Water Route Score (S _{sw})	21.82	475.68
Air Route Score (S _a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		475.68
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		21.82
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73$		S _M = 12.61

WORKSHEET FOR COMPUTING S_M

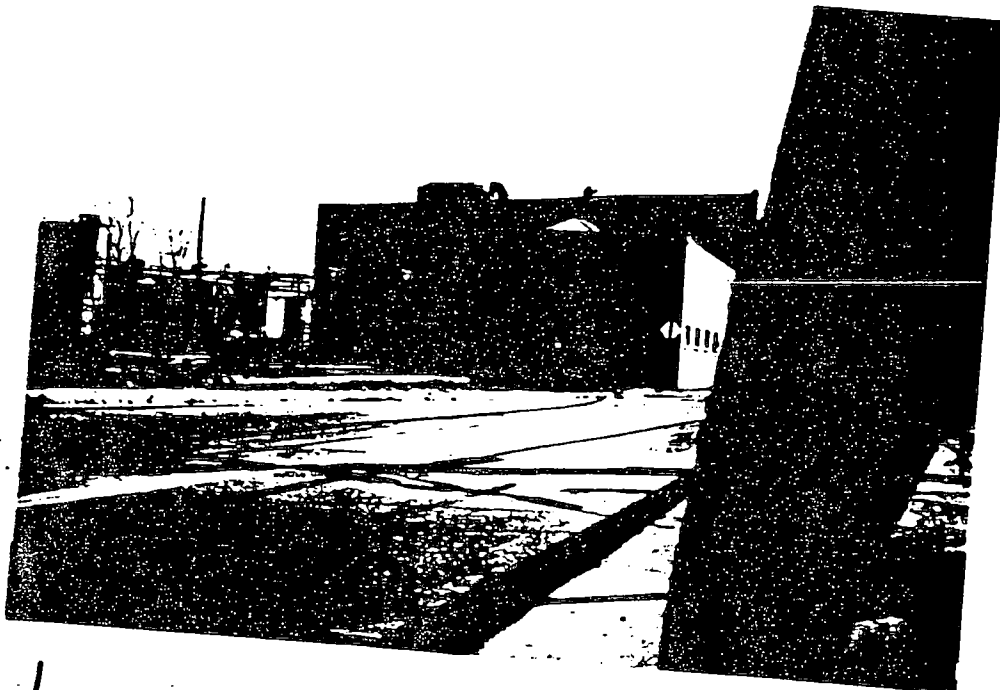
Rating Factor	Assigned Value (Circle One)								Score	Weight	Subtotal
1 Containment	1			3				1		3	7.1
2 Waste Characteristics											7.2
Direct Evidence	0			3				1		3	
Ignitability	0	1	2	3				1		3	
Reactivity	0	1	2	3				1		3	
Incompatibility	0	1	2	3				1		3	
Hazardous Waste Quantity	0	1	2	3	4	5	6	7	8	1	8
Total Waste Characteristics Score										20	
3 Targets											7.3
Distance to Nearest Population	0	1	2	3	4	5			1		5
Distance to Nearest Building	0	1	2	3					1		3
Distance to Sensitive Environment	0	1	2	3					1		3
Land Use	0	1	2	3					1		3
Population Within 2-Mile Radius	0	1	2	3	4	5			1		5
Buildings Within 2-Mile Radius	0	1	2	3	4	5			1		5
Total Targets Score										24	
4 Multiply 1 x 2 x 3											1,440
5 Divide line 5 by 1,440 and multiply by 100											SFE - <input type="text"/>

SITE: EDGEWATER TERMINAL (QUANT

I.D. 280

DATE: 3/26/85

IR 3 2123

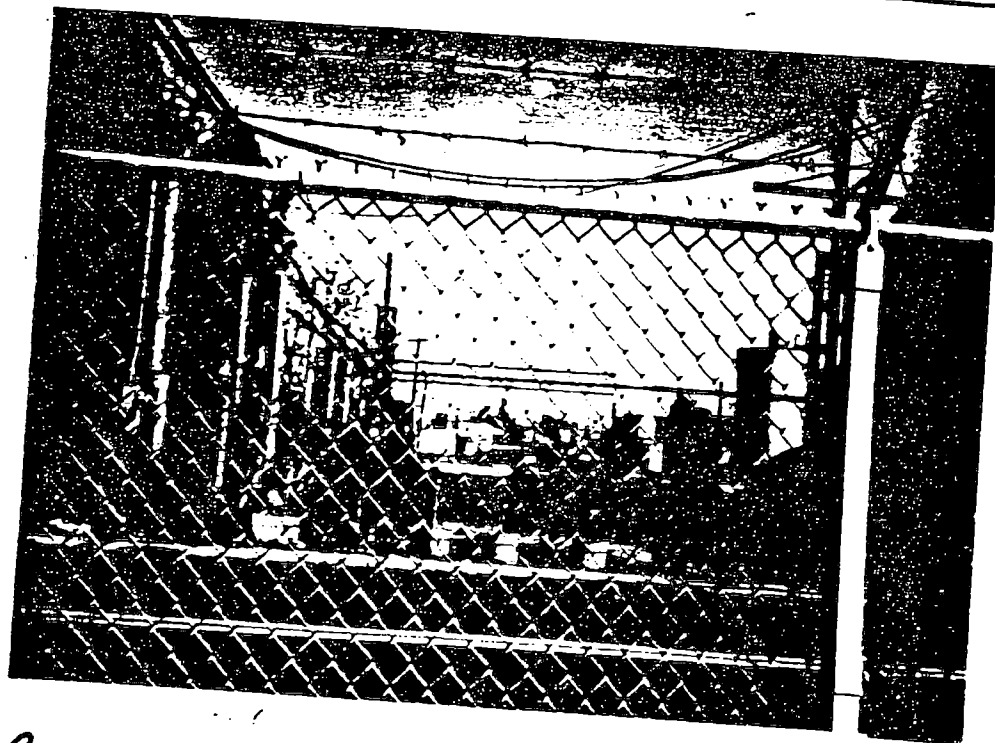


FRAME: 1

TIME: 3:15 P.M.

DIRECTION: SOUTH

DESCRIPTION: VIEW OF MAIN BUILDING ADDRESS 163 RIVER ROAD



FRAME: 2

TIME: 3:17 P.M.

DIRECTION: EAST

DESCRIPTION: VIEW OF BUILDING & BLOCKED ENTRANCE

DIRECT CONTACT WORK SHEET

LB 3.2124

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0 45	1		45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	FENCE W/HOLES RIVER 0 1 2 3	1	2	3	8.2
3 Containment	SPILLAGE SEEPAGE INTO RIVER 0 15	1	15	15	8.3
4 Waste Characteristics Toxicity	PCB'S 0 1 2 3	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 5	4	20	20	
Distance to a Critical Habitat	0 1 2 3	4	12	12	
SITE IS ADJACENT TO THE HUDSON RIVER, MATERIAL SEEPS INTO THE RIVER. HUDSON RIVER IS A HABITAT FOR THE SHORT NOSED STURGEON					
Total Targets Score			32	32	
6 If line 1 is 45, multiply 1 x 4 x 5					
If line 1 is 0, multiply 2 x 3 x 4 x 5			14400	21,600	
7 Divide line 6 by 21,600 and multiply by 100 SDC = 66.67					

DRAINAGE
 ≈ 4600
 ≈ 2 0.5 mi²
 DENSITY = 9200 PEOPLE
 mi²
 : 8000 CLERKS
 OFFICE

E SIMILAR DENSITY
 FOR OTHER SURROUNDING AREAS

SITE IS ON RIVER THE
 RADIUS FOR 180° ONLY

EA FOR 1/2 MI. RADIUS FOR 180° = 1.57 sq. mi

POPULATION = 9200 X 1.57 ≈ 14,400 PEOPLE

MALCOLM
PIRNIE

LB 3.2125

OFF - SITE RECONNAISSANCE

Date: 3/26/85

Time: 2:55 PM

Site ID No. 280

Location: EDGEWATER TERMINAL (QUANTA)

Address: RIVER ROAD (EITHER 1 OR 163)

City, State: EDGEWATER, BERGEN

Zip: 07020

Personnel: JAMES YOUNG

Title: GEOLOGIST

NICK RATONDA

CIVIL ENGINEER

Conditions: SUNNY

Temperature: 55°F

Signature: James Young

Date: 3/26/85

Witness: Nicholas C. [Signature]

Date: 3/26/85

Subject: EDGEWATER TERMINAL (QUANTA) Site ID No. 280

Date: 3/26/85 Page No.

SITE IS INACTIVE FACILITY OF QUANTA RESOURCES. OBVIOUSLY HAS NOT BEEN IN OPERATION FOR SOME TIME. FACILITY IS CLEAN WITH FADING PAINT AND SEVERAL HUNDRED CAPPED 55 GAL DRUMS. THE GUARD IN THE GATEHOUSE TO THE ADJACENT INDUSTRIAL COMPLEX TOLD US THAT THEY HAVE BEEN OUT OF BUSINESS SOME TIME HAVING BEEN "SHUT DOWN BY THE EPA". THERE IS A TRAILER/OFFICE ON SITE WHICH WAS TENANTED AT THE TIME OF THIS INSPECTION. SITE IS PAVED AND IN A HEAVY INDUSTRIAL AREA ADJACENT TO THE HUDSON RIVER.

Signature: James R Young

Date: 3/26/85

Witness: Richard C. [unclear]

Date: 3/26/85

Subject: EDgewater TERMINAL (QUANTA) Site ID No. 280
 Date: 3/26/85 Page No. 3 OF 9
 ASA: 100 Frame: 19-25 To: 1-5

19 & 21 SOUTHWEST AT DRUMS AND TANKS IN MAIN YARD

22 DRUMS LOOKING SOUTH

23-24A SOUTH AT TRAILER AND MAIN YARD

1 SOUTH AT MAIN BUILDING ADDRESS 163 RIVER ROAD

2 EAST AT BLOCKED MAIN ~~W~~ ENTRANCE

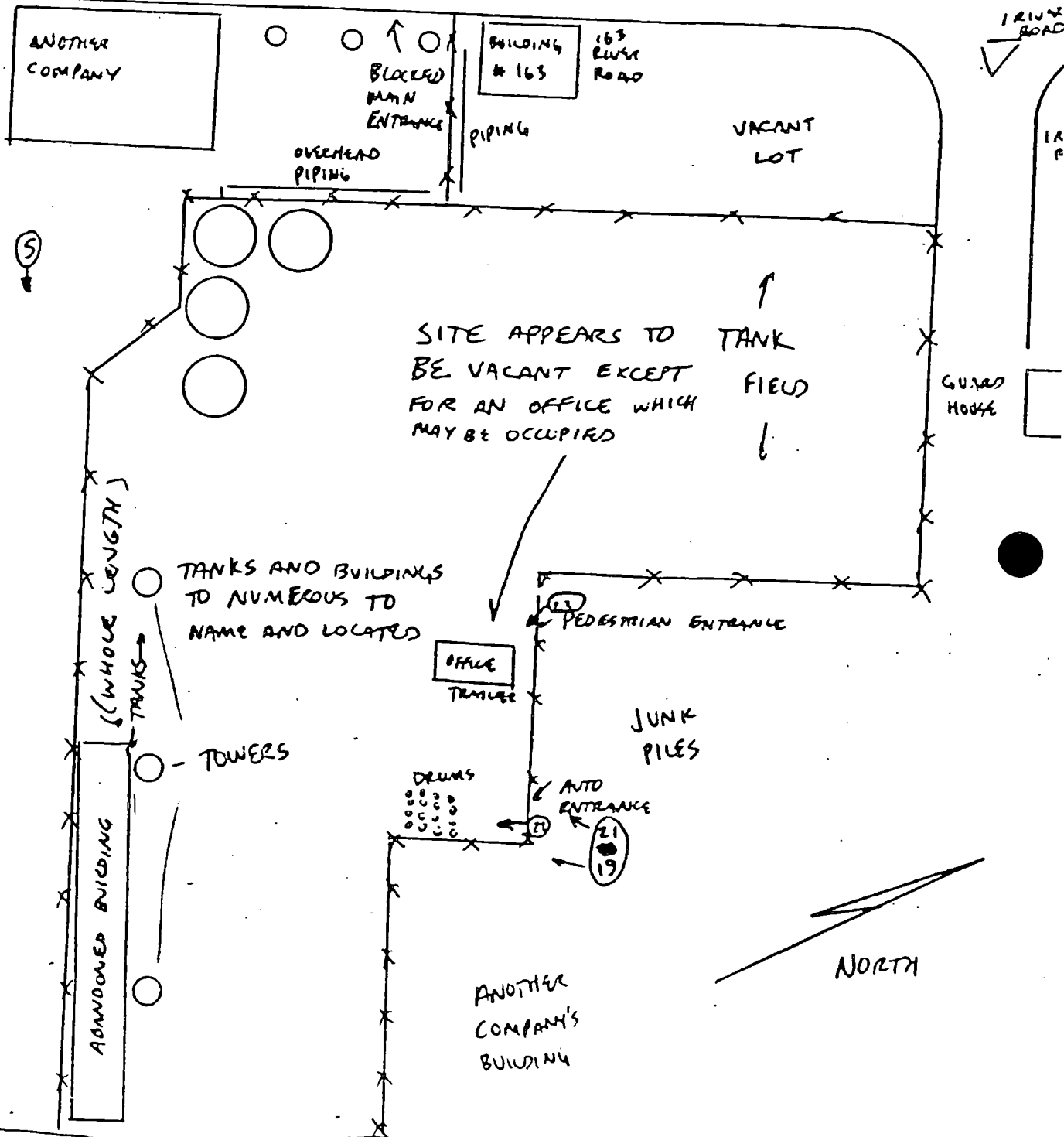
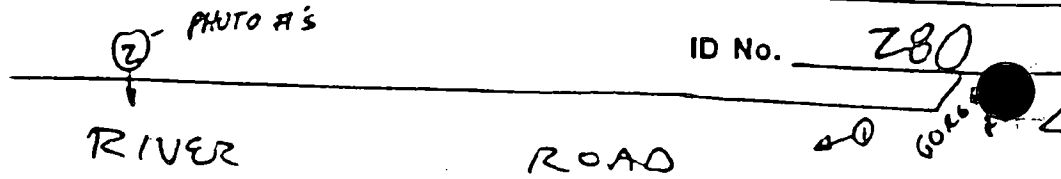
3-5 SOUTHERN BOUNDARY FROM NORTHEAST TO EAST SHOWING TANKS AND ABANDON BUILDING

Signature: Nicholas C. Aitah

Date: MARCH 26, 1985

Witness: Jane Young

Date: 3/26/85



Signature: Nicholas C. Antonic
Witness: James Young

HUDSON RIVER
Date: 3/26/85
Date: 3/26/85



QUANTA RESOURCES
 © EDGEWATER TERMINAL

WASER

MALCOLM
PIRNIE

SITE NAME: Edgewater Terminal
(aka Quanta Resources)

ID NO.: 280

LOCATION: Hudson
Berger
1 River R
Edgewater

FILE	SEARCH DATE	REVIEWER	RCRA 3001 FORM	CERCLA 103C FORM	PRELIMINARY INSP. REPORT	FIELD INSPECTION REPORT	AGENCY INTERNAL REPORTS	RESP. PARTY MEMOS	FORMAL REPORTING CORRESPONDENCE	SITE SKETCHES	ANALYTICAL DATA	SECOND SEARCH DATE	REMARKS	Q/ ONE
HSMA	3/20/85	R											400 lbs Heavy Duty Drums Site #2 (HRT)	

CODES:

- ✓ REVIEWED AND COPIED
- X REVIEWED BUT NOT COPIED
- NF NOT FOUND

MALCOLM
PIRNIE

SITE NAME: Edgewater Terminal

ID NO.: 280

LOCATION: 1 River Rd Edgewater
(check address printed to be in Keamy.)

FILE	SEARCH DATE	REVIEWER	RCRA 3001 FORM	CERCLA 103C FORM	PRELIMINARY INSP. REPORT	FIELD INSPECTION REPORT	AGENCY INTERNAL REPORTS	RESP. PARTY MEMOS	FORMAL REPORTING CORRESPONDENCE	SITE SKETCHES	ANALYTICAL DATA	SECOND SEARCH DATE	REMARKS	Q/CHE
EPA/30111	3/21/85	GPV				✓	✓	✓	✓				Referenced in Site Quanta Resources Inc. - other info on file N/Amul.	

CODES:

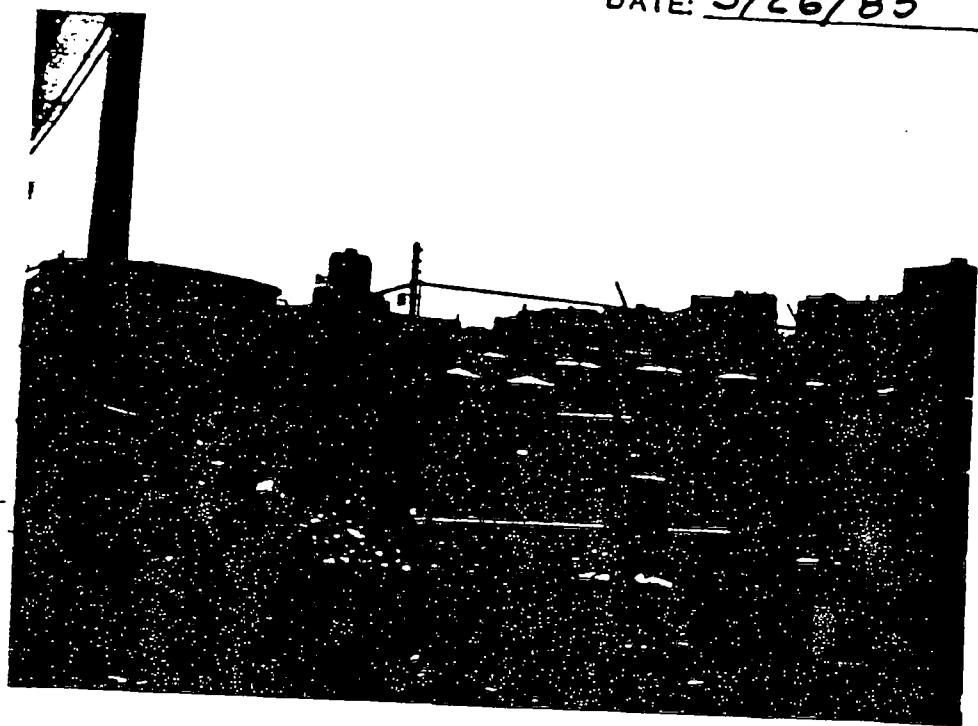
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- X REVIEWED BUT NOT COPIED
- NF NOT FOUND

SITE: EDGEWATER TERMINAL (PLANT)

I.D. 280

DATE: 3/26/85

LB 3.2



FRAME: 19 TIME: 3:00 P.M. DIRECTION: SOUTHWEST
DESCRIPTION: VIEW OF DRUMS & TANKS IN MAIN YARD



FRAME: 21 TIME: 3:00 P.M. DIRECTION: SOUTHWEST
DESCRIPTION: VIEW OF DRUMS & TANKS IN MAIN YARD

PIRNIE

Preliminary Assessment Photo Log

SITE: EDGEWATER TERMINAL (Q-100)

I.D. 280

DATE: 3/26/85

LB 3.2133

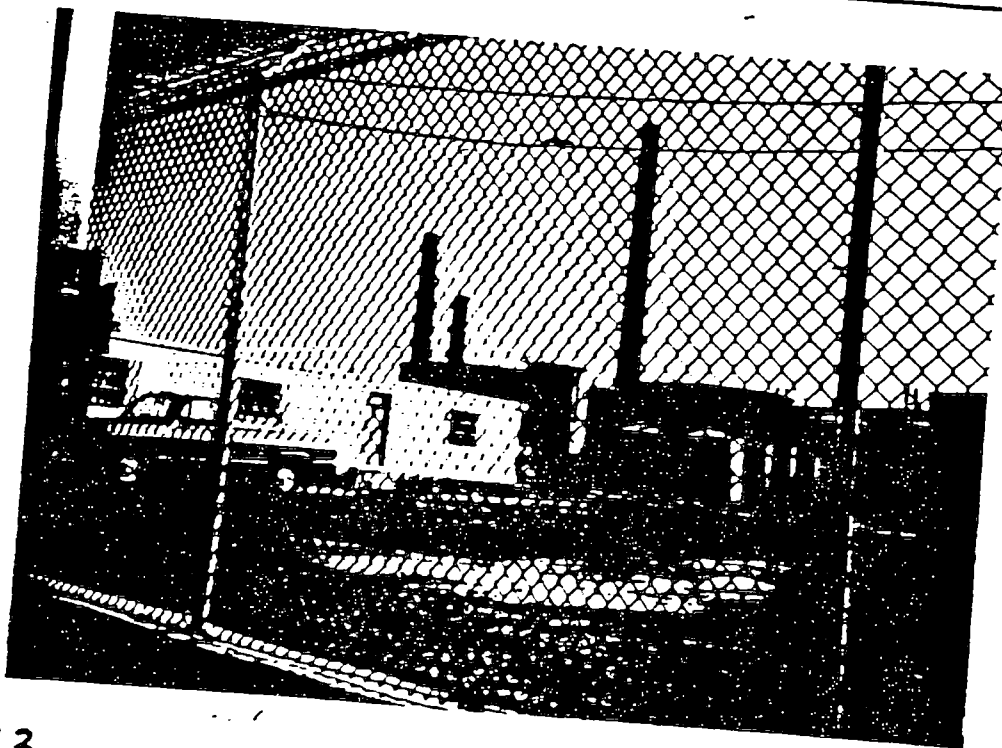


FRAME: 22

TIME: 3:02 P.M.

DIRECTION: SOUTH

DESCRIPTION: VIEW OF DRUMS IN MAIN YARD



FRAME: 23

TIME: 3:10 P.M.

DIRECTION: SOUTH

DESCRIPTION: VIEW OF TRAILER & MAIN YARD

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REMEDIAL INVESTIGATION REPORT

Regarding:

THE LUSTRELON INC. SITE

One River Road
Edgewater, New Jersey

Prepared For

EDGEWATER ASSOCIATES

1200 Union Turnpike
New Hyde Park, N.Y. 11040

November 1994

Prepared By:

PAULUS, SOKOLOWSKI AND SARTOR, INC.

