File No. 09-01-08

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY
DIVISION OF RESPONSIBLE PARTY SITE REMEDIATION
DISCHARGE RESPONSE ELEMENT

ADMINISTRATIVE COST RECOVERY ENFORCEMENT REFERRAL

TO: Kathy Wooley, Financial Management **DATE:** 4-22-92

FROM: Yacoub Yacoub, Region Chief, MFO

RE: ROLLINS TERMINAL INC. (Case name) 9012241045 (Incident #) PKB (PAC)

ROLLINS TERMINAL, FOOT OF E. 2nd St., BAYONNE (Location of Violation) BLOCK 54D/ LOT 52B, 52C4 (Block and/ Lot) 0901 (Cty/Mun Code)

FOOT OF EAST 2nd ST., PO BOX 513, BAYONNE, NJ, 07002-0513
Mailing Address (Street, City, State, Zip code)

ROLLINS TERMINAL INC. / HENRY TYSZKA / FACILITY MNGR
Responsible Party/Contact Name

The inspection/investigation was conducted between 12-26-90 and 4-22-91. It is recommended that an **ADMINISTRATIVE COST RECOVERY DEMAND LETTER** be issued.

SPECIFIC HAZARDOUS SUBSTANCES INVOLVED: ZIRCONIUM OXYCHLORIDE

COMMENTS:

REVIEWED AND APPROVED BY:

4/28/92

04-28-92

09-01-08

Bayonne Terminals, Inc.

East Second Street, P.O. Box 513, Bayonne, N.J. 07002 • 201/436-5000

RECEIVED
JUN 15 1993

June 11, 1993

Mr. Arnold Schiff
Metro Regional Office
NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS
WASTE MANAGEMENT
Two Babcock Place
West Orange, NJ 07052

Dear Mr. Schiff:

In accordance with our conversation on Friday, June 11, 1993, Bayonne Terminals, Inc. will conduct a remedial investigation of the sumps between and next to rail tracks because of problems alleged by our neighbor, Norton.

Our objective will be to find and correct any problem, if it truly exists, without delay.

Your assistance in this matter is greatly appreciated.

Sincerely,

John H. Curtis

John H. Curtis
President

JHC:ral

Bayonne Terminals, Inc.

East Second Street, P.O. Box 513, Bayonne, N.J. 07002 • 201/436-5000

RECEIVED
JUN 30 1993

June 24, 1993

Mr. Arnold Schiff
Metro Regional Office
NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS
WASTE MANAGEMENT
2 Babcock Place
West Orange, NJ 07052

Dear Mr. Schiff:

On June 15, 1993, Bayonne Terminals, Inc. investigated the alleged problem that our neighbor, the Norton's, had reported.

As stated in my letter of June 11, 1993, to you, our objective was to find and correct the problem if it existed. The problem alleged by the Norton's was a 5" - 6" diameter clay pipe uncovered by Norton while digging a hole near their property line. This pipe supposedly had an undetermined liquid in it that was coming from our property.

On June 15, 1993, we hired a contractor to work with us to determine if the alleged problem existed. Since there are inadequate piping diagrams in the area of the subject pipe, we took the following steps:

1. There are two (2) sumps located between the two rail tracks in the general vicinity of the subject pipe that are approximately 3' wide x 5' long (three feet wide by five feet long) and 4' (four feet) deep that were cleaned to determine if the subject pipe was connected to those sumps. The subject pipe was not connected to the sumps, concluding that neither sump could be the source of the alleged problem. Both sumps were cleaned and the single pipe connection in each sump was sealed with a pipe plug.

2. After determining that the sumps could not be a source for the alleged problem, we excavated a hole between the Norton property and ours to locate the subject pipe. After digging approximately 6' (six feet), we located the subject pipe, broke the pipe, and verified that this pipe indeed ran between the two properties by shining a light through it. The pipe had no liquid in it and was dry on both ends.

   We then, on our property, sealed both ends of the subject pipe with a pipe plug on the side nearest the Norton property and a pipe plug and concrete on the other side.

   The sumps and the excavation were refilled with clean material and the sumps were covered with plastic and a plywood top to prevent any possible rain water from entering them.

   All material removed from the sumps and excavation were placed in closed containers for determination of proper disposal.

   The contractor had a Health and Safety plan in effect throughout the entire one-day operation.