CONSULTING ENGINEERS

67A Mountain Boulevard Extension

Warren, New Jersey 07059

Project No.: 0662-032-04

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1.0 INTRODUCTION

Lustrelon, Inc. formerly occupied four buildings on the northern portion of the Edgewater Associates property located on River Road in Edgewater, New Jersey. The company manufactured lamps and other lighting fixtures for sale by major retail outlets and had been at this location since the early 1970's. The company declared bankruptcy (Chapter 11) in November 1989 and ceased operations on or about August 23, 1990.

With the demise of Lustrelon, the property owner, Edgewater Associates, subsequently entered into an Administrative Consent Order (ACO) with the New Jersey Department of Environmental Protection (NJDEP) in November 1991 to conduct New Jersey Environmental Cleanup Responsibility Act (ECRA) (now the Industrial Site Recovery Act or ISRA) compliance actions. ECRA Initial Notice documents, including a proposed site investigation plan were submitted to NJDEP in January 1992. On May 5, 1992, the NJDEP released a draft comment letter on the proposed sampling plan and a revised Remedial Investigation Workplan (RIWP) was submitted to NJDEP on June 25, 1993. An NJDEP Conditional Approval of the revised RIWP was issued on January 12, 1994. This Remedial Investigation Report (RIR) describes the results of the field investigations and historical site documentation conducted to-date under the NJDEP-approved RIWP.

2.0 SITE DESCRIPTION

The Lustrelon Inc., site comprises approximately 11.7 acres on the Edgewater Associates property identified as Block 91, Lot 4 and located between River Road and the Hudson River in Edgewater, New Jersey. The Lustrelon site is contained on the U.S.G.S. Central Park, New York Quadrangle, 7.5 Minute Series Topographic Map (Figure 1). This site is generally comprised of miscellaneous historical fill placed adjacent and into the original Hudson River tidal zone.

Four brick and concrete block buildings, one to three stories high, were utilized by Lustrelon and covered approximately 4.7 acres. The former Lustrelon facility is depicted on Figure 2. In February 1992, a fire partially destroyed Building 4 and that building was razed shortly thereafter, since it presented a continued fire and safety hazard.

The site is currently comprised of three vacant buildings. Building No. 6 is a one-story concrete block structure of approximately 16,000 square feet (sf); Building No. 5 is a two and three-story brick structure, with a basement, of approximately 16,000 sf; and Building No. 3 is a one and three-story cinder block/brick structure of approximately 80,000 sf. No entrance to a basement in Building 6 was visible, possibly due to additional fill placed around the building. The current general site layout is included as Figure 3. The previous uses of each building are described in Section 2.1.

2.1 Former Site Operations

The primary manufacturing areas were located in Building 4 (Figure 4). Two electroplating, three paint spray, and a degreasing area were located in this building, as well as chemical storage areas. Nickel and brass (zinc and copper) electroplating was conducted manually and with the use of a conveyor system. Paint spraying involved lacquer paints only. The remainder of this building was utilized for warehouse and



LEGEND:
 USGS TOPOGRAPHIC MAP
 7.5 MINUTE SERIES
 CENTRAL PARK, NJ/NY,
 WEEHAWKEN, NJ/NY
 QUADRANGLES

SITE LOCATION MAP LUSTRELON, INC.

PAULUS SOKOLOWSKI & SARTOR, INC.
 CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
 WARREN, NEW JERSEY

Drn By: MR

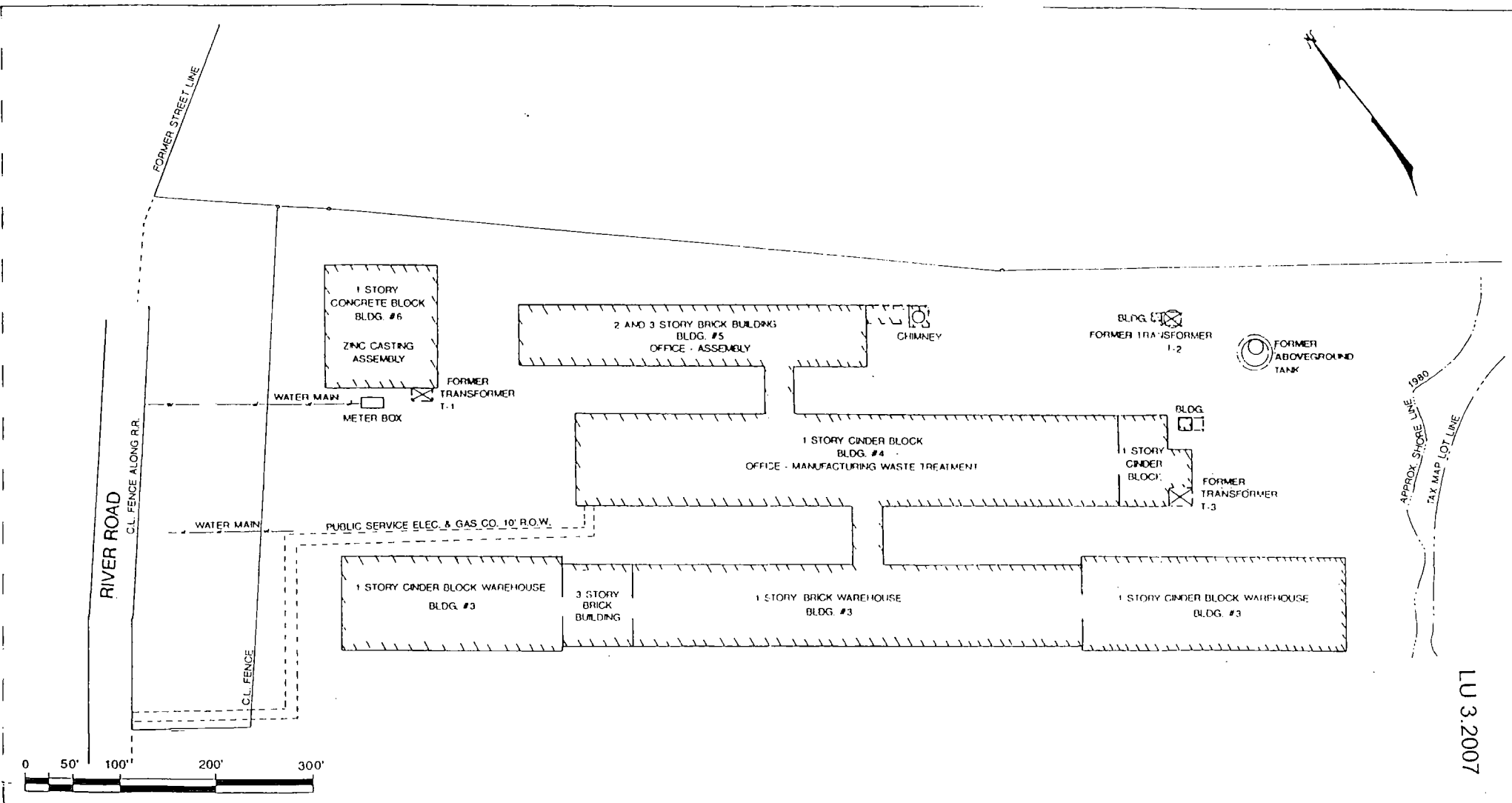
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Proj. No.: 0662-032-04

Ck'd By: JB

Date: August 17, 1994

Fig. No.: 1



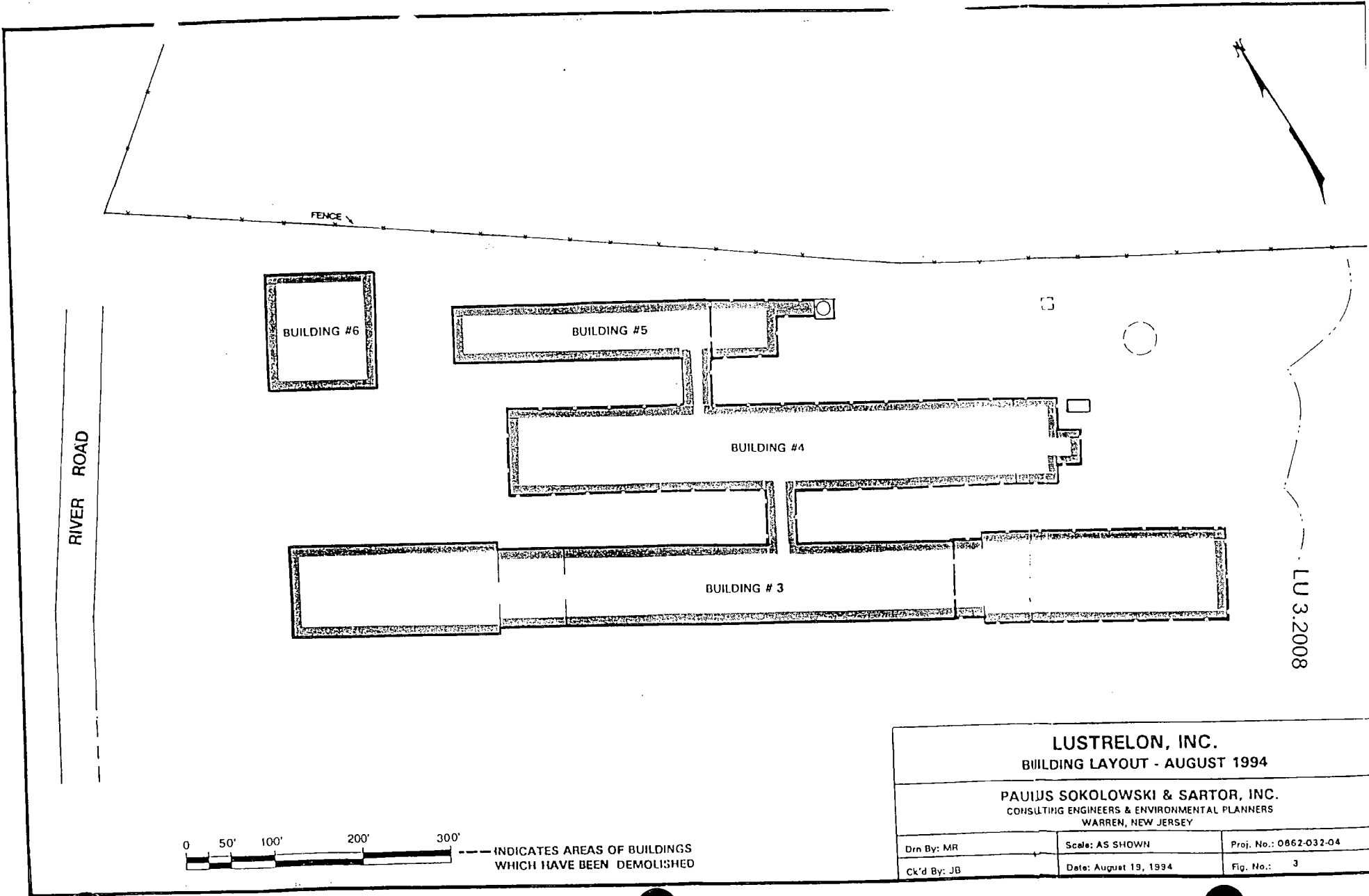
LU 3.2007

LUSTRELON -
EDGEWATER, NEW JERSEY

GENERAL SITE LAYOUT

PAULUS, SOKOLOWSKI & SARTOR
CONSULTING ENGINEERS
Warren, New Jersey

SOURCE: J. AZZOLINA 4/22/81	Drawn By: L.M.	Scale: AS SHOWN	Proj No. 662-032-04
	Checked By: J.N.	Date: AUGUST 18, 1994	Fig No: 2



LU 3.2008

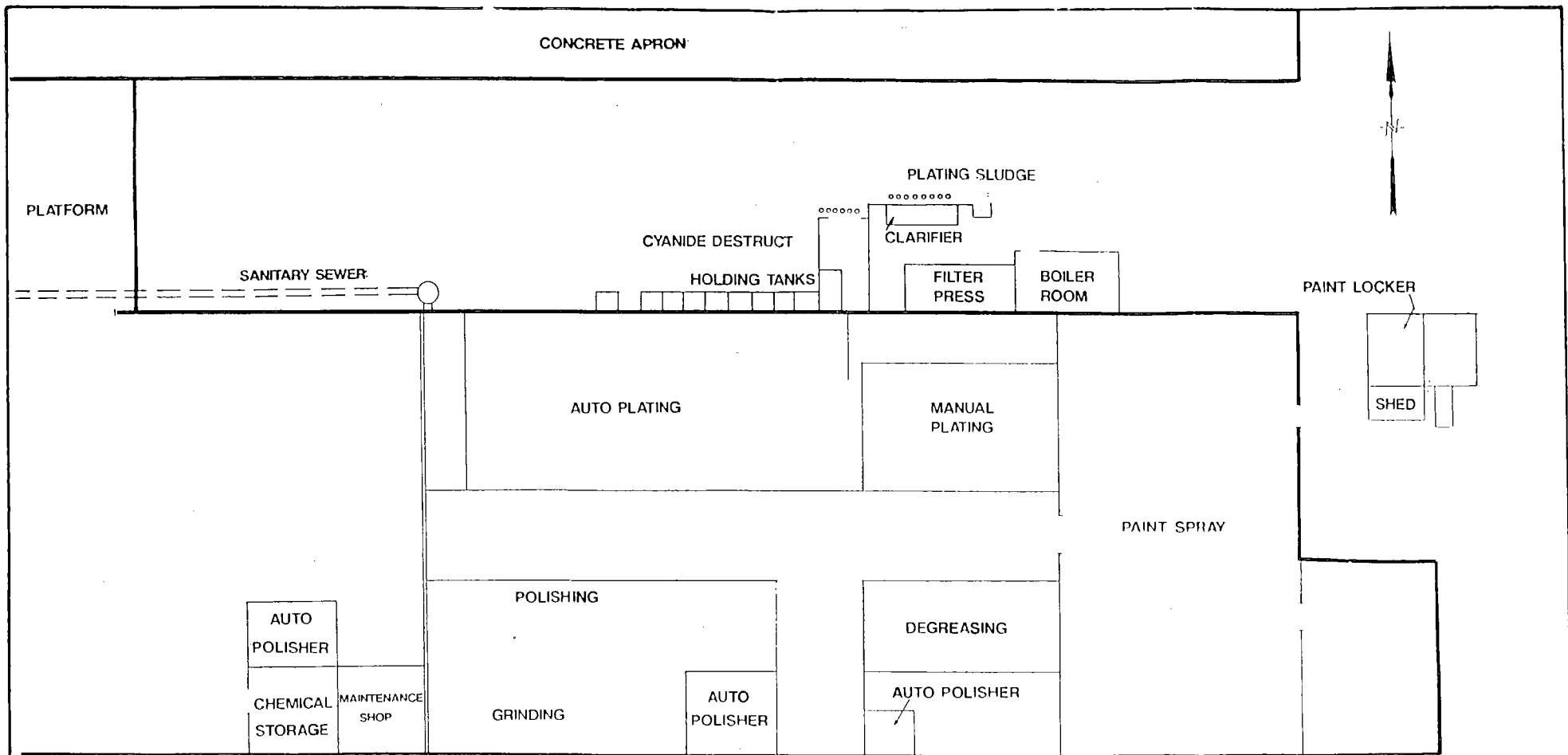
LUSTRELON, INC.
BUILDING LAYOUT - AUGUST 1994

PAULIS SOKOLOWSKI & SARTOR, INC.
 CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
 WARREN, NEW JERSEY

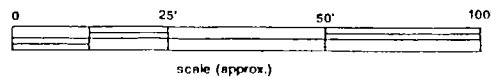
Drn By: MR	Scale: AS SHOWN	Proj. No.: 0862-032-04
Ck'd By: JB	Date: August 19, 1994	Fig. No.: 3



--- INDICATES AREAS OF BUILDINGS WHICH HAVE BEEN DEMOLISHED



SOURCE:
LUSTRELON
11/28/89



LUSTRELON, INC.
BUILDING NO. 4 LAYOUT
MANUFACTURING AREAS

PAULUS, SOKOLOWSKI & SARTOR, INC.
CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
67A MOUNTAIN BLVD. EXT., WARREN, N.J. 07059

Drn By: MJR	Scale: as shown	Proj No: 662-0027-04
Ck'd By: J.J.R.	Date: November 1994	Fig No: 4

office. As previously noted, a fire partially destroyed Building 4 in February 1992; the building was razed shortly thereafter.

Assembly of lamp shades and lamp bodies was conducted in Building 5; office and storage areas were also present. Zinc casting was conducted in Building 6; a small machine shop and storage areas were also present. Building 3 was a warehouse.

This area was previously owned by the Celotex Corp. and Allied Chemical. The specific uses of this property by those previous owners is unknown.

2.2 Geologic Features

The subject property is located within the Newark Basin, in the Piedmont Province of New Jersey. The Newark Basin was formed in the late Triassic period. Sediments comprising the Newark Supergroup were deposited in the shallow non-marine conditions of the basin during late Triassic and early Jurassic time. The Stockton Formation is of the lower Newark Supergroup units and outcrops west of the site in a roadcut along River Road. Stockton rocks are generally yellow-gray to pale brown arkose, siltstone, and mudstone deposits with minor conglomeritic beds. In addition to sediment deposition in the Newark Basin, igneous intrusions and flows of basalt and diabase (Watchung basalt flows and Palisades sill) of Triassic and Jurassic age are found throughout the area. The area along the Hudson River has been extensively in-filled.

The subject property is comprised of miscellaneous urban fill overlying marsh sediments. The depth to groundwater is typically 7 to 14 feet below present grade and groundwater flow is generally east to southeast. Depth to groundwater and rate of flow appear to be only minimally affected by tidal fluctuations in the nearby Hudson River.

3.0 SUMMARY OF HISTORICAL SAMPLING AND ANALYTICAL DATA

Previous site soils screening sampling and analyses were conducted by PS&S in January and November 1988. Sampling stations are described on Tables 1 and 2 and are located on Figure 5. A summary of the sampling programs and results are described below.

In January 1988, soil sampling was conducted at four locations within the Lustrelon, Inc. site. Locations included a drum storage area (B-1), the vicinity of the abandoned boiler stack (B-2), a paint and chemical storage area (B-3) and an apparent spill area south of Building 3 (B-4).

In November 1988, soil sampling was conducted at seven locations. These included three sampling stations adjacent to transformers (LHA-1, 2, and 3), one station at an oily stained area by an exterior drain pipe at Building 6 (LB-1), one station in the vicinity of the exterior cyanide treatment tanks adjacent to the north side of Building 4 (LB-2), and one station adjacent to the secondary containment area surrounding the aboveground fuel oil tank (LB-3). In addition, a sample of what appeared to be fibrous dust was obtained from a manhole south of Building 4 (LMG-1).

Soil samples obtained from sampling stations B-1 through B-4 and LB-1 through LB-3 were analyzed for USEPA Priority Pollutants plus a 40 parameter unknown library search (PP+40) and total petroleum hydrocarbons (TPHC). Soil samples LHA-1, 2, and 3 were analyzed for TPHC and polychlorinated biphenols (PCBs) only.

A summary of the chemical analyses results, together with the February 3, 1994 NJDEP Cleanup Criteria, is presented in Table 3. Parameters whose concentrations exceeded the NJDEP Non-Residential Cleanup Criteria (NRCC), as discussed below, are noted on Figures 6 and 7.