We did not find a problem, and as you can see, we sealed everything to make sure BTI could not contribute to whatever problems the Norton's may have.

Should you have any questions, please call me at 201-436-5000.

Sincerely,

John H Curtis

John H. Curtis
President

JHC:ral

DEP-062A
10/91

09-[illegible]

☐ Check here if Revised Billing

Jersey Department of Environmental Protection and Energy

ENFORCEMENT INVOICE

Document # [illegible]-25
Date Rec'd [illegible]
Amount [illegible]

DIVISION DRPSR - MFO
PROGRAM DISCHARGE RESPONSE

TYPE: ☐ Fine/Penalty ☒ Cost Recovery

FACILITY ID NO.
PROGRAM ID NO.

RECEIVED
OCT 2 6 1992

Case/Company Name ROLLINS TERMINAL, INC.
Address P.O. BOX 513
BAYONNE, NJ 07002-0513

Please identify appropriate category:
☐ County
☐ Local
☐ Private

Authority:
☐ Regional
☐ Local

☐ Industrial
☐ Commercial
☐ Other - ____ Specify

DATE ASSESSED	DESCRIPTION	AMOUNT
SEP 14 1992	ADMINISTRATIVE OVERSIGHT COSTS ASSOCIATED WITH A DISCHARGE OF ZIRCONIUM OXYCHLORIDE, ROLLINS TERMINAL, 12/24/90. NJSA58:10-23.11 ET SEQ.	$1,188.75
DATE DUE:	30 DAYS FROM RECEIPT OF INVOICE AMOUNT DUE:	$1,188.75

Make check payable to: **Treasurer, State of New Jersey**

Mail to: **NJDEPE, Bureau of Revenue**
CN 417, Trenton, N.J. 08625-0417

COPY DISTRIBUTION: White - Remittance Copy Yellow - Company Pink - Bureau of Revenue Goldenrod - Division

---

BAYONNE TERMINALS, INC.
One Rollins Plaza, Wilmington, Delaware 19803

2-3
710

CONTINENTAL BANK N.A.
231 South La Salle Street, Chicago, Illinois 60697

011453

DATE	CHECK NO.	NET AMOUNT
9/30/92	11453	$1,188.75

PAY TO THE ORDER OF

Treasurer State of NJ
428 East State St.
CN-417
Trenton, NJ 08625

John H. Curtis

BAA000014

⑈011453⑈ ⑆071000039⑆ 77 75466⑈ ⑈0000118875⑈

14.

DEP-052A 09-01-08
10/91 ☐ Check here if Revised Billing

New Jersey Department of Environmental Protection and Energy

ENFORCEMENT INVOICE

RECEIVED
SEP 21 1992

Document #
Date Rec'd
Amount

DIVISION DRPSR - MFO
PROGRAM DISCHARGE RESPONSE

TYPE: ☐ Fine/Penalty ☒ Cost Recovery

FACILITY ID NO.
PROGRAM ID NO.

Case/Company Name ROLLINS TERMINAL, INC.
Address P.O. BOX 513
BAYONNE, NJ 07002-0513

Please identify appropriate category:
☐ County Authority: ☐ Industrial
☐ Local ☐ Regional ☐ Commercial
☐ Private ☐ Local ☐ Other
Specify

DATE ASSESSED	DESCRIPTION	AMOUNT
SEP 14 1992	ADMINISTRATIVE OVERSIGHT COSTS ASSOCIATED WITH A DISCHARGE OF ZIRCONIUM OXYCHLORIDE, ROLLINS TERMINAL, 12/24/90. NJSA58:10-23.11 ET SEQ.	$1,188.75
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CN 417, Trenton, N.J. 08625-0417

COPY DISTRIBUTION: White - Remittance Copy Yellow - Company Pink - Bureau of Revenue Goldenrod - Division

State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation
CN 028
Trenton, NJ 08625-0028

Scott A. Weiner
Commissioner

Karl J. Delaney
Director

SEP 14 1992

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. P258810349

Mr. Henry Tyszka
Facility Manager
Rollins Terminal, Inc.
P.O. Box 513
Bayonne, NJ 07002-0513

Dear Mr. Tyszka:

The New Jersey Department of Environmental Protection and Energy is authorized, pursuant to the New Jersey Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., to collect all costs associated with a discharge and incurred by the State in the removal of hazardous substances or mitigation of damages. Accordingly, oversight costs (salary, materials and indirect costs), in the amount of $1,188.75 were incurred by the Department on the following site: Rollins Terminal, Foot of East Second Street, Bayonne, 12/24/90.