TABLE 1
SOIL SAMPLING LOCATIONS - JANUARY 1988

Sample No.	Description of Area	No. Samples	Sample Depths (ft)
B-1	Drum Storage	2	0-0.5; 5.0-5.5
B-2	Adjacent to Stack	2	0-0.5; 4.0-4.5
B-3	Paint/Chemical Storage	2	0-0.5; 5.0-5.5
B-4	Possible Oil Spillage	2	0-0.5; 5.0-5.5

TABLE 2
SOIL SAMPLING LOCATIONS - NOVEMBER 1988

Station No.	Description of Area	No. Samples	Sample Depths (ft)
1) LHA-1	Transformer	1	0-0.5
2) LB-1	Oily Stained Soil below Interior Drain Pipe	2	0.5-1.0; 6.5-7.0
3) LB-2	Vicinity of CN Treatment Tanks	2	0.5-1.0; 6.0-6.5
4) LHA-2	Transformer	1	0-0.5
5) LB-3	Aboveground Oil Tank	2	0-0.5; 6.5-7.0
6) LHA-3	Transformer	1	0-0.5
7) LMG-1	Manhole with Fibrous Dust (Non Soil)	1	0-0.5

TABLE 3
LUSTRELON, INC.
PRIORITY POLLUTANT AND PETROLEUM HYDROCARBON ANALYSIS
JANUARY 1988

Sample No.	B-1 AS1	B-1 AS2	B-2 AS1	B-2 AS2	B-3 AS1	B-3 AS2	B-4 AS1	B-4 AS2	NJDEP Residential Direct Contact Soil Cleanup Criteria ⁽¹⁾	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria ⁽¹⁾	NJDEP Impact to Groundwater Soil Cleanup Criteria ⁽¹⁾
Sample Depth	0-0.5'	5.0-5.5'	0-0.5'	4.0-4.5'	0.0.5'	5.0-5.5'	0-0.5'	5.0-5.5'			
Date Sampled	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88	1/22/88	1/21/88			
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	14	340	*
Arsenic	211	64.9	289	148	115	78.6	123	104	20	20	*
Beryllium	ND	1 B	0.7 B	ND	ND	ND	ND	5.3	1	1	*
Cadmium	6.3	2.7 B	12.7	32.2	7.4	3 B	6.2	4.1 B	1	100	*
Chromium	22.7	14.7	54.9	13.4	19.8	32.8	12.5	12.7	500	500	*
Copper	96.5	105	171	99.9	80.6	33.4	155	249	600	600	*
Lead	22	624	63.1	107	65.1	19.4	143	391	400	600	*
Mercury	ND	48.1	ND	ND	ND	ND	ND	0.59	14	270	*
Nickel	36.1 B	23.3 B	63.7	28	36.8 B	19.2 B	25.6 B	35.2 B	250	2400	*
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	63	3100	*
Silver	ND	ND	ND	ND	ND	ND	ND	ND	110	4100	*
Thallium	ND	ND	ND	ND	ND	ND	ND	4.8	2	2	*
Zinc	53.1	161	126	212	136	50.9	91.3	391	1,500	1,500	*
Cyanide	471	ND	ND	ND	ND	ND	ND	ND	1,100	21,000	*
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	50
Petroleum Hydrocarbons	25635	355	11846	260	16895	474	1177	7860	10,000 ²	10,000 ²	*
Pesticides	ND	ND	ND	ND	ND	ND	ND	ND	*	*	*
PCBs	0.39	ND	ND	ND	1.4	ND	ND	ND	0.49	2	50
Methylene Chloride	.002JB	.004JB	.002JB	.003JB	.003JB	.002JB	.003JB	.004JB	49	210	1
Acetone	.003JB	.007JB	.003JB	.004JB	.005JB	.006JB	.008JB	.015B	1000	1000	100
1,1,1 Trichloroethane	.008B	.004JB	.003JB	.004JB	.003JB	.003JB	.005JB	.003JB	210	1000	50
TI VOCs	ND	ND	ND	ND	ND	ND	ND	ND	*	*	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - NJDEP 2/3/94 Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TA 3
LUSTREON, INC.
PRIORITY POLLUTANT AND PETROLEUM HYDROCARBON ANALYSIS
JANUARY 1988

Sample No.	B-1 AS1	B-1 AS2	B-2 AS1	B-2 AS2	B-3 AS1	B-3 AS2	B-4 AS1	B-4 AS2	NJDEP Residential Direct Contact Cleanup Criteria ^(b)	NJDEP Non-Residential Direct Cleanup Criteria ^(b)	NJDEP Impact to Groundwater Cleanup Criteria ^(b)
Sample Depth (ft)	0-0.5'	5.0-5.5'	0-0.5'	4.0-4.5'	0.0.5'	5.0-5.5'	0-0.5'	5.0-5.5'			
Date Sampled	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88	1/21/88			
Acenaphthylene	ND	ND	ND	0.43J	ND	ND	ND	ND	*	*	*
Acenaphthene	ND	1.8J	0.38	ND	ND	ND	ND	ND	3,400	10,000	100
Anthracene	ND	2.7J	0.77J	ND	ND	ND	ND	ND	10,000	10,000	100
Benzo (A) Anthracene	ND	4.9	4.2	11.0	2.9j	ND	ND	ND	0.9	4.0	500
Benzo (A) Pyrene	ND	4.9	4.2	12.0	ND	ND	ND	ND	0.66	0.66	100
Benzo (B) Fluoranthene	ND	7.1	6.9	26.0	ND	ND	ND	ND	10.9	4.0	50
Benzo (K) Fluoranthene	ND	8.0	9.6	ND	ND	ND	ND	ND	0.9	4.0	500
Benzo (G,H,I) Perylene	ND	ND	ND	ND	ND	ND	ND	ND	*	*	500
Chrysene	ND	4.4	3.4J	ND	3.3J	ND	ND	ND	9.0	40	500
Dibenz (a,h) Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	0.66	0.66	500
Fluoranthene	0.36J	12.0	6.1	ND	6.5	ND	ND	ND	2,300	10,000	500
Fluorene	ND	0.89J	0.38J	ND	ND	ND	ND	ND	2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	0.9	4.0	500
Naphthalene	ND	ND	0.77J	8.1	ND	ND	ND	ND	230	4,200	100
Bis (2-ethyl hexyl) phthalate	3.6	4.0J	3.4J	ND	ND	ND	3.8	ND	49	210	100
Phenanthrene	ND	10.0	3.8	26.0	2.5J	ND	ND	ND	*	*	*
Pyrene	0.36J	12.0	6.9	ND	4.0	ND	ND	ND	1,700	10,000	100
2-Methylnaphthalene	ND	ND	0.38J	3.0J	ND	ND	ND	ND	*	*	*
Dibenzofuran	ND	.044J	0.38J	0.43J	ND	ND	ND	ND	*	*	*
Di-N-Octylphthalate	0.72J	0.44J	0.77J	ND	ND	ND	ND	ND	1,100	10,000	100
Total BN Organics	3.6	63.3	42.08	83.1	10.5	ND	3.8	ND	*	*	*
Total TI BN/AE Organics	62.4J	65.2J	49.4J	63.2J	102.1J	185.3J	239.9J	119.7J	*	*	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analyzed

* - No current action level guideline.

1 - NJDEP 2/3/94 Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria

TABLE 3
LUSTRELON, INC.
PRIORITY POLLUTANT AND PETROLEUM HYDROCARBON ANALYSIS
JANUARY 1988

Sample No.	LB-1A	LB-1B	LB-2A	LB-2B	LB-3A	LB-3B	LHA-1	LHA-2	LHA-3	NJDEP ⁽¹⁾ Residential Direct Contact Soil Cleanup Criteria	NJDEP ⁽¹⁾ Non- Residential Direct Contact Soil Cleanup Criteria	NJDEP ⁽¹⁾ Impact to Groundwater Soil Cleanup Criteria
Sample Depth	0-0.5'	6.5-7.0'	0.5-1.0'	6.0-6.5'	0.0-0.5'	6.5-7.0'	0 - 0.5'	0 - 0.5'	0 - 0.5'			
Date Sampled	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88			
Antimony	ND	ND	ND	ND	ND	ND	NA	NA	NA	14	340	*
Arsenic	5	3.7	2.1	2.1	0.6	5.5	NA	NA	NA	20	20	*
Beryllium	ND	ND	ND	1.3	0.7	ND	NA	NA	NA	1	1	*
Cadmium	1.92	1.5	1.1	0.5	1.1	1.7	NA	NA	NA	1	100	*
Chromium	14	9.9	14.3	18.5	7.09	6.07	NA	NA	NA	500	500	*
Copper	93	132	74.9	85.9	55.3	289	NA	NA	NA	600	600	*
Lead	253	158	102	138	50	274	NA	NA	NA	400	600	*
Mercury	0.31	0.21	0.15	1.4	0.03	0.29	NA	NA	NA	14	270	*
Nickel	30	27.1	34.3	34.1	24.2	29.3	NA	NA	NA	250	2400	*
Selenium	ND	ND	ND	ND	ND	ND	NA	NA	NA	63	3100	*
Silver	9.15	ND	ND	ND	ND	ND	NA	NA	NA	110	4100	*
Thallium	ND	ND	ND	ND	ND	ND	NA	NA	NA	2	2	*
Zinc	160	137	51	171	105	261	NA	NA	NA	1,500	1,500	*
Cyanide	1.05	0.55	0.43	0.41	0.3	0.81	NA	NA	NA	1,100	21,000	*
Phenol	ND	ND	0.36	ND	0.33	ND	NA	NA	NA	10,000	10,000	50
Petroleum Hydrocarbons*	6460	3050	5090	370	16200	19800	330	1100	2280	10,000 ⁽²⁾	10,000 ⁽²⁾	*
PCBs	ND	ND	ND	ND	ND	ND	0.973	60.7	3.97	0.49	2	50
Pesticides	ND	ND	ND	ND	ND	ND	NA	NA	NA	*	*	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - NJDEP 2/3/94 Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 3
LUSTRELON, INC.
PRIORITY POLLUTANT AND PETROLEUM HYDROCARBON ANALYSIS
JANUARY 1988

Sample No.	LB-1A	LB-1B	LB-2A	LB-2B	LB-3A	LB-3B	LHA-1	LHA-2	LHA-3	NJDEP Residential Direct Contact Soil Cleanup Criteria	NJDEP Non-Residential Direct Contact Soil Cleanup Criteria	NJDEP Impact to Groundwater Soil Cleanup Criteria
Sample Depth	0-0.5'	6.5-7.0'	0.5-1.0'	6.0-6.5'	0.0-0.5'	6.5-7.0'	0 - 0.5'	0 - 0.5'	0 - 0.5'			
Date Sampled	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88	11/2/88			
Benzo(A)Pyrene	1.54	1.29	27.6	1.45	15.7	8.74	NA	NA	NA	0.66	0.66	100
Naphthalene	ND	ND	21.7	0.807 J	ND	1.93	NA	NA	NA	230	4,200	100
Methylnaphthalene	0.07 J	0.054 J	9.17	0.373 J	0.115 J	6.4	NA	NA	NA	*	*	*
Dibenzofuran	0.046 J	0.074 J	14.3	0.62 J	ND	ND	NA	NA	NA	*	*	*
Acenaphthylene	0.069 J	ND	0.414 J	ND	ND	ND	NA	NA	NA	*	*	*
Diethylphthalate	0.081 J	0.089 J	ND	0.119 J	ND	ND	NA	NA	NA	10,000	10,000	50
Di-N-OctylPhthalate	0.052 J	0.052 J	ND	ND	0.093 J	0.129 J	NA	NA	NA	1,100	10,000	100
Indeno(1,2,3-CD)Pyrene	2.16	1.88	39.7	1.57	33.2	16.3	NA	NA	NA	0.9	4	500
Benzo(G,H,I)Perylene	2.18	2.29	41.8	2.15	37.2	17.7	NA	NA	NA	*	*	*
N-Nitrosodiphenylamine	ND	ND	0.488 J	ND	ND	15.9	NA	NA	NA	140	600	100
Dibenz(A,H)Anthracene	ND	ND	11.9	ND	9.65	4.9	NA	NA	NA	0.66	0.66	500
Butylbenzyl Phthalate	ND	ND	ND	ND	0.492 J	ND	NA	NA	NA	1,100	10,000	100
Di-N-Butyl Phthalate	1.67B	1.28B	1.55B	1.67B	3.47B	3.18B	NA	NA	NA	1,100	10,000	100
Fluoranthene	1.89	1.87	95.4	3.23	22.5	20.9	NA	NA	NA	2,300	10,000	500
Pyrene	2.94	3.69	110.0	7.04	23.0	28.1	NA	NA	NA	1,700	10,000	500
Bis(2 Ethylhexyl)Phthalate	1.33B	1.57B	2.16B	1.11B	23.0B	4.54B	NA	NA	NA	49	210	100
Acenaphthene	0.137J	0.203J	23.4	1.01J	ND	ND	NA	NA	NA	3,400	10,000	100
Fluorene	ND	0.133J	20.9	1.06J	ND	ND	NA	NA	NA	2,300	10,000	100
Phenanthrene	1.26	1.58	128.0	5.24	14.8	18.4	NA	NA	NA	*	*	*
Anthracene	0.25J	0.336J	53.2	1.63	ND	3.48	NA	NA	NA	10,000	10,000	500
Benzo(A)Anthracene	1.65	1.4	40.6	2.09	18.1	12.3	NA	NA	NA	0.9	4	500
Chrysene	1.75	1.43	36.4	1.95	17.5	10.4	NA	NA	NA	9	40	500
Benzo(B)Fluoranthene	1.1J	1.04J	21.9	1.25	12.6	7.18	NA	NA	NA	0.9	4.0	50
Benzo(K)Fluoranthene	1.2	0.959J	16.6	0.847J	8.6	5.26	NA	NA	NA	0.9	4	500
Total BN Organics	16.57	15.43	712.57	27.6	212.85	177.89	NA	NA	NA	*	*	*

2,4 Dimethylphenol (.109J) and 4-Methylphenol (.183J) detected at location LB-2A.

All results reported in Parts Per Million (PPM)

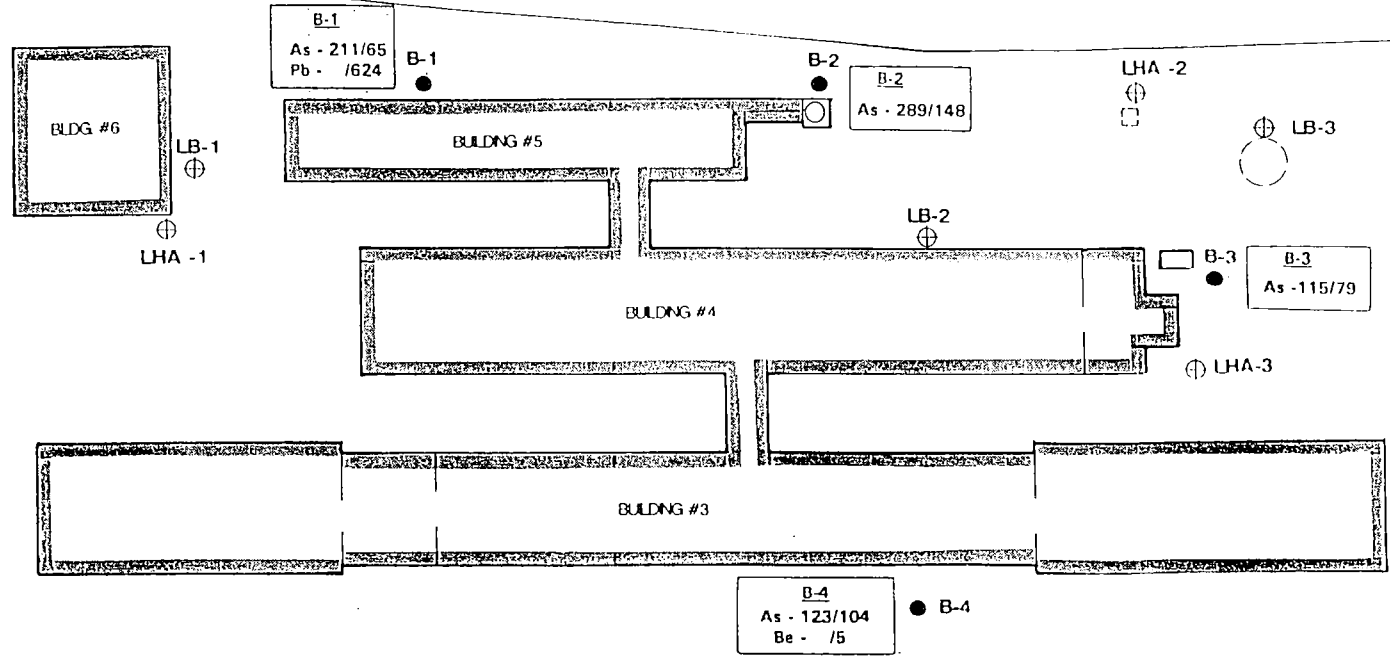
TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - NJDEP 2/3/94 Cleanup Criteria
 ? - Total Organic Compound (TOC) Cleanup Criteria.



RIVER ROAD

FENCE



KEY:

UPPER SAMPLE/
LOWER SAMPLE (ppm)

NJDEP NON-RESIDENTIAL CLEANUP CRITERIA

As - 20 ppm
Pb - 600 ppm
Be - 1 ppm



LUSTRELON, INC.
1988 ANALYTICAL SOILS DATA -
METALS CONCENTRATIONS EXCEEDING 2/3/94
NJDEP NON-RESIDENTIAL CLEANUP CRITERIA

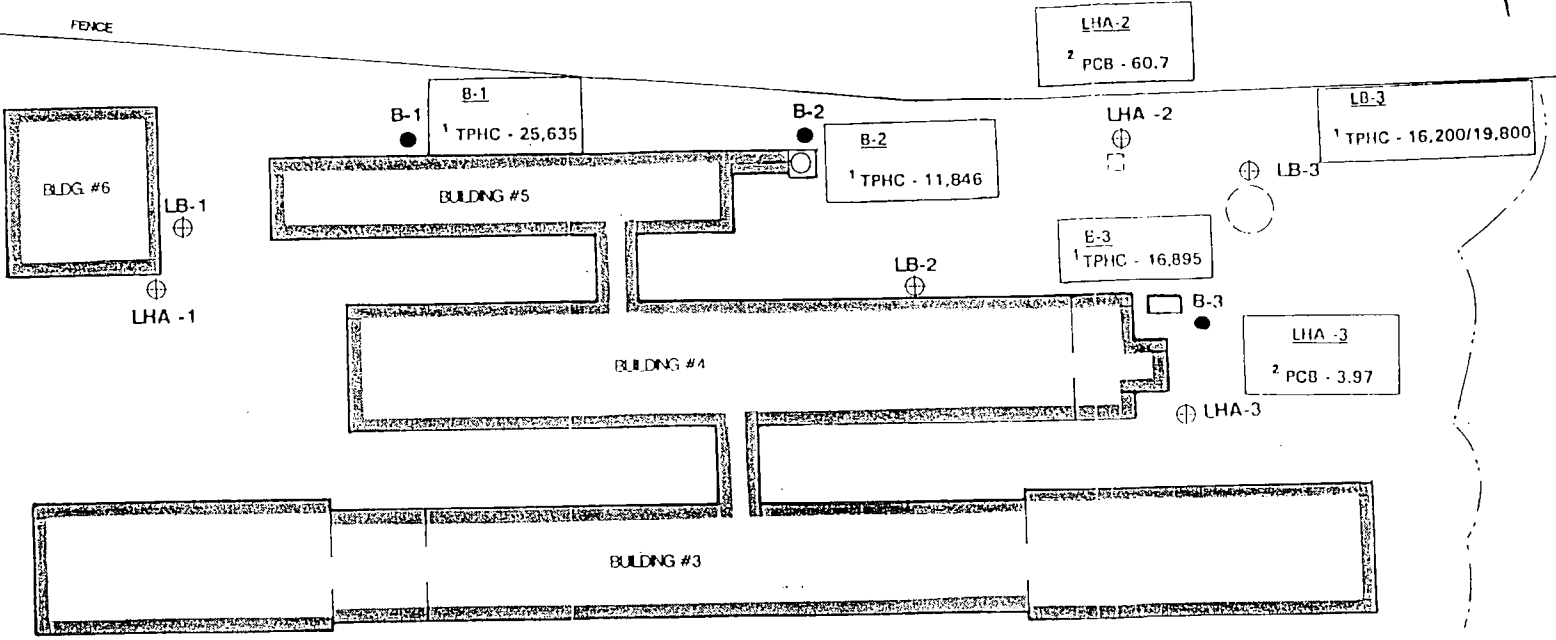
PAULUS SOKOLOWSKI & SARTOR, INC.
CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
WARREN, NEW JERSEY

Dm By: MR	Scale: AS SHOWN	Proj. No.: 0682-032-04
Ck'd By: JB	Date: August 15, 1994	Fig. No.: 6

LU.3.2018

RIVER ROAD

FENCE



1 - 10,000 ppm TOC cleanup criteria

2 - 2 ppm PCB cleanup criteria



Sample Number	B-1 AS1	B-1 AS2	B-2 AS1	B-2 AS2	LB-1A	LB-1B	LB-2A	LB-2B	LB-3A	LB-3B	NJDEP Non-Residential Direct Contact Cleanup Criteria
Depth (Former Grade)	0.0 - 0.5'	5.0 - 5.5'	0.0 - 0.5'	4.0 - 4.5'	0.0 - 0.5'	6.5 - 7.0'	0.0 - 0.5'	6.0 - 6.5'	0.0 - 0.5'	6.5 - 7.0	
Benzo (A) Anthracene	—	4.9	4.2	11.0	—	—	40.6	—	18.1	12.3	4.0
Benzo (A) Pyrene	—	4.9	4.2	12.0	1.54	1.29	27.6	1.45	15.7	8.74	0.66
Benzo (B) Fluoranthene	—	7.1	6.9	26.0	—	—	21.9	—	12.6	7.18	4.0
Benzo (K) Fluoranthene	—	8.0	9.6	—	—	—	16.6	—	8.6	5.26	4.0
Dibenz (a,h) Anthracene	—	—	—	—	—	—	11.9	—	9.65	4.9	0.66
Indeno (1,2,3-CD) Pyrene	—	—	—	—	—	—	39.7	—	33.2	16.3	4.0

LUSTRELON, INC.
1988 ANALYTICAL SOILS DATA -
TPHC, BN & PCB CONCENTRATIONS EXCEEDING 2/3/94
NJDEP NON-RESIDENTIAL CLEANUP CRITERIA

PAULUS SOKOLOWSKI & SARTOR, INC.
CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
WARREN, NEW JERSEY

Dm By: MR	Scale: AS SHOWN	Proj. No.: 0882-032-04
Ck'd By: JB	Date: August 16, 1994	Fig. No.: 7

LU 3.2019

Inorganic Analyses

Soil analytical data obtained in January 1988 did not indicate significant concentrations of inorganic compounds exceeding NJDEP NRCC. A 1.3 parts per million (ppm) concentration of beryllium from sample LB-2B represented a negligible exceedence over the 1.0 ppm NRCC for that parameter.

The soil data obtained in November 1988 indicated site soils (fill) to be generally contaminated with arsenic above the 20 ppm NRCC. Arsenic levels ranged from 64.9 ppm to 289 ppm. (No exceedences of the 20 ppm arsenic NRCC were reported from the January 1988 sampling.) Single occurrences of other exceedences were reported from the subsurface samples obtained from stations B-1 and B-4. At station B-1, a lead concentration of 624 ppm was reported, while at station B-4, beryllium was reported at a concentration of 5.3 ppm. The NRCC for those parameters are 600 and 1.0 ppm, respectively.

Organic Analyses

Total base neutral organic compound (BN) concentrations ranged from non-detectable to 712 ppm. Individual BN parameters whose concentrations exceeded NJDEP NRCC were reported from sampling stations B-1, B-2, LB-1, LB-2, and LB-3. These parameters included benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluorethene, benzo(k)fluorethene, dibenz(a,h,)anthracene, and indeno(1,2,3-cd)pyrene. Concentrations of these individual parameters ranged from 1.29 to 40.6 ppm.

TPHC concentrations ranged from 260 ppm to 25,635 ppm. Samples from four locations exceeded the 10,000 ppm total organic compound (TOC) cleanup criteria. These samples were obtained from sampling stations B-1 (25,635 ppm), B-2 (11,846 ppm), B-3 (16,895 ppm), and LB-3 (16,200 and 19,800 ppm). PCB concentrations were generally below 1 ppm. However, concentrations which exceeded the 2.0 ppm PCB

NRCC were reported from sampling stations LHA-2 (60.7 ppm) and LHA-3 (3.97 ppm). Volatile organic contamination was negligible at all sampling locations, with all values below method detection levels and estimated at less than 0.009 ppm.

The fibrous material observed in an apparent storm drain opening located between Buildings 3 and 4 was analyzed for priority pollutant metals (PPM). The analysis indicated the material contained copper (2,720 ppm), lead (288 ppm) and zinc (650 ppm). Similar looking material had also been observed in the area of a large ventilation fan in Building 4.

4.0 SAMPLING AND ANALYTICAL PROGRAM

As a result of the review of analytical soils data gathered by the property owner in 1988 (and summarized in Section 3.0), and visits to the site, the NJDEP, in its January 12, 1994 approval letter, required additional soil sampling to be conducted at the following locations:

- (1) Additional fill placed on site subsequent to 1988;
- (2) Areas potentially impacted by the February 1992 fire;
- (3) The railroad right-of-way west of Building 6;
- (4) Transformer area adjacent to Building 6 (AOC 9);
- (5) Transformer area northeast of Building 4 (AOC 10);
- (6) Transformer area at east end of Building 4 (AOC 11);

Additional requirements included the installation of a groundwater monitoring well to be installed downgradient of the former fuel oil AST and the conducting of an asbestos survey. NJDEP also required additional areas to be addressed at the completion of the sampling conducted as part of this RIWP. These areas were to include:

- (1) Drum Storage Area (AOC 1) (sample B-1);
- (2) Area adjacent to Boiler Chimney (AOC 2) (sample B-2);
- (3) Paint/Chemical Storage Area (AOC 3) (sample B-3);
- (4) Possible Oil Spillage Area (AOC 4) (sample B-4);
- (5) Stained Soil by Interior Drain Pipe from Building 6 (AOC 5), (sample LB-1);
- (6) Vicinity of Cyanide Treatment Tanks (AOC 6) (sample LB-2); and
- (7) Aboveground Oil Tank (AOC 7) (sample LB-3).

4.1 Soil Sampling and Analytical Program

Soil sampling and chemical analysis were conducted in the following areas as part of this RIWP:

- (1) Additional fill placed on site subsequent to 1988;
- (2) Areas potentially impacted by the February 1992 fire;
- (3) The railroad right-of-way;

- (4) Area adjacent to Building 6 transformer (AOC 9);
- (5) Area adjacent to transformer located northeast of Building 4 (AOC 10);
- (6) Area adjacent to transformer at east end of Building 4 (AOC 11).

An estimated two to nine feet of additional fill has been placed upon various areas of the site. Sample depths have been designated from current grade. The sampling and analytical protocol followed at each of these areas of concern is outlined below. Sampling stations are noted on Figure 8.

Additional Fill

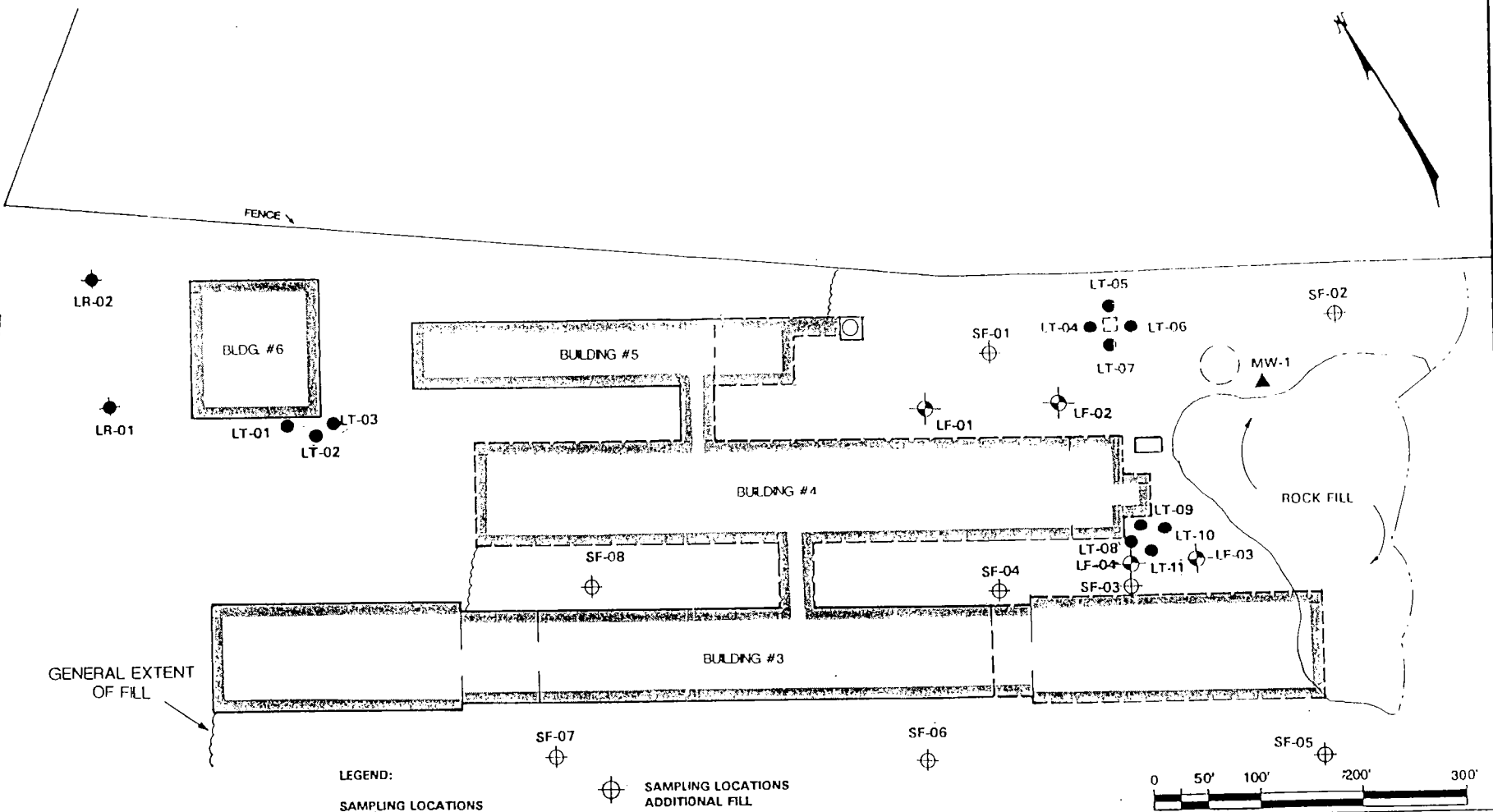
Number of Soil Samples:	Twenty six (26)
Sample Locations:	Eight locations as shown on Figure 8
Sample Depth:	One sample from within each of the following depth intervals: 0.5 - 1.0 foot depth interval, 3.0 - 3.5 foot depth interval, and the 5.5 - 6.0 foot depth interval. (A sample from the 5.5 - 6.0 foot depth interval was not recovered from one of the sampling stations.) A sample was also obtained from the 7.5 - 8.0 foot depth interval at three locations.
Analytical Parameters:	PP+40 and TPHC pH and cation capacity - 15 subsurface samples only

Impacts From Fire

Number of Soil Samples:	Four (4)
Sample Locations:	Four (4) locations located north and east of Building 4.
Sample Depth:	Historic fill, approximately 6 to 10 feet below current grade
Analytical Parameters:	TPHC, PCBs, BN+15, and PPM



RIVER ROAD



LEGEND:

SAMPLING LOCATIONS TRANSFORMERS (LT-01, LT-02 & LT-03)

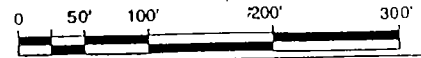
▲ GROUNDWATER MONITORING WELL GROUNDWATER SAMPLE ONLY

--- INDICATES AREAS OF BUILDING WHICH HAVE BEEN DEMOLISHED

⊕ SAMPLING LOCATIONS ADDITIONAL FILL (SF-01 THROUGH SF-08)

⊕ SAMPLING LOCATIONS FIRE IMPACT EVALUATION (LF-01 THROUGH LF-04)

◆ SAMPLING LOCATIONS RAILROAD RIGHT-OF-WAY (LR-01 & LR-02)



NOTE:
ALL SAMPLING CONDUCTED VIA SOIL BORINGS, EXCEPT STATIONS SF-01 THROUGH SF-08. TEST PITS WERE DUG AT THESE LOCATIONS.

LUSTRELON INC.
SOIL SAMPLING LOCATIONS - JUNE 1994

PAULUS, SOKOLOWSKI & SARTOR, INC.
CONSULTING ENGINEERS & ENVIRONMENTAL PLANNERS
WARREN, NEW JERSEY

Drn By: MR	Scale: AS SHOWN	Proj. No.: 0862-032-04
Ck'd By: JB	Date: JULY 29, 1994	Fig. No.: 8

LU 3.2024

Railroad Right-of-Way

Number of Soil Samples: Four (4)

Sample Locations: Two (2) locations west of Building 6.

Sample Depth: 3.0 to 3.5 feet below current grade and 0 to 6 inches above groundwater

Analytical Parameters: TPHC, PCBs, BN+15 and PPM
pH, cation exchange capacity (subsurface samples)

Building 6 Transformer

Number of Soil Samples: Three (3)

Sample Locations: Three (3) locations adjacent to three of the four sides of the transformer pad. Note: The transformer pad abuts Building 6 on one side and was inaccessible to the drill rig.

Sample Depth: Approximate former surface (2.5 to 3.0 feet below current grade)

Analytical Parameters: TPHC and PCBs

Transformer Northeast of Building 4

Number of Soil Samples: Eight (8)

Sample Locations: Four (4) locations adjacent to the four sides of the transformer pad.

Sample Depth: Approximate former 0- to 6-inch depth interval and 6-inch depth interval above groundwater. Current depth intervals ranging from 8 to 12.5 feet below current grade.

Analytical Parameters: TPHC, PCBs, BN + 15, and PPM
pH, cation exchange capacity (one subsurface sample only)

Transformer at East End of Building 4

Number of Soil Samples:	Seven (7)
Sample Locations:	Four (4) locations adjacent to the four sides of the transformer pad. Note: The transformer pad abuts Building 4 on two sides.
Sample Depth:	Approximate former 0- to 6-inch depth interval and 0- to 6-inch depth interval above groundwater. Sample depths range from the 9.5 to 10.0 foot and 11.5 to 12.0 foot depth intervals below current grade.
Analytical Parameters:	TPHC, PCBs, BN + 15, and PPM pH, cation exchange capacity (one subsurface sample only)

Field Sampling Program

Analytical soil samples were generally acquired using a truck-mounted drill rig with hollow stem auger drilling techniques and split-spoon sampling. However, soil borings could not be conducted in some portions of the site due to the rocky nature of the fill. In those areas, a backhoe was utilized to dig test pits to obtain the required samples. Soil samples from stations LT-01 and SF-01 through SF-08 (excluding sample SF-04A) were obtained from test pits. A field photoionization detector was utilized to measure organic vapor levels during field operations and to "screen" soil samples in the field.

Quality Assurance/Quality Control (QA/QC) Program

Prior to the commencement of the soil sampling operations and between each analytical sampling interval, the sampling equipment was decontaminated using the following protocol.

1. Thorough scrub and washing withalconox soap solution and tap water;
2. Rinse with tap water, then distilled/deionized water;
3. Rinse with 10% nitric solution;
4. Rinse with distilled/deionized water;
5. Rinse with pesticide grade acetone;
6. Allow to dry thoroughly; and
7. Final rinse with distilled/deionized water.

The rinse waters generated during decontamination of the sampling equipment were disposed of on-site. During the sampling operations, PS&S representatives wore protective gloves which were changed following the acquisition of each analytical sample to prevent cross-contamination between sampling locations. One field blank was prepared for each day of sampling and analyzed for the same parameters as the analytical samples obtained at the site on that day.

All analytical samples were placed in laboratory-provided glass containers fitted with Teflon seals, placed in an iced cooler, and transported to an NJDEP-certified laboratory accompanied by standard chain-of-custody documentation.

4.2 Groundwater Monitoring Well Installation and Sampling

On June 16, 1994, a groundwater monitoring well was installed approximately 20 feet downgradient of the former aboveground fuel storage tank. Air hammer technique was utilized to advance the boring through the fill material; groundwater was encountered at approximately 14 feet below current grade, at low tide. The well screening was installed within the depth interval of 10 to 30 feet below grade to encompass both the high and low tide levels. Well construction was completed at 30 feet below grade.

The well was constructed in an eight-inch diameter borehole. Four-inch diameter PVC (schedule 40) riser pipe was attached to four-inch diameter PVC well screen (20-slot size) with threaded couplings. The annular space surrounding the well screen was backfilled with No. 2 Morie sand pack, extending to two feet above the well screen.

Bentonite pellets were used to seal the annular space above the sand pack. Upon completion of the well construction operations, a protective steel casing and security cap was installed on the well and grouted into place with a cement collar extending six feet below the ground surface.

Upon satisfactory completion of well construction, the well was evacuated/developed in accordance with NJDEP procedures by the well drilling contractor. The development equipment was decontaminated prior to use following accepted NJDEP protocols. Upon satisfactory well development, the monitoring well was allowed to equilibrate for a period of two weeks prior to sampling, in accordance with NJDEP protocols.

All soil and rock cuttings removed from the borehole during well installation, and the groundwater removed from the well during development and prior to sampling, was collected and containerized for disposal, as may be appropriate.

Quality Assurance/Quality Control (QA/QC) Program

Disposable gloves were worn during the acquisition of the groundwater sample. Prior to the commencement of the monitoring well sampling operations, the teflon sampling bailer was decontaminated prior to sampling in the following manner :

1. Thorough scrub and washing withalconox soap solution and tap water;
2. Rinse with tap water, then distilled/deionized water;
3. Rinse with 10% nitric solution;
4. Rinse with distilled/deionized water;
5. Rinse with pesticide grade acetone;
6. Allow to dry thoroughly; and
7. Final rinse with distilled/deionized water.

One field blank was prepared for the day of sampling and analyzed for the same parameters as the analytical samples obtained at the site. In addition, one trip blank was

prepared by the laboratory and accompanied the sample bottles and samples from the laboratory to the site and from the site to the laboratory. The trip blank was analyzed for VOC+15 parameters.

All analytical samples were placed in laboratory supplied glass containers fitted with Teflon seals, placed in an iced cooler, and transported to a NJDEP-certified laboratory accompanied by standard chain-of-custody documentation.

4.3 Asbestos Survey

A PS&S asbestos-professional visited the site and estimated the quantity and condition of observable suspect asbestos-containing material (SACM) in Buildings 3, 5, and 6. Limited sampling and analysis of SACM was also conducted.

5.0 RESULTS OF SITE INVESTIGATION - SOILS

The results of the soil sampling conducted in the general areas of concern previously noted are reviewed in the following sections. The soil analytical results obtained during this RI are summarized in Tables 4 through 9. QA/QC data are summarized in Table 10.

5.1 Building No. 6 Transformer (AOC No. 9)

Laboratory analysis of a soil sample collected from the 0- to 6-inch depth interval in November 1988 (sample LHA-1) indicated a PCB concentration of 0.97 ppm.

As part of this RI, three soil samples were obtained from the surface soils adjacent to the former transformer pad. The soil samples were obtained from the approximate former 0- to 6-inch depth interval at the east, west and south sides of the pad. Building 6 borders the pad to the north and that area could not be accessed by a drill rig. The three soil samples were analyzed for TPHCs and PCBs (Table 4). TPHC values ranged from non-detectable (ND) to 226 ppm. PCB values ranged from ND to 0.51 ppm.

5.2 Transformer Northeast of Building No. 4 (AOC No. 10)

Laboratory analysis of a soil sample collected from the 0- to 6-inch depth interval in November, 1988 (sample LHA-2) indicated a TPHC concentration of 1,100 ppm and a PCB concentration of 60.7 ppm.

During this RI sampling program, eight soil samples were obtained from four borings, one located on each side of the former transformer pad. Soil samples were obtained from the approximate former 0- to 6-inch depth interval and from the 0- to 6-inch depth interval above groundwater. The eight soil samples were analyzed for TPHC,

TABLE 4
LUSTRELON, INC
BUILDING 6 TRANSFORMER AREA - ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	LT-01	LT-02	LT-03			NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	2'6"-3'	2'6"-3'	2'6"-3'					
Sample Type	Soil	Soil	Soil					
Date	6-9-94	5-31-94	5-31-94					
Petroleum Hydrocarbons	ND	226	192			10,000 ²	10,000 ²	*
pH	NA	NA	NA			*	*	*
Cation Exchange Capacity (CEC)	NA	NA	NA			*	*	*
Total PCBs	0.51	ND	ND			.49	2	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria

PCBs, BN+15, PPM, and hexavalent chromium. (One subsurface sample was also analyzed for pH and cation exchange capacity). See Table 5.

Concentrations of certain BNs exceeded the 2/3/94 NJDEP NRCC. Those parameters included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluorethene, and benzo(k)fluorethene. Concentrations of individual compounds ranged from 1.5 to 18 ppm. Concentrations of arsenic (23 and 36.4 ppm) marginally exceeded the 20 ppm NJDEP NRCC at sampling locations LT-06 and LT-07, while a 1.1 ppm beryllium concentration at LT-05 was also a negligible exceedence over the 1.0 NRCC. Copper concentrations of 3,546 and 5,638 ppm were reported from samples LT-04 and LT-04A; a lead concentration of 2,727 ppm was also reported from sample LT-04A. Hexavalent chromium concentrations were reported as ND.

TPHC values ranged from 67 to 1,275 ppm, while PCB values ranged from ND (from samples LT-05 and LT-05A) to 3,275 ppm. The highest PCB concentrations (3,275 and 173 ppm) were reported from samples LT-06 and LT-06A. All other PCB concentrations were less than 15 ppm. The single cation exchange and pH values taken of the subsurface soils in this area were 122.2 and 8.92, respectively.

5.3 Transformer at East End of Building 4 (AOC No. 11)

Laboratory analyses of a soil sample collected from the 0- to 6-inch depth interval in November 1988 (sample LHA-3) indicated a TPHC concentration of 2,280 ppm and a PCB concentration of 3.97 ppm.

Seven (7) soil samples were obtained from four borings located on each side of the former transformer pad. Nine other borings were attempted in this area to obtain the required samples. However, refusal was encountered in these borings from approximately four to ten feet below grade. Soil samples were obtained from the approximate former 0- to 6-inch depth interval and from the 0- to 6-inch depth interval

TABLE 5
LUSTRELON, INC.
TRANSFORMER AREA NORTHEAST OF BUILDING 4 - ANALYTICAL SUMMARY
MAY AND JUNE 1994

Sample No.	LT-04	LT-04A	LT-05	LT-05A	LT-06	LT-06A	LT-07	LT-07A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	8'- 8'6"	12'6"-13'	6'6'-7'	8'6"-9'	7'-7'6"	12'6'-13'	7-7'6"	12'6"-13'			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	5-31-94	5-31-94	6-1-94	6-1-94	5-31-94	5-31-94	5-31-94	5-31-94			
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	10	*
Antimony	ND@0.1	ND@0.2	ND@0.1	ND@0.2	ND@0.1	ND@.01	ND@0.2	ND@0.2	14	340	*
Arsenic	16.6	11.5	16.5	8.5	36.4	16.3	23.0	9.0	20	20	*
Beryllium	0.6	1.0	1.1	0.6	0.7	0.6	0.8	0.7	1	1	*
Cadmium	0.7	1.2	1.5	1.2	1.1	0.3	0.9	0.9	1	100	*
Chromium	16.5	22.6	20.6	9.1	17.5	15.4	18.4	15.1	500	500	*
Copper	3546	5638.6	37.7	36.3	95.6	96.4	98.0	71.4	600	600	*
Lead	201.4	2727.1	410.2	26.3	150.3	41.6	148.7	76.9	400	600	*
Mercury	1.085	0.280	ND@0.183	ND@0.177	0.230	ND@0.176	1.240	ND@0.185	14	270	*
Nickel	17.7	37.0	25.7	9.6	30.8	13.4	23.3	19.1	250	2400	*
Selenium	ND@0.1	ND@0.1	ND@0.1	1.7	ND@0.1	ND@0.1	ND@0.1	ND@0.1	63	3100	*
Silver	1.4	3.4	2.9	0.9	ND@0.7	ND@0.7	1.9	1.4	110	4100	*
Thallium	0.2	0.2	ND@0.03	0.4	0.1	0.1	0.2	ND@0.04	2	2	*
Zinc	255.2	407	156.2	22.4	330.4	71.1	164.9	123.4	1500	1500	*

All results reported in Parts Per Million (PPM)

- TI - Tentatively Identified
- ND - Not Detected at Method Detection Limit
- J - Estimated Value
- B - Compound Found in Associated Lab Blank

- NA - Not Analysed
- * - No current action level guideline.
- 1 - 2/3/94 NJDEP Cleanup Criteria
- 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 5
LUSTRELON, INC.
TRANSFORMER AREA NORTHEAST OF BUILDING 4 - ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LT-04	LT-04A	LT-05	LT-05A	LT-06	LT-06A	LT-07	LT-07A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	8'-8'6"	12'6"-13'	6'6'-7'	8'6"-9'	7'-7'6"	12'6"-13'	7'-7'6"	12'6"-13'			
Date	5-31-94	5-31-94	6-1-94	6-1-94	5-31-94	5-31-94	5-31-94	5-31-94			
Acenaphthylene	.81J	ND	ND	ND	ND	ND	.24J	ND@.78	*	*	*
Acenaphthene	24	11	4.0	ND	.70J	.63	1.5	1.8	3,400	10,000	100
Anthracene	32	14	7.2	ND	2.2	1.1	3.4	2.9	10,000	10,000	100
Benzo (A) Anthracene	18	5.3	9.5	.10J	5.4	1.6	9.5	4.4	0.9	4.0	500
Benzo (A) Pyrene	16	3.7	8.7	ND	4.4	1.5	10	4.0	0.66	0.66	100
Benzo (B) Fluoranthene	13	3.5	6.9	.15J	3.7	1.6	7.8	3.7	0.9	4.0	50
Benzo (K) Fluoranthene	14	3.3	7.1	ND	4.0	1.1	8.9	3.1	0.9	4.0	500
Benzo (G,H,I) Perylene	10	2.4	6.6	ND	2.0	.63	8.4	2.9	*	*	*
Chrysene	18	5.5	9.6	.12J	5.3	1.6	10	4.7	9.0	40	500
Dibenz (a,h) Anthracene	4	ND	2.8	ND	.91	.16J	ND	ND	0.66	0.66	100
Fluoranthene	53	19	20	.26J	9.2	3.5	16	9.0	2,300	10,000	100
Fluorene	24	11	4.1	ND	.87	.60	1.4	1.7	2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	9.7	2.3	5.7	ND	2.2	.71	7.9	2.7	0.9	4.0	500
Naphthalene	11	2	1.4J	.11J	.21J	.22J	.89J	1.3	230	4,200	100
Bis (2-ethyl hexyl) Phthalate	ND	.77J	1.0J	.082J	1.6	.60	.74J	1.9	49	210	100
Phenanthrene	65	27	19	.32J	6.2	3.2	12	8.8	*	*	*
Pyrene	44	16	18	.22J	5.3	3.3	16	8.8	1,700	10,000	100

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

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LUSTRELL INC.
TRANSFORMER AREA NORTHEAST OF BUILDING 4 - ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LT-04	LT-04A	LT-05	LT-05A	LT-06	LT-06A	LT-07	LT-07A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	8'-8'6"	12'6"-13'	6'6"-7'	8'6"-9'	7'-7'6"	12'6"-13'	7'-7'6"	12'6"-13'			
Date	5-31-94	5-31-94	6-1-94	6-1-94	5-31-94	5-31-94	5-31-94	5-31-94			
Di-N-Octyl Phthalate	ND	ND	1.1J	ND	ND	ND	ND	ND	1,100	10,000	100
Butyl Benzyl Phthalate	ND	ND	ND	ND	.82	ND	ND	.27J	1,100	10,000	100
Diethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	50
Dimethyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	10,000	10,000	50
Di-N-Butyl Phthalate	ND	ND	ND	ND	ND	ND	ND	ND	5,700	10,000	100
2-Methylnaphthalene	11	3.3	1.0J	.18J	ND	.18J	.54J	.92	*	*	*
Dibenzofuran	15	6.5	2.7	ND	.51J	.34J	.92J	1.1	*	*	*
1,2,4-Trichlorobenzene	ND	ND	ND	ND	.84	1.2	ND	ND	68	1200	100
Total BN Organics	381.7	135.8	131.9	0	54.94	22.87	112.8	63.22	*	*	*
BN Organics with Qualifiers	.81J	.77J	4.5J	1.542J	1.42J	.9J	3.33J	.27J	*	*	*
Total TI BN Organics	54.5	19.39	20.71	3.15	53.2	29.9	24.5	9.48	*	*	*
Total Petroleum Hydrocarbons	300	67	1,275	ND@10	1,075	109	694	182	10,000 ²	10,000 ²	*
pH	NA	NA	NA	NA	NA	8.92	NA	NA	*	*	*
Cation Exchange Capacity (CEC)	NA	NA	NA	NA	NA	122.2	NA	NA	*	*	*
Total PCBs	10.64	13.52	ND	ND	3,275	173.81	ND	6.29	0.49	2	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

above groundwater. The eight soil samples were analyzed for TPHC, PCBs, BN+15, PPM, and hexavalent chromium. One subsurface sample was analyzed for pH and cation exchange capacity (Table 6).