Payment of this amount will not relieve the company from potential liability for civil or administrative penalties, additional costs incurred by the Department, nor any other responsibility or obligation under the law, including responsibility for damages which may have been caused by the discharge. Your payment of this amount merely satisfies the Department's interest in recovering its actual costs of the above referenced site.

Payment shall be made by check or money order payable to "Treasurer, State of New Jersey" within 30 days after receipt of this notice. Please send your check and the white copy of the attached Form DEP-062A to:

New Jersey Department of Environmental
Protection and Energy
Bureau of Revenue
CN 417
Trenton, NJ 08625-0417

Should you have any questions concerning this matter, please contact Mr. Yacoub Yacoub at (201) 699-3960.

Sincerely,

Kathleen M. Wooley

Kathleen M. Wooley
Administrative Assistant
Administrative Support Unit

Enclosures
c: Yacoub Yacoub, MFO

ROLLINS TERMINAL, INC, BAYONNE/9012241045
ANALYSIS OF EXPENDITURES
TIME PERIOD COVERED: 12/24/90 THROUGH 06/30/92

PART A: CASE MANAGEMENT TEAM COSTS

FY	SALARIES	%	ADDITIVE	SUBTOTAL	%	FRINGE	SUBTOTAL	%	INDIRECT	TOTAL
1991	$320.14	23.22%	$74.34	$394.48	28.65%	$113.02	$507.49	134.24%	$681.26	$1,188.75
1992	$0.00	22.00%	$0.00	$0.00	28.65%	$0.00	$0.00	134.24%	$0.00	$0.00

TOTAL CASE MANAGEMENT TEAM COSTS $1,188.75

PART B: DIRECT COSTS $0.00

TOTAL SITE CLEANUP COSTS $1,188.75

COST RECOVERIES TO DATE $0.00

PREPARED BY ADMINISTRATIVE SUPPORT UNIT ACRMF054 09/10/92

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PAGE      1

                                   ADMINISTRATIVE COST RECOVERY
                               ROLLINS TERMINAL, INC. BAYONNE/2012241045
                                  12/24/90 THROUGH 06/30/92

                     ALL CHARGES TO PROJECT ACTIVITY PKB - ROLLINS TERMINAL - 2012241045 SITE
                                         FISCAL YEAR 91

 FY  PAC  WCC  WCC DESCRIP                   NAME        ACCOUNTNUMBER   OCODE  DATE     HOURS       AMOUNT
 --  ---  ---  -----------                   ----
 91  PKB  MPE  METRO FIELD OFFICE            OSTER     D 481510127000012 521    901228     4.0        65.92
                                                                                910111     3.0        49.44
                                             WALKER    M 481510127000012 521    910111    11.0       135.30
                                                                                910125     2.5        30.75
                                                                                910308     3.0        38.73

*TOTAL WCC MPE                                                                            23.5       320.14
*TOTAL PAC PKB                                                                            23.5       320.14
*TOTAL FY 91                                                                              23.5       320.14