The concentrations of certain BNs exceeded the 2/3/94 NJDEP NRCC. These exceedences were most significant in the former surface soils at locations LT-08 and LT-11. These parameters included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluorethene, benzo(k)fluorethene, and dibenzo(a) anthracene. Concentrations of individual compounds ranged from 0.66 to 7.6 ppm. No PPM concentrations were reported to exceed current NJDEP NRCC; all hexavalent chromium analyses were reported as ND.

TPHC values ranged from ND to 4,682 ppm, while PCB values ranged from ND (at sampling locations LT-08 and LT-08A) to 181 ppm. The highest PCB concentrations (181 and 153 ppm) were reported from samples LT-10 and LT-10A. The remaining PCB concentrations ranged from 2.74 to 36 ppm. The single cation exchange and pH values measured in the subsurface soils were 126.5 and 9.16, respectively.

5.4 Railroad Siding Area

Four (4) soil samples were obtained from two (2) borings located on the west side of Building 6 in the former railroad siding area. Soil samples were obtained from the approximate former 0- to 6-inch depth interval and from the 0- to 6-inch depth interval above groundwater. The four soil samples were analyzed for TPHC, PCBs, BN+15, PPM, and hexavalent chromium. One subsurface sample was analyzed for pH and cation exchange capacity (Table 7).

The concentrations of three BNs marginally exceeded the 2/3/94 NJDEP NRCC. These parameters were benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluorethene. Concentrations of the individual BNs ranged from 1.1 to 4.8 ppm. A 6.7 ppm beryllium

TABLE 6
LUSTRELON, INC.
TRANSFORMER AREA EAST OF BUILDING 4 - ANALYTICAL SUMMARY
MAY AND JUNE 1994

Sample No.	LT-08	LT-08A	LT-09	LT-10	LT-10A	LT-11	LT-11A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non- Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	9'6"-10'	11'6"-12'	9'6"-10'	9'6"-10'	11'6"-12'	9'6"-10'	11'6"-12'			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94			
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	10	*
Antimony	ND@0.1	ND@0.1	ND@0.2	ND@0.1	ND@0.2	0.3	ND@0.1	14	340	*
Arsenic	6.3	6.9	15.2	12.2	16.3	23.2	9.1	20	20	*
Beryllium	0.9	0.6	0.7	0.6	0.7	0.7	0.6	1	1	*
Cadmium	1.5	0.6	1.8	1.3	1.3	1.8	1.1	1	100	*
Chromium	27.6	16.4	21.8	24.2	22.1	15.7	52.8	500	500	*
Copper	97.2	29.3	583.1	187.8	99.4	186.8	452.3	600	600	*
Lead	126.9	52.0	163.9	241.3	196.9	383.5	187	400	600	*
Mercury	0.250	0.182	ND@0.169	0.489	0.188	1.007	0.204	14	270	*
Nickel	113.9	19.5	115.3	134.3	76.3	29	153	250	2400	*
Selenium	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	1.3	ND@0.1	63	3100	*
Silver	1.5	1.6	2.4	1.7	2.2	1.0	1.1	110	4100	*
Thallium	0.03	ND@0.03	ND@0.04	ND@0.03	ND@0.04	0.4	0.1	2	2	*
Zinc	362.7	62.6	335.2	457.2	233.4	120.7	215.7	1500	1500	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 6
LUSTRELON, INC.
TRANSFORMER AREA EAST OF BUILDING 4 - ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LT-08	LT-08A	LT-09	LT-10	LT-10A	LT-11	LT-11A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	9'6"-10'	11'6"-12'	9'6"-10'	9'6"-10'	11'6"-12'	9'6"-10'	11'6"-12'			
Date	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94			
Acenaphthylene	.17J	ND@.46	ND@.45	ND@.46	ND@.47	.25J	ND@.64	*	*	*
Acenaphthene	.82J	.36J	.46	ND@.46	ND.47	1.3J	.21J	3,400	10,000	100
Anthracene	2.1	.31J	.97	.28J	.12J	3.4	.56J	10,000	10,000	100
Benzo (A) Anthracene	7	.76	2.0	.90	.40J	7.4	1.2	0.9	4.0	500
Benzo (A) Pyrene	7.6	.70	2	1	.46J	7	1.3	0.66	0.66	100
Benzo (B) Fluoranthene	5.6	.66	2	.84	.38J	6	.99	0.9	4.0	50
Benzo (K) Fluoranthene	6.3	.46J	1.5	.92	.40J	6	1.1	0.9	4.0	500
Benzo (G,H,I) Perylene	6.2	.49	1.3	.73	.32J	5	.76	*	*	*
Chrysene	7.1	.74	1.9	.95	.43J	8	1.3	9.0	40	500
Dibenz (a,h) Anthracene	2.5	.20J	.66	.40J	.12J	2.4	.30J	0.66	0.66	100
Fluoranthene	13	2.1	4.4	1.7	.81	16	1	2,300	10,000	100
Fluorene	.64J	.29J	.55	.11J	ND@.47	1.4J	.24J	2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	5.4	.41J	1.4	.70	.29J	4.8	.76	0.9	4.0	500
Naphthalene	.19J	.30J	.27J	ND@.46	ND@.47	.42J	ND@.64	230	4,200	100
Bis (2-ethyl hexyl) Phthalate	.30J	.048J	.24J	.30J	.14J	.32J	.92	49	210	100
Phenanthrene	7.7	2.1	3.2	1	.48	13	2.4	*	*	*
Pyrene	14	1.2	2.6	1.1	.60	14	2.1	1,700	10,000	100

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE
LUSTRELON, INC.
TRANSFORMER AREA EAST OF BUILDING 4 - ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LT-08	LT-08A	LT-09	LT-10	LT-10A	LT-11	LT-11A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	9'6"-10'	11'6"-12'	9'6"-10'	9'6"-10'	11'6"-12'	9'6"-10'	11'6"-12'			
Date	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94	6-2-94			
Di-N-Octyl Phthalate	ND@.95	ND@.46	ND@.45	ND@.46	ND@.47	ND@1.5	ND@.64	1,100	10,000	100
Butyl Benzyl Phthalate	ND@.95	ND@.46	ND@.45	ND@.46	ND@.47	ND@1.5	ND@.64	1,100	10,000	100
Diethyl Phthalate	ND@.95	ND@.46	ND@.45	ND@.46	ND@.47	ND@1.5	ND@.64	10,000	10,000	50
Dimethyl Phthalate	ND@.95	ND@.46	ND@.45	ND@.46	ND@.47	ND@1.5	ND@.64	10,000	10,000	50
Di-N-Butyl Phthalate	.054J	ND@.46	ND@.45	ND@.46	ND@.47	ND@1.5	ND@.64	5,700	10,000	100
2-Methylnaphthalene	.11J	.11J	.18J	ND@.46	ND@.47	.43J	ND@.64	*	*	*
Dibenzofuran	.39J	.28J	.34J	ND@.46	ND@.47	.92J	.14J	*	*	*
1,2,4 Trichlorobenzene	ND	ND	1.4	.68	.43J	ND@1.5	2.6	68	1200	100
Total BN Organics	84.5	8.75	28.34	10.52	1.89	93	16.73	*	*	*
BN Organics with Qualifiers	2.674J	2.768J	1.03J	1.09J	3.49J	5.04J	1.15J	*	*	*
Total TI BN Organics	21.554	1.27	9.32	5.83	2.68	17.97	9.9	*	*	*
Total Petroleum Hydrocarbons	662	4,682	780	920	535	240	ND@10	10,000 ²	10,000 ²	*
pH	NA	NA	NA	NA	9.16	NA	NA	*	*	*
Cation Exchange Capacity (CEC)	NA	NA	NA	NA	126.5	NA	NA	*	*	*
Total PCBs	ND	ND	36.62	181.38	153.9	2.74	25.62	0.49	2	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 7
LUSTRELON, INC.
RAILROAD AREA ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	LR-01	LR-01A	LR-02	LR-02A			NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	3'-3'6"	5'6"-6'	3'-3'6"	6'6"-7'					
Sample Type	Soil	Soil	Soil	Soil					
Date	5-26-94	5-26-94	5-26-94	5-26-94					
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1			10	10	*
Antimony	1.0	ND@0.1	0.2	0.1			14	340	*
Arsenic	6.2	3.2	8.7	4.4			20	20	*
Beryllium	0.6	0.7	6.7	0.5			1	1	*
Cadmium	0.9	0.9	0.7	0.5			1	100	*
Chromium	16.3	13.0	16.8	9.2			500	500	*
Copper	113.1	91.7	113.0	35.3			600	600	*
Lead	319.7	125.7	170.2	56.9			400	600	*
Mercury	ND@.175	ND@.177	.420	ND@.185			14	270	*
Nickel	34.0	30.3	33.6	24.2			250	2400	*
Selenium	ND@0.1	ND@0.1	ND@0.1	ND@0.1			63	3100	*
Silver	0.5	ND@0.5	ND@0.5	ND@0.5			110	4100	*
Thallium	0.2	0.2	0.2	0.1			2	2	*
Zinc	109.6	125.1	141.6	115.7			1500	1500	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria

TABLE 7
LUSTRELON, INC.
RAILROAD AREA ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LR-01	LR-01A	LR-02	LR-02A			NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil					
Depth (ft)	3'-3'6"	5'6"-6'	3'-3'6"	6'6"-7'					
Date	5-26-94	5-26-94	5-26-94	5-26-94					
Acenaphthylene	ND	ND	ND	ND			*	*	*
Acenaphthene	.22J	.26J	1.1	.32J			3,400	10,000	100
Anthracene	.51	.65	1.7	.48J			10,000	10,000	100
Benzo (A) Anthracene	1.7	1.5	4.8	1.2			0.9	4.0	500
Benzo (A) Pyrene	1.4	1.2	4.5	1.1			0.66	0.66	100
Benzo (B) Fluoranthene	1.5	1.1	4.4	1.0			0.9	4.0	50
Benzo (K) Fluoranthene	1.2	1.0	3.0	.89			0.9	4.0	500
Benzo (G,H,I) Perylene	1.1	.77	3.2	.85			*	*	*
Chrysene	1.8	1.5	4.7	1.3			9.0	40	500
Dibenz (a,h) Anthracene	ND	.43	ND	ND			0.66	0.66	100
Fluoranthene	2.9	3.3	9.7	2.3			2,300	10,000	100
Fluorene	.21J	.30J	.86	.31J			2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	1.0	.81	3.0	.73J			0.9	4.0	500
Naphthalene	.140J	.20J	.68J	.80J			230	4,200	100
Bis (2-ethyl hexyl) Phthalate	.26J	.59	.30J	.49J			49	210	100
Phenanthrene	2.1	2.7	6.2	2.1			*	*	*
Pyrene	2.6	2.5	7.0	2.0			1,700	10,000	100

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 7
LUSTRELON, INC.
RAILROAD AREA ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LR-01	LR-01A	LR-02	LR-02A			NJDEPE Residential Direct Contact Cleanup Criteria ¹	NJDEPE Non-Residential Direct Contact Cleanup Criteria ¹	NJDEPE Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil					
Depth (ft)	3'-3'6"	5'6"-6'	3'-3'6"	6'6"-7'					
Date	5-26-94	5-26-94	5-26-94	5-26-94					
Di-N-Octyl Phthalate	ND	ND	ND	ND			1,100	10,000	100
Butyl Benzyl Phthalate	ND	ND	ND	ND			1,100	10,000	100
Diethyl Phthalate	ND	ND	ND	ND			10,000	10,000	50
Dimethyl Phthalate	ND	ND	ND	ND			10,000	10,000	50
Di-N-Butyl Phthalate	ND	ND	ND	ND			5,700	10,000	100
2-Methylnaphthalene	.21J	.28J	.42J	.31J			*	*	*
Dibenzofuran	.16J	.21J	.49J	.23J			*	*	*
Total BN Organics	17.81	18.05	54.16	12.74			*	*	*
BN Organics with Qualifiers	1.2J	1.25J	1.89J	3.13J			*	*	*
Total TI BN Organics	9.24	8.5	14.55	3.59			*	*	*
Petroleum Hydrocarbons	186	74	122	ND@10			10,000 ²	10,000 ²	*
pH	NA	7.03	NA	8.81			*	*	*
Cation Exchange Capacity (CEC)	NA	47.4	NA	93.7			*	*	*
Total PCBs	ND	ND	ND	ND			.49	2	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria

concentration reported from sample LR-02 was the only PPM concentration which exceeded NJDEP NRCC; all hexavalent chromium analyses were reported as ND.

TPHC values ranged from ND to 186 ppm, while PCB values were all ND. The subsurface cation exchange values were 47.4 and 93.7, while the subsurface pH values were 7.03 and 8.81.

5.5 Fire Impact Area

Four (4) soil samples were obtained from four (4) borings (LF-01 through LF-04) located around the eastern end of the (former) Building No.4 floor slab (Figure 8). Soil samples were obtained from the approximate 0- to 6-inch depth interval below original grade. The four soil samples were analyzed for TPHC, PCBs, BN+15, PPM, and hexavalent chromium (Table 8).

The concentrations of individual BNs marginally exceeded the 2/3/94 NJDEP NRCC. These parameters were primarily benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluorethene. Concentrations of the individual BNs ranged from 1.0 to 12 ppm. No PPM analyses were reported which exceeded respective NJDEP NRCC; all hexavalent chromium analyses were reported as ND. TPHC values ranged from 112 to 825 ppm. PCB concentrations exceeding the NJDEP NRCC were reported from sampling stations LF-03 (77.73 ppm) and LF-04 (12.26 ppm).

5.6 Additional Fill

Twenty six (26) soil samples were obtained from eight (8) borings located in the additional fill. Soil samples were obtained from a 6-inch depth interval approximately every two feet through the fill. The depth of additional fill was estimated to be from six to eight feet. Three to four soil samples were obtained from each sampling location, depending on the depth of fill at each location. (Only two samples were recovered from

TABLE 8
LUSTRELON, INC.
FIRE IMPACT AREA ANALYTICAL SUMMARY
MAY AND JUNE 1994

Sample No.	LF-01	LF-02	LF-03	LF-04					NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6'-6"6"	8'-06'	8'-8'6"	9'6"-10							
Sample Type	Soil	Soil	Soil	Soil							
Date	5-26-94	5-26-94	5-26-94	5-26-94							
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1					10	10	*
Antimony	ND@0.1	0.3	ND@0.2	0.5					14	340	*
Arsenic	7.7	7.5	11.3	13.1					20	20	*
Beryllium	0.9	0.7	0.7	0.7					1	1	*
Cadmium	0.9	1	0.9	0.9					1	100	*
Chromium	16.2	21.8	16.8	33.9					500	500	*
Copper	128.9	54.1	146	143.7					600	600	*
Lead	350.5	353.3	195.2	308.4					400	600	*
Mercury	0.767	0.575	0.610	1.035					14	270	*
Nickel	48	47.1	20	61					250	2400	*
Selenium	ND@0.1	ND@0.1	ND@0.1	ND@0.1					63	3100	*
Silver	0.7	0.6	1	1.5					110	4100	*
Thallium	0.1	0.2	0.2	0.2					2	2	*
Zinc	209.5	288.5	171.9	188.7					1500	1500	*

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 8
LUSTRELON, INC.
FIRE IMPACT AREA ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LF-01	LF-02	LF-03	LF-04					NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil							
Depth (ft)	6'-6'6"	8'-8'6"	8'-8'6"	9'6"-10'							
Date	5-26-94	5-26-94	5-31-94	6-2-94							
Acenaphthylene	ND@1.1	.23J	.45J	ND@1.8					*	*	*
Acenaphthene	2	.77J	1.5J	3.8					3,400	10,000	100
Anthracene	3.7	1.8	4.6	6.8					10,000	10,000	100
Benzo (A) Anthracene	6.7	5	12	10					0.9	4.0	500
Benzo (A) Pyrene	5.8	5.2	12	9.9					0.66	0.66	100
Benzo (B) Fluoranthene	4.7	4.6	10	9					0.9	4.0	50
Benzo (K) Fluoranthene	4.9	4.4	10	7					0.9	4.0	500
Benzo (G,H,I) Perylene	3.9	3.8	9.2	7.2					*	*	*
Chrysene	6.2	4.6	12	10					9.0	40	500
Dibenz (a,h) Anthracene	ND@1.1	1	4.1	ND@1.8					0.66	0.66	100
Fluoranthene	14	9.3	23	21					2,300	10,000	100
Fluorene	2.1	.79J	1.8	3.8					2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	3.9	3.8	8.6	6.5					0.9	4.0	500
Naphthalene	.75J	.26J	ND@1.6	1.8					230	4,200	100
Bis (2-ethyl hexyl) Phthalate	.30J	ND@.83	.32J	1.1J					49	210	100
Phenanthrene	11	5	17	22					*	*	*
Pyrene	10	6.2	23	21					1,700	10,000	100

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

LU 3.2045

TABLE 8
LUSTRELON, INC.
FIRE IMPACT AREA ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	LF-01	LF-02	LF-03	LF-04			NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil					
Depth (ft)	6'-6"6"	8'-8"6"	8'-8"6"	9'6"-10'					
Date	5-26-94	5-26-94	5-31-94	6-2-94					
Di-N-Octyl Phthalate	ND@1.1	ND@.83	ND@1.6	ND@1.8			1,100	10,000	100
Butyl Benzyl Phthalate	ND@1.1	ND@.83	ND@1.6	ND@1.8			1,100	10,000	100
Diethyl Phthalate	ND@1.1	ND@.83	ND@1.6	ND@1.8			10,000	10,000	50
Dimethyl Phthalate	ND@1.1	ND@.83	ND@1.6	ND@1.8			10,000	10,000	50
Di-N-Buty Phthalate	ND@1.1	ND@.83	ND@1.6	ND@1.8			5,700	10,000	100
1,2,4-Trichlorobenzene	ND@1.1	ND@.83	12	.95J			68	1200	100
2-Methylnaphthenene	.58J	.20J	.36J	1.2J			*	*	*
Dibenzofuran	1.2	.40J	1J	2.7			570	10,000	100
1,4 Dichlorobenzene	.34J	ND@.83	ND@1.6	ND@1.8			*	*	*
Total BN Organics	80.1	54.7	159.3	142.5			*	*	*
BN Organics with Qualifiers	1.97J	2.29J	3.63J	3.25J			*	*	*
Total TI BN Organics	12.43	16.45	39.8	23.2			*	*	*
Petroleum Hydrocarbons	324	825	112	290			10,000 ²	10,000 ²	*
PCBs	ND	ND	77.73	12.26			.49	2	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

sampling station SF-04.) The 26 soil samples were analyzed for PP+40, hexavalent chromium, and TPHC. Fifteen subsurface samples were analyzed for pH and cation exchange (Table 9).

The concentrations of both volatile organic compounds (VOCs) and PCB/pesticides were generally reported as ND. Where reported, VOC concentrations were significantly below the 2/3/94 NJDEP NRCC. PCBs were reported only from sample SF-03A (3.0 to 3.6 feet below grade). The 1.85 ppm PCB value reported was below the NJDEP 2.0 ppm NRCC.

Concentrations of BNs reported from surface samples obtained from sampling stations SF-01 through SF-05, (located in the eastern-most portion of the site) were generally below the respective NRCC; only the concentrations of benzo(a)pyrene (0.79 to 2.6 ppm) exceeded NJDEP NRCC. Concentrations of additional BNs in the lower portions of the fill at sampling locations SF-01 and SF-03 typically exceeded NRCC. These parameters included benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluorethene, benzo(k)fluorethene, and dibenzo(a,h) anthracene. Concentrations of individual BNs in the lower depths of the additional fill in these areas ranged from 1.3 to 7.8 ppm.

Concentrations of these same general BNs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluorethene, benzo(k)fluorethene, and dibenzo(a,h)anthracene] were more consistent through the fill at sampling locations SF-06 through SF-08, and individual parameters variously exceeded (often only marginally) NJDEP NRCC. Concentrations of individual BNs in these areas exceeding NJDEP NRCC ranged from 0.71 to 24 ppm.

Two isolated exceedences of the NJDEP NRCC for PPM were reported. A 21 ppm arsenic concentration was reported from sample SF-03C, located 7.5-8.0 feet below grade, and a 1.7 ppm beryllium concentration was reported from sample SF-04 (surface sample). These were marginal exceedences and no other PPM concentrations were

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6'-1'	3'-3'6"	3'6"-6'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	10	*
Antimony	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.2	ND@0.1	ND@0.1	14	340	*
Arsenic	14.4	8.8	10	13.4	18.9	18.6	16.3	8.5	9.1	11.4	21.1	10	11.7	20	20	*
Beryllium	0.7	0.6	0.7	0.5	0.8	0.9	0.7	0.4	0.6	0.5	0.4	1.7	0.6	1	1	*
Cadmium	1.7	1.5	1.3	1.7	0.8	0.9	1	1.2	2.3	2.1	0.6	6.2	0.8	1	100	*
Chromium	16.3	19.4	24.7	17	45.5	44.4	47.8	20.6	24.9	18.5	15.8	21.4	14.9	500	500	*
Copper	67.2	99.6	96.1	294.1	86	73.1	91.8	75.8	502.1	189.3	133.5	58.2	27.8	600	600	*
Lead	450.7	588.1	314.1	428	177.3	154.3	252.7	198.8	255.9	334.5	633.4	811	115.7	400	600	*
Mercury	1.18	0.973	1.115	0.174	0.68	0.590	0.235	1.38	7.4	2.48	1.70	0.765	0.294	14	270	*
Nickel	23.8	22.2	23.7	24.4	29.9	32.2	35.1	24.1	479.9	167.4	287.7	33.9	18.3	250	2400	*
Selenium	ND@0.6	ND@0.1	ND@0.05	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	0.9	ND@0.1	ND@0.1	63	3100	*
Silver	1.3	1.2	1.5	1.1	0.9	0.9	0.9	0.6	2.8	1.3	ND@0.8	2.8	1.2	110	4100	*
Thallium	0.03	ND@0.03	ND@0.02	ND@0.03	ND@0.03	ND@0.03	ND@0.03	ND@0.03	ND@0.03	0.3	ND@0.4	ND@0.03	ND@0.03	2	2	*
Zinc	384.6	351	268	493.8	231.9	129.2	243.7	222.1	648.1	427.6	104.1	497	141.7	1500	1500	*
Cyanide	ND@1.8	ND@1.8	ND@1.9	ND@1.9	ND@1.9	ND@1.9	ND@1.9	ND@1.8	313	ND@1.8	ND@1.9	ND@2.0	ND@1.8	1,100	21,000	*
Phenol	4.5	4.8	8.7	4.6	3.7	4.7	3	4.7	4.7	ND@2.3	3.7	13.3	ND@2.3	10,000	10,000	50

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6"-1"	3"-3'6"	5'6"-6'	6"-1'	3"-3'6"	5'6"-6'	7'6"-8'	6"-1'	3"-3'6"	5'6"-6'	7'6"-8'	6"-1'	3"-3'6"			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-2-94	6-9-94			
Acenaphthylene	ND@.38	ND@.77	ND@1.2	ND@.39	ND@.39	ND@.40	ND@.70	ND@.37	ND@1.2	ND@.76	.25J	.16J	ND@.38	*	*	*
Acenaphthene	.29J	1	2.2	.27J	ND@.39	.13J	.42	.10J	2.1	.45J	1.7	1.6	.20J	3,400	10,000	100
Anthracene	.68	2.4	4.7	.55	.096J	.31J	1.1	.24J	3.3	.97	3.3	1.5	.53	10,000	10,000	100
Benzo (A) Anthracene	1.9	4.6	7.8	1	.41	1.1	2.4	.75	7.3	2.2	7.7	2.8	1	0.9	4.0	500
Benzo (A) Pyrene	2.1	4.6	6.7	1.1	.42	1.1	2.1	.79	7.6	2.3	7.4	2.6	1.1	0.66	0.66	100
Benzo (B) Fluoranthene	2.3	4	6.1	.91	.37J	.94	1.9	.66	7	2.1	6.2	2.7	.92	0.9	4.0	50
Benzo (K) Fluoranthene	1.4	3.2	5	.94	.34J	1	1.6	.58	5.5	1.7	6.4	2.2	.88	0.9	4.0	500
Benzo (G,H,I) Perylene	.94	3.3	3.6	.52	.34J	.54	1.8	.58	3.4	1.4	5	1.1	.46	*	*	500
Chrysene	2.1	4.8	8.4	1.1	.45	1.2	2.4	.80	8.3	2.6	7.8	3.3	1	9.0	40	500
Dibenz (a,b) Anthracene	.52	1.4	1.4	.18J	.13J	.21J	.71	.22J	1.3	.57J	ND@1.2	.49J	.20J	0.66	0.66	500
Fluoranthene	3.2	10	17	2.1	.84	2.3	5.2	1.6	16	5.2	14	8.9	2.6	2,300	10,000	500
Fluorene	.28J	1.3	2.4	.26J	ND@.39	.12J	.46	.086J	1.6	.36J	1.5	1.5	.19J	2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	.97	3	3.8	.50	.34J	.57	1.5	.53	3.7	1.4	5	1.2	.50	0.9	4.0	500
Naphthalene	.24J	.9	1.5	.14J	ND@.39	ND@.40	.17J	ND@.37	.91J	ND@.76	.90J	.58J	ND@.38	230	4,200	100
Bis (2-ethyl hexyl) Phthalate	.72	.46J	1.8	.86	ND@.39	.13J	1.1	.85	8.2	3.5	ND@1.2	5.9	.094J	49	210	100
Phenanthrene	2.3	7.7	14	1.8	.42	1.2	4.1	.91	11	3.2	12	6.9	2	*	*	*
Pyrene	2.9	7.4	12	1.8	.66	1.6	4.2	1.2	9.9	3.2	14	5.1	1.6	1,700	10,000	100

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup

LU 3.2049

TABLE 9
LUSTRELON, INC
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Di-N-Octyl Phthalate	ND	ND	ND	.086J	ND	ND	ND	.20J	3.1	.33J	ND	.36J	ND	1,100	10,000	100
Butyl Benzyl Phthalate	.27J	ND	.57J	1.8	ND	ND	ND	.16J	ND	ND	ND	1.9	ND	1,100	10,000	100
Di-N-Butyl Phthalate	ND	ND	ND	.25J	ND	ND	ND	ND	ND	ND	ND	.22J	ND	5,700	10,000	100
2-Methylnaphthalene	.14J	.4J	.57J	ND@.39	ND@.39	ND@.40	.11J	ND@.37	.25J	ND@.76	.40J	.64	ND@.38	*	*	*
Dibenzofuran	.17J	.74J	1.4	.16J	ND@.39	ND@.40	.25J	ND@.37	.93J	.18J	.92J	.89	.13J	*	*	*
4-Methylphenol	ND@.38	ND@.77	ND@1.2	ND@.39	ND@.39	ND@.40	ND@.40	ND@.37	ND@.76	ND@.76	ND@1.2	.43J	ND@.38	2,800	10,000	*
Pentachlorophenol	ND@.38	ND@.77	ND@1.2	ND@.39	ND@.39	ND@.40	ND@.40	ND@.37	ND@.76	ND@.76	ND@1.2	.13J	ND@.38	6	24	100
Total BN/AE Organics														*	*	*
BN/AE Organics with Qualifiers	1.39J	1.60J	1.14J	1.346J	1.616J	.90J	.53J	1.006J	2.09J	1.89J	2.47J	2.37J	.814J	*	*	*
Total TI BN Organics	6.19	8.47	19.69	2.99	0.31	2.28	4.98	3.17	34.56	19.48	20.46	57.62	5.1	*	*	*

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analyzed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-2-94	6-9-94			
Methylene Chloride	ND@.019	.0081J	.0092J	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	.0085J	.012J	ND@.021	.0082J	49	210	1
1,1 Dichloroethane	ND@.019	.013J	.0077J	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	570	1,000	10
Chloroform	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	19	28	1
1,2 - Dichloroethane	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	6	24	1
1,1,1 Trichloroethane	.048	.025	.0086J	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	.046	.065	ND@.021	ND@.019	210	1,000	50
1,2 Dichloropropane	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	10	43	*
Trichloroethene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	23	54	1
Benzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	3	13	1
Tetrachloroethene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	.33	.014J	4	6	1
Toluene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	1,000	1,000	500
Chlorobenzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	37	680	1
Ethyl Benzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	1,000	1,000	100
Xylenes	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	.014J	ND@.020	.026J	ND@.019	410	1,000	10
Trichlorofluoro Methane	0.16J	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	*	*	*
1,4 Dichlorobenzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.020	ND@.020	ND@.018	ND@.020	ND@.019	ND@.020	ND@.021	ND@.019	570	10,000	100
Total Targeted VOCs	.048 .016J	.025 .021J	.0255J	ND	ND	ND	ND	ND	ND	.046 .0225J	.065 .012J	.33 ND	0222J	*	*	*
T1 Volatile Organics	.022	.019	ND	ND	ND	ND	ND	ND	ND	.026B	.032B	.392	.026B	*	*	*

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank
 NA - Not Analyzed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

U3 2051

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Petroleum Hydrocarbons	1634	1756	1722	703	86	66	632	773	2300	750	386	1970	115	10,000 ²	10,000 ²	*
pH	NA	8.77	8.69	NA	NA	8.26	8.26	NA	NA	8.98	6.60	NA	9.08	*	*	*
Cation Exchange Capacity (CEC)	NA	114.5	113.5	NA	NA	264.0	240.0	NA	NA	126.5	136.5	NA	101.0	*	*	*
Total PCBs	ND	ND	ND	ND	ND	ND	ND	ND	1.85	ND	ND	ND	ND	.49	2	50
Aldrin	ND@.007	ND@.014	ND@.029	ND@.029	ND@.007	ND@.007	.019	ND@.014	ND@.015	.034	ND@.151	ND@.116	ND@.007	0.040	0.17	50
alpha-BHC	ND@.008	ND@.016	ND@.032	ND@.032	ND@.008	ND@.008	ND@.017	ND@.015	ND@.016	ND@.031	ND@.166	ND@.128	ND@.008	*	*	*
beta-BHC	ND@.004	ND@.009	ND@.018	ND@.018	ND@.004	ND@.005	ND@.009	ND@.008	ND@.009	ND@.017	ND@.092	ND@.071	ND@.004	*	*	*
delta-BHC	ND@.004	ND@.009	ND@.018	ND@.019	ND@.005	ND@.005	ND@.010	ND@.009	ND@.010	ND@.018	ND@.097	ND@.074	ND@.005	*	*	*
gamma-BHC	ND@.007	ND@.015	ND@.031	ND@.031	ND@.008	ND@.008	ND@.016	ND@.015	ND@.016	ND@.030	ND@.162	ND@.125	ND@.008	*	*	*
Chlordane	ND@.007	ND@.015	ND@.029	.080	ND@.007	ND@.008	ND@.015	ND@.014	ND@.015	ND@.029	ND@.154	ND@.119	ND@.007	*	*	*
4,4'-DDD	ND@.011	ND@.023	ND@.046	ND@.046	ND@.012	.149	ND@.024	ND@.022	ND@.024	.056	ND@.240	ND@.185	ND@.011	3	12	50
4,4'-DDE	ND@.011	.026	ND@.047	ND@.047	ND@.012	ND@.012	ND@.024	ND@.022	ND@.024	ND@.045	ND@.244	ND@.188	ND@.011	2	9	50
4,4'-DDT	ND@.007	ND@.014	ND@.029	ND@.029	ND@.007	ND@.007	ND@.015	ND@.014	ND@.015	ND@.028	ND@.150	ND@.166	ND@.007	2	9	500
Dieldrin	ND@.007	.023	ND@.030	ND@.030	.015	ND@.008	ND@.016	.022	ND@.015	ND@.029	ND@.157	ND@.121	ND@.007	0.042	0.18	50

All results reported in Parts Per Million (PPM)
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 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank
 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-01	SF-01A	SF-01B	SF-02	SF-02A	SF-02B	SF-02C	SF-03	SF-03A	SF-03B	SF-03C	SF-04	SF-04A	NJDEP Residenti al Direct Contact Cleanup Criteria ¹	NJDEP Non- Residenti al Direct Contact Cleanup Criteria ¹	NJDEP Impact to Ground water Cleanup Criteria ¹
Depth (ft)	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Endosulfan I	ND@.005	ND@.010	ND@.021	ND@.021	ND@.005	ND@.005	ND@.011	ND@.010	ND@.011	ND@.022	ND@.108	ND@.083	ND@.005	340	6200	50
Endosulfan II	ND@.006	ND@.011	ND@.023	ND@.023	ND@.006	ND@.006	ND@.012	ND@.011	ND@.012	ND@.022	ND@.119	ND@.092	ND@.006	340	6200	50
Endosulfan Sulfate	ND@.005	ND@.011	ND@.022	ND@.022	ND@.006	ND@.006	ND@.012	ND@.011	ND@.011	ND@.022	ND@.115	ND@.089	ND@.005	*	*	*
Endrin	ND@.008	ND@.017	ND@.034	ND@.034	ND@.009	ND@.009	ND@.018	ND@.016	ND@.018	ND@.033	ND@.179	ND@.138	ND@.008	17	310	50
Endrin Aldehyde	ND@.007	ND@.014	ND@.029	ND@.029	ND@.007	ND@.008	ND@.015	ND@.014	ND@.015	ND@.028	ND@.153	ND@.118	ND@.007	*	*	*
Endrin Ketone	.023	.023	ND@.023	ND@.023	ND@.006	ND@.006	.045	.024	ND@.012	ND@.022	ND@.118	ND@.091	ND@.006	*	*	*
Heptachlor	ND@.005	ND@.009	ND@.019	ND@.019	ND@.005	ND@.005	ND@.010	ND@.009	ND@.010	ND@.018	ND@.097	ND@.075	ND@.005	0.15	0.65	50
Heptachlor Epoxide	ND@.003	ND@.006	ND@.013	ND@.013	ND@.003	ND@.003	ND@.007	ND@.006	ND@.007	ND@.013	.203	ND@.053	ND@.003	*	*	*
Methoxychlor	ND@.043	.151	ND@.175	ND@.177	ND@.044	ND@.045	.146	ND@.084	ND@.091	.226	1.196	ND@.707	ND@.043	280	5200	50
Toxaphene	ND@.176	ND@.359	ND@.726	ND@.733	ND@.184	ND@.188	ND@.380	ND@.347	ND@.375	ND@.709	ND@3.8	ND@2.429	ND@.178	0.10	0.2	50
% Solids	88.5	86.8	85.9	85.1	85.0	83.2	82.2	89.9	83.1	88.0	82.1	79.7	87.7	*	*	*

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

* - No current action level guideline.

1 - 2/3/94 NJDEP Cleanup Criteria

2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	10	10	*
Antimony	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	14	340	*
Arsenic	13.7	15.9	13.1	10.8	8.4	10.5	9.9	15	13.9	14.4	8.6	13.4	15.6	20	20	*
Beryllium	0.8	0.6	0.5	0.9	0.5	0.8	0.8	0.4	0.6	0.8	0.5	0.8	0.8	1	1	*
Cadmium	1.0	0.8	0.7	1.1	12.7	1	0.8	0.7	0.6	0.9	6.8	7.6	69	1	100	*
Chromium	27	22.1	15.6	17	14.8	15.9	15.8	12	17.7	19.2	22.6	27.0	62.7	500	500	*
Copper	101.9	45.1	36.5	96.4	101.9	106.6	200.7	28.1	35.5	52.2	74	65.4	96.9	600	600	*
Lead	174.2	156.8	138.2	225.1	572.9	295.8	206.8	166.3	125.5	265.5	256.4	1543.2	564	400	600	*
Mercury	0.423	0.423	0.50	0.782	1.375	0.719	0.585	0.68	0.37	0.66	1.45	1.11	1.39	14	270	*
Nickel	26.7	20.1	19.6	30.7	20.4	28.4	20.4	17.3	22.7	25.5	26	42.4	34.1	250	2400	*
Selenium	ND@0.1	ND@0.05	ND@0.05	ND@0.05	ND@0.05	ND@0.05	ND@0.04	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	ND@0.1	63	3100	*
Silver	0.9	0.7	0.6	0.8	1	0.8	0.7	0.9	0.7	1	1.2	1.6	1.3	110	4100	*
Thallium	ND@0.03	ND@0.03	ND@0.03	ND@0.03	ND@0.03	ND@0.02	ND@0.02	ND@0.03	ND@0.02	ND@0.03	ND@0.02	ND@0.03	ND@0.04	2	2	*
Zinc	331.6	139.5	124.1	273.6	328.4	451.9	303.1	143.9	114.3	220.8	266.5	658.4	384.8	1500	1500	*
Cyanide	ND@1.8	ND@1.8	ND@1.8	ND@1.9	ND@1.8	ND@1.8	ND@1.8	5.7	ND@1.9	ND@1.9	3.2	3.6	ND@2	1,100	21,000	*
Phenol	ND@2.3	6.9	5.6	6.4	3.5	5.7	6.4	8.1	6.5	7	5.3	4.8	ND@2.5	10,000	10,000	50

All results reported in Parts Per Million (PPM)

- TI - Tentatively Identified
- ND - Not Detected at Method Detection Limit
- J - Estimated Value
- B - Compound Found in Associated Lab Blank

- NA - Not Analysed
- * - No current action level guideline.
- 1 - 2/3/94 NJDEP Cleanup Criteria
- 2 - Total Organic Compound (TOC) Cleanup Criteria.

LU 3.2054

TABLE 9
LUSTRELON, INC
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NIDEP Residential Direct Contact Cleanup Criteria ¹	NIDEP Non-Residential Direct Contact Cleanup Criteria ¹	NIDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Accenaphthylene	ND@.28	ND@.38	ND@.38	ND@.39	.22J	ND@.38	ND@.37	ND@1.1	ND@.78	ND@.80	ND@.74	ND@.44	ND@4.2	*	*	*
Accenaphthene	.27J	.24J	.20J	.12J	1.9	.57	.49	2	1.8	2	.87	.62	6.4	3,400	10,000	100
Anthracene	.62	.47	.40	.28J	4	1.3	1.1	3.7	3.4	4.3	1.5	.99	10	10,000	10,000	100
Benzo (A) Anthracene	1.5	1.1	1.1	.70	7.1	2.7	2	6.2	5.7	6.3	3.8	2.3	23	0.9	4.0	500
Benzo (A) Pyrene	1.8	1.2	1	.73	7	2.7	1.9	4.9	4.3	5.4	3.7	2.1	24	0.66	0.66	100
Benzo (B) Fluoranthene	1.8	.99	.96	1.2	5.2	2.1	1.6	4.8	3.7	5.6	3.2	1.7	22	0.9	4.0	50
Benzo (K) Fluoranthene	1.5	1.1	.84	.16J	5.7	2.6	1.7	3.3	2.9	3.7	2.6	1.8	16	0.9	4.0	500
Benzo (G,H,I) Perylene	.80	.76	.66	.44	5.1	1.4	.85	3	2.4	1.9	2.5	1.1	15	*	*	*
Chrysene	1.6	1.2	1.2	.72	7.1	2.6	2	6.9	5.8	6.7	4.2	2.6	25	9.0	40	500
Dibenz (a,h) Anthracene	.40	ND@.38	ND@.38	ND@.39	2.5	.71	.35J	1.2	1	.91	.80	.46	4.7	0.66	0.66	100
Fluoranthene	3.6	2.3	2.2	1.3	15	4.7	3.8	14	10	14	8.8	5.2	54	2,300	10,000	100
Fluorene	.26J	.26J	.19J	.16J	2.1	.60	.52	2	1.8	2.4	.70J	.58	4.7	2,300	10,000	100
Indeno (1,2,3-CD) Pyrene	.84	.75	.66	.45	4.8	1.4	.90	3	2.4	2	2.1	1.2	13	0.9	4.0	500
Naphthalene	.12J	.14J	.089J	.084J	2.6	.35J	.46	1.1J	1.1	1.1	.60J	.51	3.4J	230	4,200	100
Bis (2-ethyl hexyl) Phthalate	11	1.4	.27J	.91	2.2	2.7	.57	.82J	.72J	1.3	.66J	1	2.1J	49	210	100
Phenanthrene	2.2	1.8	1.5	1.1	12	3.8	3.3	11	9.9	12	5.6	4.1	36	*	*	*
Pyrene	2.3	2.2	2.2	1.2	12	4.9	3.4	8.4	8	8.4	5	3.3	29	1,700	10,000	100

All results reported in Parts Per Million (PPM)

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 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

NA - Not Analyzed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

LU 3.2055

TABLE 9
LUSTRELON, INC
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	7'6"-8"	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Di-N-Octyl Phthalate	.32J	2.4	ND@.38	ND@.39	2.3	2.6	ND@.37	ND@1.1	ND@.78	ND@.80	ND@.74	ND@.44	ND@4.2	1,100	10,000	100
Butyl Benzyl Phthalate	ND@.38	ND@.38	ND@.38	.39J	ND@.75	.30J	.53	.37J	3.1	.54J	.41J	ND@.44	ND@4.2	1,100	10,000	100
Di-N-Butyl Phthalate	.84J	ND@.38	ND@.38	ND@.39	ND@.75	.088J	ND@.37	.32J	.21J	.83	ND@.74	ND@.44	ND@4.2	5,700	10,000	100
Dibenzofuran	.14J	.17J	.10J	.11J	1.4	.36J	.33J	1.2	1.1	1.4	.40J	.32J	2.5J	*	*	*
2-Methylnaphthalene	ND@.38	.079J	ND@.38	ND@.39	.96	.18J	.18J	.80J	.62J	.74J	.18J	.24J	.97J	*	*	*
Total BN/AE Organics	29.96	17.67	12.72	8.75	100.96	37.38	25.12	75.6	68.40	80.24	44.67	29.56	282.80	*	*	*
BN/AE Organics with Qualifiers	1.194J	.889J	.849J	1.304J	.220J	1.278J	.860J	3.410J	1.550J	1.280J	2.950J	.560J	8.970J	*	*	*
Total TI BN/AE Organics	6.73	7.21	4.18	1.71	11.39	3.62	3.44	19.90	15.52	3.44	14.28	6.64	79.60	*	*	*

All results reported in Parts Per Million (PPM)

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 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Ground Water Cleanup Criteria ¹
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	7'6"-8'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Methylene Chloride	.072	.0091J	ND@.019	ND@.019	ND@.019	.0078J	ND@.019	ND@.018	.015J	.031	ND@.018	ND@.022	ND@.021	49	210	1
1,1 Dichloroethane	ND@.019	ND@.019	ND@.019	.011J	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	570	1,000	10
Chloroform	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	19	28	1
1,2 - Dichloroethane	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	6	24	1
1,1,1 Trichloroethane	ND@.019	ND@.019	ND@.019	.017J	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	210	1,000	50
1,2 Dichloropropane	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	10	43	*
Trichloroethene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	23	54	1
Benzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	3	13	1
Tetrachloroethene	.56	.29	.035	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	.018J	ND@.018	ND@.022	ND@.021	4	6	1
Toluene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	.077	ND@.018	ND@.022	ND@.021	1,000	1,000	500
Chlorobenzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	37	680	1
Ethyl Benzene	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	.029	ND@.018	ND@.022	ND@.021	1,000	1,000	100
Xylenes	ND@.019	ND@.019	.090	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	.15	ND@.018	ND@.022	ND@.021	410	1,000	10
Trichlorofluoro Methane	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	*	*	*
1,4 Dichlorobenzene	ND@.019	ND@.019	ND@.019	.012J	ND@.019	ND@.019	ND@.019	ND@.018	ND@.019	ND@.020	ND@.018	ND@.022	ND@.021	570	10,000	100
Total Targeted VOCs	.632	.29 .0091J	.035	.040J	ND	.0078J	ND	ND	.95J	.287 .018J	ND	ND	ND	*	*	*
TI Volatile Organics	.029B	.029B	.009	.038	ND	ND	ND	.109	.291	2.747	.774	ND	ND	*	*	*

All results reported in Parts Per Million (PPM)

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 ND - Not Detected at Method Detection Limit
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 B - Compound Found in Associated Lab Blank

NA - Not Analysed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6'-1'	3'-3'6"	5'6"-6'	7'6"-8'	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'	6'-1'	3'-3'6"	5'6"-6'			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Petroleum Hydrocarbons	528	840	825	826	760	698	658	1196	482	960	842	686	1,195	10,000 ¹	10,000 ¹	*
pH	NA	NA	8.52	8.20	NA	8.81	8.90	NA	8.52	8.65	NA	8.26	8.41	*	*	*
Cation Exchange Capacity (CEC)	NA	NA	114.5	115.5	NA	117.5	104.0	NA	99.0	108.0	NA	152.5	131.5	*	*	*
Total PCBs	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	49	2	50
Aldrin	ND@.007	ND@.035	ND@.014	ND@.015	ND@.014	ND@.015	ND@.014	ND@.035	ND@.015	ND@.015	ND@.034	ND@.041	ND@.039	0.040	0.17	50
alpha-BHC	ND@.008	ND@.039	ND@.016	ND@.016	ND@.015	ND@.016	ND@.015	ND@.038	ND@.016	ND@.016	ND@.038	ND@.045	ND@.043	*	*	*
beta-BHC	ND@.004	ND@.021	ND@.009	ND@.009	ND@.008	ND@.009	ND@.008	ND@.021	ND@.009	ND@.009	ND@.021	ND@.025	ND@.024	*	*	*
delta-BHC	ND@.004	ND@.022	ND@.009	ND@.009	ND@.009	ND@.009	ND@.009	ND@.022	ND@.009	ND@.009	ND@.022	ND@.026	ND@.025	*	*	*
gamma-BHC	ND@.008	ND@.038	ND@.015	ND@.016	ND@.015	ND@.016	ND@.015	ND@.037	ND@.016	ND@.016	ND@.037	ND@.044	ND@.042	*	*	*
Chlordane	ND@.007	ND@.036	ND@.015	ND@.015	ND@.014	ND@.015	ND@.014	ND@.035	ND@.015	ND@.015	ND@.035	.102	ND@.040	*	*	*
4,4'-DDD	ND@.011	ND@.056	ND@.023	ND@.023	ND@.022	ND@.023	ND@.022	ND@.055	ND@.023	ND@.024	ND@.055	ND@.065	ND@.062	3	12	50
4,4'-DDE	ND@.011	ND@.057	ND@.023	ND@.023	ND@.022	ND@.023	ND@.022	ND@.056	ND@.024	ND@.024	ND@.055	ND@.066	ND@.063	2	9	50
4,4'-DDT	ND@.007	ND@.035	ND@.014	.031	ND@.014	ND@.014	ND@.014	ND@.035	ND@.015	ND@.015	ND@.034	ND@.041	ND@.039	2	9	500
Dieldrin	ND@.007	ND@.036	ND@.015	ND@.015	ND@.014	ND@.015	ND@.014	ND@.036	ND@.015	ND@.015	ND@.036	ND@.042	ND@.041	0.042	0.18	50

All results reported in Parts Per Million (PPM)

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 ND - Not Detected at Method Detection Limit
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 B - Compound Found in Associated Lab Blank

NA - Not Analyzed
 * - No current action level guideline.
 1 - 2/3/94 NJDEP Cleanup Criteria
 2 - Total Organic Compound (TOC) Cleanup Criteria.

TABLE 9
LUSTRELON, INC.
SURFACE FILL ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	SF-05	SF-05A	SF-05B	SF-05C	SF-06	SF-06A	SF-06B	SF-07	SF-07A	SF-07B	SF-08	SF-08A	SF-08B	NJDEP Residential Direct Contact Cleanup Criteria ¹	NJDEP Non-Residential Direct Contact Cleanup Criteria ¹	NJDEP Impact to Groundwater Cleanup Criteria ¹
Depth (ft)	6"-1'	3'-3'6"	5'6"-6'	7'6"-8"	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'	6"-1'	3'-3'6"	5'6"-6'			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Date	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94	6-9-94			
Endosulfan I	ND@.005	ND@.025	ND@.010	ND@.010	ND@.010	ND@.010	ND@.010	ND@.025	ND@.010	ND@.011	ND@.025	ND@.029	ND@.028	340	6200	50
Endosulfan II	ND@.006	ND@.028	ND@.011	ND@.012	ND@.011	ND@.012	ND@.011	ND@.027	ND@.012	ND@.012	ND@.027	ND@.032	ND@.031	340	6200	50
Endosulfan Sulfate	ND@.005	ND@.027	ND@.011	ND@.011	.037	.020	ND@.011	ND@.027	ND@.011	ND@.011	ND@.026	ND@.031	ND@.030	*	*	*
Endrin	ND@.008	ND@.041	ND@.011	ND@.017	ND@.016	ND@.017	ND@.016	ND@.041	ND@.017	ND@.018	ND@.041	ND@.048	ND@.046	17	310	50
Endrin Aldehyde	ND@.007	ND@.035	ND@.014	ND@.015	ND@.014	ND@.015	ND@.014	ND@.035	ND@.015	ND@.015	ND@.035	ND@.041	ND@.040	*	*	*
Endrin Ketone	ND@.005	ND@.027	ND@.011	ND@.011	ND@.011	.029	ND@.011	ND@.027	.020	.053	ND@.027	ND@.032	ND@.030	*	*	*
Heptachlor	.008	ND@.023	ND@.009	ND.009	ND@.009	ND@.009	ND@.009	ND@.022	ND@.009	ND@.010	ND@.022	ND@.026	ND@.025	0.15	0.65	50
Heptachlor Epoxide	ND@.003	ND@.016	ND@.006	.010	ND@.006	ND@.007	ND@.006	ND@.016	ND@.007	ND@.007	ND@.016	ND@.018	ND@.018	*	*	*
Methoxychlor	ND@.043	ND@.213	ND@.087	ND@.008	ND@.085	ND@.088	ND@.085	ND@.211	ND@.089	ND@.090	ND@.209	ND@.249	ND@.237	280	5200	50
Toxaphene	ND@.176	ND@.882	ND@.360	ND@.366	ND@.351	ND@.366	ND@.351	ND@.873	ND@.367	ND@.373	ND@.086	ND@.1.03	ND@.984	0.10	0.2	50
% Solids	88.4	88.4	86.6	85.2	88.9	88.7	88.9	89.3	85.0	83.6	90.3	75.7	79.3	*	*	*

All results reported in Parts Per Million (PPM)

- TI - Tentatively Identified
- ND - Not Detected at Method Detection Limit
- J - Estimated Value
- B - Compound Found in Associated Lab Blank

NA - Not Analysed

- * - No current action level guideline.
- 1 - 2/3/94 NJDEP Cleanup Criteria
- 2 - Total Organic Compound (TOC) Cleanup Criteria.

reported above the respective NJDEP NRCC; all hexavalent chromium analyses were reported to be ND.

TPHC concentrations ranged from 66 to 2,300 ppm. With the exception of a single PCB value of 1.85 at SF-3A (3.0 to 3.6 feet below grade), PCB values were reported to be ND. The subsurface cation exchange values reported ranged from 101 to 264, while subsurface pH values generally ranged from 8.26 to 9.08. A pH value of 6.6 from sample SF-03C was the single value reported outside of this range.

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number:	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Sample Type	Water	Water	Water	Water	Water
Depth (ft)	—	—	—	—	—
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Methylene Chloride	NA	NA	NA	ND@.005	ND@.005
1,1 Dichloroethane	NA	NA	NA	ND@.005	ND@.005
Chloroform	NA	NA	NA	ND@.005	ND@.005
1,2 - Dichloroethane	NA	NA	NA	ND@.005	ND@.005
1,1,1 Trichloroethane	NA	NA	NA	ND@.005	ND@.005
1,2 Dichloropropane	NA	NA	NA	ND@.005	ND@.005
Trichloroethene	NA	NA	NA	ND@.005	ND@.005
Benzene	NA	NA	NA	ND@.005	ND@.005
Tetrachloroethene	NA	NA	NA	ND@.005	ND@.005
Toluene	NA	NA	NA	ND@.005	ND@.005
Chlorobenzene	NA	NA	NA	ND@.005	ND@.005
Ethyl Benzene	NA	NA	NA	ND@.005	ND@.005
Xylenes	NA	NA	NA	ND@.005	ND@.005
Total Volatile Organics	NA	NA	NA	ND	ND
Total VO Organics w/ Qualifiers	NA	NA	NA	ND	ND
TI Volatile Organics	NA	NA	NA	ND	.012
<p>All results reported in Parts Per Million (PPM) TI - Tentatively Identified ND - Not Detected at Method Detection Limit J - Estimated Value B - Compound Found in Associated Lab Blank NA - Not Analyzed</p>					

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No.	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Depth (ft)	---	---	---	---	---
Sample Type	Water	Water	Water	Water	Water
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Hexavalent Chromium	<0.1	<0.1	<0.1	<0.1	<0.1
Antimony	ND@.004	ND@.004	ND@.004	ND@.004	ND@.004
Arsenic	ND@.008	ND@.008	ND@.008	ND@.008	ND@.008
Beryllium	ND@.001	ND@.001	ND@.001	ND@.001	ND@.001
Cadmium	ND@.003	ND@.003	ND@.003	ND@.003	ND@.003
Chromium	ND@.025	ND@.025	ND@.025	ND@.025	ND@.025
Copper	ND@.010	ND@.010	ND@.010	ND@.010	ND@.010
Lead	ND@.003	ND@.003	ND@.003	ND@.003	ND@.003
Mercury	ND@.003	ND@.003	ND@.003	ND@.003	ND@.003
Nickel	ND@.015	ND@.015	ND@.015	ND@.015	ND@.015
Selenium	ND@.002	ND@.002	ND@.002	ND@.002	ND@.002
Silver	ND@.020	ND@.020	ND@.020	ND@.020	ND@.020
Thallium	ND@.001	ND@.001	ND@.001	ND@.001	ND@.001
Zinc	ND@.010	ND@.010	ND@.010	ND@.010	ND@.010
Cyanide	NA	NA	NA	ND@.050	ND@.050
Phenol	NA	NA	NA	ND@.100	ND@.100

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank
 NA - Not Analysed

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Depth (ft)	--	---	---	---	---
Sample Type	Water	Water	Water	Water	Water
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Petroleum Hydrocarbons	ND@.44	ND@.47	ND@.46	ND@.43	ND@.043
pH	NA	NA	NA	NA	NA
Cation Exchange Capacity (CEC)	NA	NA	NA	NA	NA
Total PCBs	ND	ND	.032	.0072	ND
Aldrin	NA	NA	NA	ND@.00019	ND@.00019
alpha-BHC	NA	NA	NA	ND@.00021	ND@.00019
beta-BHC	NA	NA	NA	ND@.00012	ND@.00019
delta-BHC	NA	NA	NA	ND@.00012	ND@.00019
gamma-BHC	NA	NA	NA	ND@.00021	ND@.00019
Chlordane	NA	NA	NA	ND@.00020	ND@.00019
4,4'-DDD	NA	NA	NA	ND@.00031	ND@.00019
4,4'-DDE	NA	NA	NA	ND@.00031	ND@.00019
4,4'-DDT	NA	NA	NA	ND@.00019	ND@.00019
Dieldrin	NA	NA	NA	ND@.00020	ND@.00019
<p>All results reported in Parts Per Million (PPM) TI - Tentatively Identified ND - Not Detected at Method Detection Limit J - Estimated Value B - Compound Found in Associated Lab Blank NA - Not Analysed</p>					

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample No	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Depth (ft)	---	---	---	---	---
Sample Type	Water	Water	Water	Water	Water
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Endosulfan I	NA	NA	NA	ND@.0014	ND@.0014
Endosulfan II	NA	NA	NA	ND@.0015	ND@.0015
Endosulfan Sulfate	NA	NA	NA	ND@.0015	ND@.0015
Endrin	NA	NA	NA	ND@.0023	ND@.0023
Endrin Aldehyde	NA	NA	NA	ND@.0019	ND@.0019
Endrin Ketone	NA	NA	NA	ND@.0015	ND@.0015
Heptachlor	NA	NA	NA	ND@.0012	ND@.0012
Heptachlor Epoxide	NA	NA	NA	ND@.0009	ND@.0009
Methoxychlor	NA	NA	NA	ND@.00117	ND@.00116
Toxaphene	NA	NA	NA	ND@.00485	ND@.00482
% Solids	---	---	---	---	---

All results reported in Parts Per Million (PPM)

TI - Tentatively Identified

ND - Not Detected at Method Detection Limit

J - Estimated Value

B - Compound Found in Associated Lab Blank

NA - Not Analysed

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Sample Type	Water	Water	Water	Water	Water
Depth (ft)	---	---	---	---	---
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Accnaphthylene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Acenaphthene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Anthracene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Benzo (A) Anthracene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Benzo (A) Pyrene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Benzo (B) Fluoranthene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Benzo (K) Fluoranthene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Benzo (G,H,I) Perylene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Chrysene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Dibenz (a,h) Anthracene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Fluoranthene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Fluorene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Indeno (1,2,3-CD) Pyrene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Naphthalene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Bis (2-ethyl hexyl) Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Phenanthrene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01
Pyrene	ND@.011	ND@.01	ND@.011	ND@.01	ND@.01

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank
 NA - Not Analysed

TABLE 10
LUSTRELON, INC.
FIELD BLANK ANALYTICAL DATA SUMMARY
MAY AND JUNE 1994

Sample Number	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
Sample Type	Water	Water	Water	Water	Water
Depth (ft)	---	---	---	---	---
Date	5-26-94	5-31-94	6-1-94	6-2-94	6-9-94
Di-N-Octyl Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.010
Butyl Benzyl Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.010
Diethyl Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.010
Dimethyl Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.010
Di-N-Butyl Phthalate	ND@.011	ND@.01	ND@.011	ND@.01	ND@.010
Total BN/AE Organics	ND	ND	ND	ND	ND
Total BN/AE Organics w/ Qualifiers	ND	ND	ND	ND	.007J
Total TI BN Organics	ND	.007	.009	.024	.027
Acid Extractable Organics	NA	NA	NA	ND@.010	ND@.010
Phenol	NA	NA	NA	ND@.010	ND@.010
Total TI BN/AE Organics	ND	.007	.009	.024	.027

All results reported in Parts Per Million (PPM)
 TI - Tentatively Identified
 ND - Not Detected at Method Detection Limit
 J - Estimated Value
 B - Compound Found in Associated Lab Blank
 NA - Not Analysed

6.0 RESULTS OF SITE INVESTIGATION - GROUNDWATER

A groundwater monitoring well was installed in the apparent downgradient direction from the location of the former above ground fuel storage tank (AST). Well construction is described in Section 4.2; the well log is included in Appendix B. Groundwater sampling was conducted on 7/11/94, analytical parameters included BN+15, VOC+15, TPHC, PPM, TDS, pH, and dissolved oxygen. A summary of the analytical results reported by the laboratory, together with available groundwater quality criteria are included as Table 11.

The analytical data reported by the laboratory did not indicate any significant exceedence of current NJDEP Groundwater Quality Criteria for Class II-A groundwaters. Concentrations of VOC compounds detected were below method detection levels; no BN compounds were detected. A 101 ppb concentration of nickel marginally exceeded the 100 ppb groundwater criteria. No other exceedence of groundwater quality criteria was indicated.

TABLE 11
LUSTRELOX, INC.
MONITORING WELL ANALYTICAL DATA SUMMARY
JULY 1994

Sample No.	MW-1	Field Blank	Trip Blank	Higher of PQLs and Groundwater Quality Criteria (ppm)
Sample Type	Water	Water	Water	
Date	7-11-94	7-11-94	7-11-94	
Inorganic Compounds				
Antimony	ND @ .004	ND @ .004	NA	.020
Arsenic	ND @ .008	ND @ .008	NA	.008
Beryllium	ND @ .001	ND @ .001	NA	.020
Cadmium	ND @ .003	ND @ .003	NA	.004
Chromium	ND @ .025	ND @ .025	NA	.100
Copper	.016	ND @ .010	NA	1
Lead	ND @ .001	ND @ .001	NA	.010
Mercury	ND @ .0003	ND @ .0003	NA	.002
Nickel	.101	ND @ .015	NA	.100
Selenium	ND @ .002	ND @ .002	NA	.050
Silver	ND @ .020	ND @ .020	NA	.020
Thallium	ND @ .001	ND @ .001	NA	.010
Zinc	.138	ND @ .010	NA	5
Organic Compounds				
Petroleum Hydrocarbons	ND @ .43	ND @ .44	NA	*
Methylene Chloride	ND @ .005	ND @ .005	.003J	.002
1,1 Dichloroethane	.0029J	ND @ .005	ND @ .005	.070
Toluene	.0029J	ND @ .005	ND @ .005	1
TI Volatile Organics	.018B	.006B	.022B	*
Total Base Neutral Organics	ND	ND	NA	*
TI Base Neutral Organics	.024	ND	NA	*
Field Parameters				
TDS	1910	ND @ 10	NA	500
Dissolved Oxygen	4.2	NA	NA	*
Conductivity	2.71 ms	NA	NA	*
pH	7.07	NA	NA	*
Temperature	16.2°C	NA	NA	*

All results reported in Parts Per Million (PPM), unless otherwise noted.
 TI - Tentatively Identified NA - Not analyzed
 ND - Not Detected at Method Detection Limit * - No current action level
 J - Estimated Value
 B - Compound Found in Associated Lab Blank

7.0 ASBESTOS SURVEY

A Phase I Asbestos Survey was performed at the former Lustrelon facility on August 3, 1994. The purpose of the survey was to identify the location and apparent condition of suspect asbestos-containing material (SACM) and, wherever possible, to preliminarily estimate its quantity.

The site was comprised of three vacant buildings: Building No. 6 was a one-story concrete block structure of approximately 16,000 sf; Building No. 5 was a two and three-story brick structure, with basement, of approximately 16,000 sf; and Building No. 3 was a one and three-story cinder block/brick structure, with an inaccessible basement, of approximately 80,000 sf. The SACM observed at the site is summarized in Table 12, below.

TABLE 12
LUSTRELON, INC.
SUSPECT ASBESTOS CONTAINING MATERIALS

MATERIAL	LOCATION	CONDITION	QUANTITY
Pipe Insulation	Bldg. 6 ceiling	Poor	350 linear feet
Caulking	Bldg. 6 windows	Good/Poor	-
Wallboard *	Bldg. 6 bathrooms	Poor	-
Roofing Materials	Bldg. 6 roof	Inaccessible at time of survey	-
Paint	Bldg. 6 (throughout)	Poor	-
Wallboard	Bldg. 5 (throughout)	Poor	-
Caulking	Bldg. 5		
Roofing Materials	Bldg. 5 roof	Inaccessible at time of survey	-
Pipe Insulation *	Bldg. 5 (throughout)	Poor	2,000 linear feet
Paint *	Bldg. 5 (throughout)	Poor	-
Curved Rigid Insulation *	Bldg. 5 (covers entire outside)	Poor	-
Vinyl Tile *	Bldg. 5 (throughout)	Poor	-
Vinyl Tile Mastic *	Bldg. 5 (throughout)	Poor	-
Acoustical Ceiling Tile *	Bldg. 5 floor of 2nd & 3rd floors	Poor	-
Over Insulation	Bldg. 5 - 2nd floor	Poor	-
Caulking	Bldg. 5 windows	Good/Poor	-
Roofing Material	Bldg. 3 roof	Inaccessible at time of survey	-
Pipe Insulation	Bldg. 3 (throughout)	Poor	4,000 linear feet
Paint	Bldg. 3 (throughout)	Poor	-
Caulking	Bldg. 3 windows	Good/Poor	-
Wallboard	Bldg. 3 (throughout)	Poor	-

* Sample collected of this material

7.1 Analytical Results

Seven samples were collected during this Phase I Survey and sent to an independent, certified lab for the determination of asbestos content. The results of these analyses are provided in Table 13, below.

SAMPLE NO.	MATERIAL	LOCATION	ASBESTOS CONTENT
001	Wallboard	Bldg 6 bathrooms	No
002	Rigid Insulation	Exterior Bldg 5	Yes
003	Paint	Building 5	No
004	Pipe Insulation	Building 5	Yes
005	Vinyl Floor Tile	Building 5	Yes
006	Vinyl Floor Tile Mastic	Building 5	Yes
007	Acoustical Ceiling Tile	Building 5 floor, 2nd & 3rd floors	No

7.2 Recommendations

A comprehensive sampling survey should be performed prior to demolition of any of these structures. Based on any positive analytical findings in this survey, all asbestos containing materials should be properly removed, prior to demolition.

APPENDIX A

SOIL BORING AND TEST PIT LOGS

TEST PIT LOG

ULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. LT-01
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: U-TUBE SAMPLER: DIA. in. TYPE: CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE NO.	SAMPLE		SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
	DEPTH	BLOWS / 6"			
			BLACK F-M SAND LITTLE SILT WITH BRICK, CONCRETE, WOOD AND ROCK FRAGMENTS	F I L L	
LT-01	2'6" - 3'			1 2	Analytical sample collected at 2.5 - 3.0 feet.
			TEST PIT COMPLETED @ 3'	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-02
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/31/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/31/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM 10 ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED	TYPE: None ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D. U-TUBE SAMPLER: DIA. in. TYPE CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/31/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BLACK F-M SAND LITTLE SILT WITH BRICK, WOOD AND ROCK FRAGMENTS	F I L L SM	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 2.5 FT.
LT-02	2'6" - 4'6"	7	BROWN F-M SAND WITH SILT GRAVEL AND ROCK FRAGMENTS	2	Analytical sample collected at 2.5 - 3.0 feet.
		5		3	
		6		4	
		7		5	
			BORING COMPLETED @ 4'6"	6	
				7	
				8	
				9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

LULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-03
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/31/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/31/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D.
	U-TUBE SAMPLER: DIA. in. TYPE
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/31/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BLACK F-M SAND LITTLE SILT WITH BRICK, CONCRETE, WOOD AND ROCK FRAGMENTS	F 1 L L SM	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 2.5 FT.
LT-03	2'6" - 4'6"	5	BROWN F-M SAND WITH SILT GRAVEL AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	2	Analytical sample collected at 2.5 - 3.0 feet.
		7		3	
		7		4	
		3		5	
			BORING COMPLETED @ 4'6"	6	
				7	
				8	
				9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-04
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/31/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/31/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D.
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/31/94					GROUNDWATER WAS ENCOUNTERED AT 13'

SAMPLE NO.	SAMPLE		SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
	DEPTH	BLOWS/6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F 1 L L	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FT.
				2	Two attempts to advance boring. Refusal encountered at +/- 4.0 feet.
				3	
			BLACK F-M SAND LITTLE SILT WITH BRICKS, GRAVEL, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	F 1 L L	
				4	
				5	
				6	
				7	
LT-04	8'-10'	13		8	Analytical sample collected at 8.0 - 8.5 feet.
		14			
		16		9	
		12			
			BROWN-TAN F-M SAND LITTLE SILT AND GRAVEL (MEDIUM DENSE-WET)	SP	DRILL OUT WITH 4" I.D. HOLLOW STEM AUGERS FROM 10.0 TO 11.0 FEET
LT-04A	11'-13'	11		10	
		14		11	
		10		12	Analytical sample collected at 12.5 - 13.0 feet.
		9			
			BORING COMPLETED @ 13'	13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

JULIUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-05
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/1/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/1/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED	TYPE: None ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D. U-TUBE SAMPLER: DIA. in. TYPE: CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/1/94					GROUNDWATER WAS ENCOUNTERED AT 9'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL AND CONCRETE AND ROCK FRAGMENTS	F 1	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 5.0 FT.	
				L 2		
				L 3		Three attempts to advance boring. Refusal encountered at +/- 3.0 feet.
				L 4		
LT-05	5'-7'	12	BLACK F-M SAND LITTLE SILT, GRAVEL WITH BRICKS, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	F 5		
		15		L 6	Analytical sample collected at 6.5 - 7.0 feet.	
		13		L 7		
LT-05A	7'-9'	12		L 8	Analytical sample collected at 8.5 - 9.0 feet.	
		11		L 9		
		10		L 10		
			BORING COMPLETED @ 9'	L 11		
				L 12		
				L 13		
				L 14		
				L 15		
				L 16		
				L 17		
				L 18		

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-06
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/31/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/31/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D. U-TUBE SAMPLER: DIA. in. TYPE: CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/31/94					GROUNDWATER WAS ENCOUNTERED AT 13'

SAMPLE NO.	SAMPLE		SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F I L L 1	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 7.0 FT.
				L 2	Two attempts to advance boring. Refusal encountered at +/- 4.0 feet.
				3	
			BLACK F-M SAND LITTLE SILT, GRAVEL WITH BRICKS, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	4	
				F I L L 5	
				6	
LT-06	7'-9"	14		7	Analytical sample collected at 7.0 - 7.5 feet.
		12		8	
		12		9	
		10		10	DRILL OUT WITH 4" I.D. HOLLOW STEM AUGERS FROM 9.0 TO 10.0 FT.
LT-06A	11'-13'	12	BROWN-TAN F-M SAND WITH SILT PEBBLES AND GRAVEL (MEDIUM DENSE - WET)	SM 11	
		12		12	Analytical sample collected at 12.5 - 13.0 feet.
		9		13	
		6		14	
			BORING COMPLETED @ 13'	15	
				16	
				17	
				18	

BORING LOG

JULIUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-07
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/31/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/31/94
CONTRACTOR: J.C. Anderson Associates Drilling	

DRILLER: Steve HELPER: Vince

TYPE OF RIG: Truck Mounted

CASING DIA. in. FROM to ft. AUGER DIA. ID 4 in. Hollow Stem

DRILLING MUD UTILIZED TYPE: None ROTARY BIT DIA. in.

SAMPLING EQUIPMENT (type and size) SPLIT SPOON SAMPLER: 2" O.D.
 U-TUBE SAMPLER: DIA. in. TYPE:
 CORE BARREL: CORE BIT:

SAMPLER HAMMER WEIGHT (LBS) 140 AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/31/94					GROUNDWATER WAS ENCOUNTERED AT 13'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F I L L 1	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 7.0 FT.
				L 2	Three attempts to advance boring. Refusal encountered at +/- 3.0 feet.
				3	
				4	
			BLACK F-M SAND LITTLE SILT WITH BRICKS, GRAVEL, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - WET)	F I L L 5	
				6	
LT-07	7'-9'	7		7	Analytical sample collected at 7.0 - 7.5 feet.
		10		8	
		9		9	
		12		10	DRILL OUT WITH 4" I.D. HOLLOW STEM AUGERS FROM 9.0 TO 11.0 FT.
				11	
LT-07A	11'-13'	3	BROWN-TAN F-M SAND WITH SILT PEBBLES AND GRAVEL (MEDIUM DENSE - WET)	SM 11	
		6		12	Analytical sample collected at 12.5 - 13.0 feet.
		12		13	
		13		14	
			BORING COMPLETED @ 13'	15	
				16	
				17	
				18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-08
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/2/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/2/94

CONTRACTOR: J.C. Anderson Associates Drilling
 DRILLER: Steve HELPER: Vince

TYPE OF RIG: Truck Mounted

CASING DIA. in. FROM to ft. AUGER DIA. ID 4 in. Hollow Stem

DRILLING MUD UTILIZED TYPE: None ROTARY BIT DIA. in.

SAMPLING EQUIPMENT (type and size) SPLIT SPOON SAMPLER: 2" O.D.

U-TUBE SAMPLER: DIA. in. TYPE:

CORE BARREL: CORE BIT:

SAMPLER HAMMER WEIGHT (LBS) 140 AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/2/94					GROUNDWATER WAS ENCOUNTERED AT 12'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F I L L 2 3	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FT.
			BLACK F-M SAND LITTLE SILT WITH BRICKS, GRAVEL, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	F I L L 4 5 6 7	
LT-08	8'-10'	11		8	
		13			
		15		9	Analytical sample collected at 9.5 - 10.0 feet.
		16			
LT-08A	10'-12'	15	BROWN - TAN F - M SAND WITH SILT PEBBLES AND GRAVEL (MEDIUM DENSE - WET)	10	
		10		SM 11	Analytical sample collected at 11.5 - 12.0 feet.
		10		12	
			BORING COMPLETED @ 12'	13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

ULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-09
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/2/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/2/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Wells
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D.
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/2/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FT.	
				1		
				L		
				L		
				2		Five attempts to advance boring. Refusal encountered between 6.0 - 10.0 feet.
				3		
				4		
			5			
			6			
			SM	7		
LT-09	8'-10'	7	BLACK F-M SAND AND SILT GRAVEL, WOOD, ROCK AND BRICK FRAGMENTS (MEDIUM DENSE - DRY)	8		
		8		9	Analytical sample collected at 9.5 - 10.0 feet.	
		13		10		
		100		11		
			BORING COMPLETED @ 10'	12		
				13		
				14		
				15		
				16		
				17		
				18		

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-10
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/2/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/2/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Wells
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM 10 ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D. U-TUBE SAMPLER: DIA. in. TYPE: CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/2/94					GROUNDWATER WAS ENCOUNTERED AT 12'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F I L L 1 2	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FT. Two attempts to advance boring. Refusal encountered at +/- 5.0 feet.
			BLACK F-M SAND WITH SILT, GRAVEL, BRICK AND ROCK FRAGMENTS (MEDIUM DENSE - WET)	F I L L 4 5 6	
LT-10	8'-10'	3 7 7 13	BROWN-TAN F-M SAND AND SILT PEBBLES (MEDIUM DENSE-WET)	SM 9 10 11	Analytical sample collected at 9.5 - 10.0 feet. Analytical sample collected at 11.5 - 12.0 feet.
LT-10A	10'-12'	9 10 16 27			
			BORING COMPLETED @ 12'	12 13 14 15 16 17 18	

BORING LOG

JULIUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LT-11
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/2/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/2/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Wells
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED	TYPE: None ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" O.D.
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 100	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/2/94					GROUNDWATER WAS ENCOUNTERED AT 12'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT GRAVEL AND FILL MATERIAL CONSISTING OF BRICKS, WOOD, METAL, CONCRETE AND ROCK FRAGMENTS	F	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FT.
				1	
				L 1	
				L 2	
				L 3	Two attempts to advance boring. Refusal encountered at +/- 4.0 feet.
				L 4	
			BLACK F-M SAND WITH SILT, GRAVEL, BRICK AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	F	
				1	
				L 5	
				L 6	
				L 7	
LT-11	8'-10'	5		L 8	
		7		L 9	Analytical sample collected at 9.5 - 10.0 feet.
		8		L 10	
		9		L 11	
LT-11A	10'-12'	4		L 12	
		6		L 13	
		7		L 14	
		8	BROWN-TAN F-M SAND AND SILT PEBBLES (MEDIUM DENSE-WET)	SM 11	Analytical sample collected at 11.5 - 12.0 feet.
			BORING COMPLETED @ 12'	L 12	
				L 13	
				L 14	
				L 15	
				L 16	
				L 17	
				L 18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LR-01
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/26/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/26/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM 10 ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED	TYPE: None ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" OD
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/26/94					GROUNDWATER WAS ENCOUNTERED AT 6'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			RED - BROWN F-M SAND AND SILT	SM 1	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 3.0 FT.
				2	
LR-01	3'-5'	13	RED - BROWN F-M SAND AND SILT	SM 3	Analytical sample collected at 3.0 - 3.5 feet.
		11	BLACK STAINED WITH ASHES, CINDERS		
		11	WOOD, BRICK AND CONCRETE	4	
		10	(MEDIUM DENSE - DRY)		
LR-01A	5'-7'	10		5	Analytical sample collected at 5.5 - 6.0 feet.
		11			
		11	GREY CLAY AND SILT	CL 6	
		12	(STIFF - WET)		
			BORING COMPLETED @ 7'	7	
				8	
				9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LR-02
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/26/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/26/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" OD
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/26/94					GROUNDWATER WAS ENCOUNTERED AT 7'

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			RED - BROWN F-M SAND AND SILT	SM	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 3.0 FT.
				1	Four attempts to advance
				2	boring. Refusal encountered at +/- 4.0 feet.
LR-02	3'-5'	9	BLACK F-M SAND AND SILT WITH	SM	Analytical sample collected at 3.0 - 3.5 feet.
		9	ASHES, CINDERS, WOOD, BRICK,		
		12	CONCRETE AND ROCK FRAGMENTS	4	
		7	(MEDIUM DENSE - DRY)		
LR-02A	5'-7'	5		5	
		6			
		6		6	Analytical sample collected at 6.5 - 7.0 feet.
		7			
			BORING COMPLETED @ 7'	7	
				8	
				9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LF-01
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/26/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/26/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince

TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" OD
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/26/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BROWN F-M SAND LITTLE SILT AND GRAVEL, FILL MATERIAL CONSISTING OF WOOD, BRICKS METAL AND GLASS	F	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 6.0 FEET
				1	
				2	
				3	
				4	
				5	
LF-01	6'-8'	9	BLACK F-M SAND LITTLE SILT WITH ASHES AND CINDERS BRICK AND ROCK FRAGMENTS (DENSE - DRY)	SP	Analytical sample collected at 6.0 - 6.5 feet.
		15		6	
		17		7	
		8		8	
			BORING COMPLETED @ 8'	9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

BORING LOG

ULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LF-02
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 5/26/94
OBSERVERS: John Pastorick	DATE COMPLETED: 5/26/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Vince
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" OD
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
5/26/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
			BROWN F-M SAND LITTLE SILT AND GRAVEL, FILL MATERIAL CONSISTING OF WOOD, BRICKS METAL, GLASS AND CONCRETE	F	DRILLED OUT WITH 4" I.D. HOLLOW STEM AUGERS TO A DEPTH OF 8.0 FEET	
				1		
				I		Three attempts to advance boring. Refusal encountered at +/- 4.0 feet.
				L		
				L		
						4
						5
						6
				7		
LF-02	8'-10'	6	BLACK F-M SAND LITTLE SILT ASHES, CINDERS, BRICK AND METAL (MEDIUM DENSE - DRY)	SP	Analytical sample collected at 8.0 - 8.5 feet.	
		5		8		
		7		9		
		17				
			BORING COMPLETED @ 10'			
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	

BORING LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

BORING NO. LF-04
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/2/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/2/94
CONTRACTOR: J.C. Anderson Associates Drilling	
DRILLER: Steve	HELPER: Wells
TYPE OF RIG: Truck Mounted	
CASING DIA. in. FROM to ft.	AUGER DIA. ID 4 in. Hollow Stem
DRILLING MUD UTILIZED	TYPE: None ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: 2" OD
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS) 140	AVG. DROP 30 in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/2/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE NO.	SAMPLE		SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS			
	DEPTH	BLOWS / 6"						
	0-2'	10	FILL MATERIAL CONSISTING OF CONCRETE, WOOD, BRICK AND ROCK FRAGMENTS	FI L L	NO RECOVERY IN SPOONS EXCEPT FOR BRICK, CONCRETE AND WOOD FRAGMENTS			
		15						
		17						
		12						
	2'-4'	9						
		9						
		20						
		19						
	4'-6'	10						
		15						
		100/1						
LF-04	8'-10'	19				BLACK F-M SAND LITTLE SILT WITH WOOD, BRICK, CONCRETE AND ROCK FRAGMENTS (MEDIUM DENSE - DRY)	SP	Analytical sample collected at 9.5 - 10.0 feet.
		16						
		13						
		12						
			BORING COMPLETED @ 10'					
				10				
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				

TEST PIT LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-01
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
SF-01	6" - 1'		BROWN F-M SAND LITTLE SILT ROCK FRAGMENTS, FILL MATERIAL CONSISTING OF WOOD, BRICKS, TAR, CONCRETE, ROOFING MATERIAL, INSULATION	F 1 L L	Analytical sample collected at 0.5 - 1.0 feet.
SF-01A	3' - 3'6"			3	Analytical sample collected at 3.0 - 3.5 feet.
				4	Analytical sample collected at 4.5 - 5.0 feet.
SF-01B	4'6" - 5'			5	CONCRETE PAD ENCOUNTERED AT 5.0 FT.
				6	
			7		
			8		
			9		
			10		
			11		
			12		
			13		
			14		
			15		
			16		
			17		
			18		

TEST PIT COMPLETED @ 5'

TEST PIT LOG

MULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-02
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED	TYPE: None
	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
SF-02	6" - 1'		BROWN F-M SAND LITTLE SILT ROCK FRAGMENTS, FILL MATERIAL CONSISTING OF WOOD, BRICKS, BOULDERS, METAL	F 1 L	Analytical sample collected at 0.5 - 1.0 feet.	
				L	2	
SF-02A	3' - 3'6"		BROWN F-M CLAYEY SAND AND SILT AND FILL MATERIAL		Analytical sample collected at 3.0 - 3.5 feet.	
				F	4	
SF-02B	5'6" - 6'			L	Analytical sample collected at 5.5 - 6.0 feet.	
				L	6	
SF-02C	7'6" - 8'				Analytical sample collected at 7.5 - 8.0 feet.	
					7	
			TEST PIT COMPLETED @ 8'		8	
					9	
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	

TEST PIT LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-03
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
SF-03	6" - 1'		RED-BROWN F-M SAND LITTLE SILT ROCK FRAGMENTS, FILL MATERIAL CONSISTING OF WOOD, BRICKS, BOULDERS, METAL, REBAR, CONDUIT	F I L L 2	Analytical sample collected at 0.5 - 1.0 feet.
SF-03A	3' - 3'6"			3 4	Analytical sample collected at 3.0 - 3.5 feet.
SF-03B	5'6" - 6'		BLACK F-M SAND LITTLE SILT FILL MATERIAL AND TRAP ROCK (4") ASHES AND CINDERS	F I L L 7	Analytical sample collected at 5.5 - 6.0 feet.
SF-03C	7'6" - 8'			8 9 10 11 12 13 14 15 16 17 18	Analytical sample collected at 7.5 - 8.0 feet.
			TEST PIT COMPLETED @ 8'		

TEST PIT LOG

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 Warren, New Jersey 07059

TEST PIT NO. SF-04
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER: U-TUBE SAMPLER: DIA. in. TYPE: CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
			BLACK F-M SAND AND ORGANIC MATERIAL	FILL 1	
			BROWN F-M CLAYEY SAND LITTLE SILT AND GRAVEL FILL MATERIAL	FILL 2	
SF-04A	3' - 3'6"		CONSISTING OF BRICK, WOOD, ASHES, METAL AND CONCRETE	FILL 3	Analytical sample collected at 3.0 - 3.5 feet.
			TEST PIT COMPLETED @ 4'	4	CONCRETE PAD ENCOUNTERED AT 4.0 FT.
				5	
				6	
				7	
				8	
				9	
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	

TEST PIT LOG

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 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-05
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM 10 ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS
NO.	DEPTH	BLOWS / 6"			
SF-05	6" - 1'		BROWN F-M SAND LITTLE SILT FILL MATERIAL CONSISTING OF CONCRETE, BRICK, WOOD, METAL	F	Analytical sample collected at 0.5 - 1.0 feet.
				I	
				L	1
				L	2
					3
SF-05A	3' - 3'6"		BLACK F-M SAND LITTLE SILT FILL MATERIAL		Analytical sample collected at 3.0 - 3.5 feet.
					5
SF-05B	5'6" - 6'			F	Analytical sample collected at 5.5 - 6.0 feet.
				I	
				L	6
				L	7
SF-05C	7'6" - 8'				Analytical sample collected at 7.5 - 8.0 feet.
					9
				10	
				11	
				12	
				13	
				14	
				15	
				16	
				17	
				18	
			TEST PIT COMPLETED @ 8'		

TEST PIT LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-06
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE:
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
SF-06	6" - 1'		BROWN F-M SAND LITTLE SILT FILL MATERIAL CONSISTING OF CONCRETE, BRICK, WOOD, METAL, TREE TRUNKS AND BRANCHES	F	Analytical sample collected at 0.5 - 1.0 feet.	
				I		
				L		
				L		
SF-06A	3' - 3'6"				3	Analytical sample collected at 3.0 - 3.5 feet.
					4	
				5	Analytical sample collected at 5.5 - 6.0 feet.	
SF-06B	5'6" - 6'			6		
			TEST PIT COMPLETED @ 6'	7		
				8		
				9		
				10		
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		

TEST PIT LOG

PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-07
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)		ELEVATION:	
PROJECT LOCATION: River Road, Edgewater, NJ		DATE STARTED: 6/9/94	
OBSERVERS: John Pastorick		DATE COMPLETED: 6/9/94	
CONTRACTOR:			
DRILLER:		HELPER:	
TYPE OF RIG:			
CASING DIA.	in.	FROM	to ft.
AUGER DIA. ID		in.	
DRILLING MUD UTILIZED		TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)		SPLIT SPOON SAMPLER:	
		U-TUBE SAMPLER: DIA. in. TYPE:	
		CORE BARREL: CORE BIT:	
SAMPLER HAMMER WEIGHT (LBS)		AVG. DROP in.	

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
SF-07	6" - 1'		BROWN F-M SAND LITTLE SILT FILL MATERIAL CONSISTING OF CONCRETE, BRICK, WOOD, METAL,	F I L L	Analytical sample collected at 0.5 - 1.0 feet.	
					1	
					2	
SF-07A	3' - 3'6"				3	Analytical sample collected at 3.0 - 3.5 feet.
					4	
					5	Analytical sample collected at 5.5 - 6.0 feet.
SF-07B	5'6" - 6'				6	
				TEST PIT COMPLETED @ 6'	7	
					8	
					9	
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
				18		

TEST PIT LOG

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PAULUS SOKOLOWSKI AND SARTOR, INC.
 Consulting Engineers
 Warren, New Jersey 07059

TEST PIT NO. SF-08
 SHEET 1 of 1
 JOB NO. 0662-0032-04

PROJECT: Lustrelon, Inc. (Edgewater Associates)	ELEVATION:
PROJECT LOCATION: River Road, Edgewater, NJ	DATE STARTED: 6/9/94
OBSERVERS: John Pastorick	DATE COMPLETED: 6/9/94
CONTRACTOR:	
DRILLER:	HELPER:
TYPE OF RIG:	
CASING DIA. in. FROM to ft.	AUGER DIA. ID in.
DRILLING MUD UTILIZED TYPE: None	ROTARY BIT DIA. in.
SAMPLING EQUIPMENT (type and size)	SPLIT SPOON SAMPLER:
	U-TUBE SAMPLER: DIA. in. TYPE
	CORE BARREL: CORE BIT:
SAMPLER HAMMER WEIGHT (LBS)	AVG. DROP in.

WATER LEVEL OBSERVATIONS

DATE	TIME	DEPTH OF HOLE	DEPTH OF CASING	DEPTH TO WATER	REMARKS
6/9/94					GROUNDWATER WAS NOT ENCOUNTERED

SAMPLE			SAMPLE DESCRIPTION	STRATA & DEPTH	REMARKS	
NO.	DEPTH	BLOWS / 6"				
SF-08	6" - 1'		BROWN F-M SAND LITTLE SILT FILL MATERIAL CONSISTING OF CONCRETE, BRICK, WOOD, METAL,	FILL	Analytical sample collected at 0.5 - 1.0 feet.	
				L		
				L		
SF-08A	3" - 3'6"		BLACK F-M SAND ASHES AND CINDERS TRAP ROCK (4")		Analytical sample collected at 3.0 - 3.5 feet.	
SF-08B	5'6" - 6'			SP	Analytical sample collected at 5.5 - 6.0 feet.	
			TEST PIT COMPLETED @ 6'			
					6	
					7	
					8	
					9	
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
				18		

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