 TOTAL                                                                                    23.5       320.14



                                 FILE PREPARED BY ASU/KMW 09/04/92
                                    FILE REFERENCE ACRMF054
```

0 9-~~~~-15 920238

DEP-081
8/91

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ENERGY

~~920237~~

CASE TRANSFER REPORT

The following case is being considered for possible reassignment of lead. See Instructions on back.

ORIGINATING PROGRAM REPORT

IEC ____ (Yes/No) Prox. Risk ____ (Yes/No)
If Yes, complete Form DEP-081B.

1. Bureau/Division BEAC/DRPSR Name of Person Reporting Kathleen Davy Tele # 633-7141

2. SITE INFORMATION

A. Name of Site Bayonne Terminals, Incorporated/ [illegible], Inc.
Operator Bayonne Terminals, Inc. Owner Bayonne Terminals Moody Chemical
AKA(s) Rollins Terminal EPA ID # 92-03-30-1701
Address East Second Street Case ID # ____
Municipality Bayonne Lot ____ Block ____ County Hudson
Type of Business or Operation transportation SIC Code ____ Approx. Acreage ____
Hazardous Waste Quantity (tons) ____

B. Environmental Concerns (Check as many as apply, include number of units)

Asbestos ____
AGST ____
Bldg. Decont. ____
Discharge ✓
Drum Storage ____
Monitoring Well(s) ____
Dumpster ____
Floor Drain ____
Lagoon ____
Seepage Pit ____
Septic System ____
Potable Well(s) ____
Surface Spill ✓
Roof Drain ____
Tank Farm ____
Transformer ____
MVA ____
Other (specify) ____
UST (Reg.) ____
UST (Nonreg.) ____
Waste Pile ____
Unknown ____

If "B" is checked, complete and attach Form DEP-081A on contaminants or to detail other comments.

3. A. Project Activity Code Used ____ B. Was an RP Search Done? ____ (Yes/No)

4. Other NJDEPE Programs Involved in this Case are: BEECRA, Bureau of Information Systems

5. Were Local Officials notified? ☑ Yes ☐ No Date ____ Organization ____

ORIGINATING PROGRAM APPROVALS

Gary Sanderson 2-6-92 — Inspector/Date
ae 2/6/92 Tina Sayre 2/6/92 — Section Chief/Date
Barbara Murray 2/6/92 — Bureau Chief/Date

SITE ASSESSMENT GROUP REVIEW

IEC / (Yes/No) Prox. Risk ____ (Yes/No)
If Yes, complete Form DEP-081B.

1. Case Received: (Date) 2/10/92 Project Activity Code: —
Assigned to: DPinto (Date) 2/10/92

2. Reviewer's Evaluation (Circle One) SIN / RPS Score: ____
A. Remedial Level Determination C-1 (B-D) Public ____ Private ✓ Transfer Sequence # 1
Reason for Determination DISCHARGING ONTO GROUND / DISMANTLING AGSTS

RECEIVING PROGRAM DESIGNATIONS

Per the Case Management Strategy, this case is being:

(1) Transferred to: METRO BFO as the Lead Program
Contact YACOUB YACOUB Tele # (201) 669-3960

(2) Referred to:
Div./Bureau ____ Name ____ Action Required ____
Div./Bureau ____ Name ____ Action Required ____

SITE ASSESSMENT APPROVALS

Bob Van Fossen 2/20/92
Bureau Chief/Date

DPinto 2/10/92
Section Chief/Date

DPinto 2/10/92
Reviewer/Date

RECEIVING PROGRAM APPROVAL

"This is to acknowledge that case lead assignment has been approved by this Bureau."

09-23-92
Bureau Chief/Date

COPIES: White - Receiving Program Green - Originating Program Yellow - Return to BSA Pink - Tracking Gold - Local Official

1. **USE OF THIS FORM:**

Originating programs which desire to transfer a case that is no longer within their program's scope should use this form. To determine if a case requires transfer, refer to the NJDEP Case Assignment Manual, available through the Bureau of Site Assessment or your program supervisor.

INSTRUCTIONS:

Press firmly with a ballpoint pen to ensure that all copies are legible.

2A. AKA(s) = "also known as": list alternate names of site if applicable.

ID #: this should be the EPA ID number Case number: list the program case number if applicable.

2B: Check all items that apply and specify number of units for example = "AGST3"

AGST	= above ground storage tank.
MVA	= motor vehicle accident.
UST (reg.)	= underground storage tanks regulated under N.J. A.C.7:14B-1 et.seq.
UST (non reg.)	= underground storage tanks not regulated by above citation.
Bldg. Decont	= building decontamination.

If any items are checked, complete and attach the Supplemental Case Transfer Report Form DEP-081A.

2. Assign the remedial level (B-D) based on site conditions (for detailed remedial level description refer to the Case Assignment Manual).

3B: To answer yes, the RP (responsible party) search must conform to the Bureau of Compliance and Technical Services S.O.P. and be documented in the case file.

4. List all other NJDEP programs currently involved in the case, ie. NJPDES or RCRA permits, air permits, etc.

** If IEC or Proximate Risk conditions have been identified at the site, complete and attach form DEP-081B **

ORIGINATING PROGRAM APPROVALS:

Signature of the inspector and the date is required. Section and bureau chiefs may initial signifying their approval for transfer. After the bureau chief has approved, the originating program sends the completed form to: Bureau of Site Assessment, Division of Responsible Party Site Remediation, 300 Horizon Center Dr. CN 407, Trenton, New Jersey, Attention Bureau Chief. This should also be logged out by your program.

NOTE: Originating Program retains the case lead until the receiving program has accepted the case transfer as evidenced by the return of a signed copy of the original CT form.

Receiving Program the bureau chief should acknowledge receipt and acceptance of the case by signing the CT form in the bottom right corner and returning it to BSA within 14 days.

Questions or comments regarding case transfers should be directed to Nate Byrd, BSA.

DEP A
6/8

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

SUPPLEMENTAL CASE TRANSFER REPORT

VN OR POTENTIAL SOURCES OF RELEASE

Page ____ of ____

LOCATION OF CONCERN AND MEDIA AFFECTED	POLLUTANTS		ACTIONS TAKEN
GROUND WATER discharge of hazardous materials	SAMPLING FINDINGS	CONCENTRATION ACTION LEVEL	ACTIONS TAKEN: Spills of hazardous materials witnessed by the adjacent operator OUTCOME: (Norton & Sons, Inc.) reportedly as a result of their former operations, NEXT STEP: groundwater may be affected.
SURFACE WATER	SAMPLING FINDINGS	CONCENTRATION ACTION LEVEL	ACTIONS TAKEN: -recommend investigation/remediation OUTCOME: NEXT STEP:
SOILS discharge of hazardous materials	SAMPLING FINDINGS	CONCENTRATION ACTION LEVEL	ACTIONS TAKEN: During the course of an ECRA case (Norton & Son, Inc.) it was discovered that hazardous materials were discharged OUTCOME: directly onto the ground. Rollins Terminal is currently dismantling [illegible] NEXT STEP: along the southern + eastern border of the Norton Site.
AIR	SAMPLING FINDINGS	CONCENTRATION ACTION LEVEL	ACTIONS TAKEN: Tanks have reportedly been removed already from the western border of the site. Stained OUTCOME: Soil is evident (by sight). No remediation of the soils is being conducted NEXT STEP: -recommend investigation/remediation.
OTHER -recommend referral to BFO-metro enforcement (DRPSR) -~~and [illegible]~~ Bayonne Terminals, Inc. (aka Rollins) not subject to ECRA review	SAMPLING FINDINGS	CONCENTRATION ACTION LEVEL	ACTIONS TAKEN: OUTCOME: NEXT STEP:

INDUSTRIAL SITE EVALUATION ELEMENT BEAC REFERRAL

Case Name: Bayonne Terminals, Inc. - AKA Rollins Terminal

ECRA Case# N/A City/County: Bayonne City, Hudson County

Referral through BEAC to other Division/Bureau________________
(identify Division/Bureau and violation)

The Cleanup Oversight Section is requesting referral of the matter to an appropriate NJDEPE unit for investigation/remediation of an off-site source of ground water contamination due to recent and historic spills which occurred on the Bayonne Terminals, Inc. property.

← off-site GW source

Brief Chronological Enforcement History

Based on a review to the ground water data, generated to date, it appears that ground water contamination on the Mobay Chemical Corporation/Norton and Son, Inc. site (ECRA Case # 84242) is emanating from the Bayonne Terminal site.

Throughout the history of the ECRA case the responsible Party reportedly witnessed several spills which occurred on the adjacent property.

By letter dated February 4, 1991, the Division of Water Resources, Metro Bureau of Regional Enforcement informed Bayonne Terminals, Inc. that an inspection conducted on October 15, 1990, by a representative of the NJDEPE, revealed various poor housekeeping practices in transfer areas that resulted in spills of materials on to the ground. The letter required Bayonne Terminals to eliminate all discharges and to submit an application for a NJPDES/DGW permit.

Most recently, on December 19, 1991. Norton and Son Inc. reported, to ECRA, activities on the Bayonne Terminal property which may have resulted in a release (spill) of hazardous materials. To my knowledge this incident was not reported to the hotline.

To date, Bayonne Terminal has failed to comply with the requirements of NJDEPE's February 4, 1991 letter. In addition, the most recent events (the dismantling of the storage tanks) may pose a health risk, through exposure to contaminated soils.

Pertinent Documents/Phone Contacts

1. Letter/Phone

February 4, 1991 letter referred to above

2. Letter/Phone

December 20, 1991 letter referred to above

Case Manager __________ Date 1-27-92
Supervisor __________ Date 1-27-92
Section Chief __________ Date 1-28-92
Received by BEAC__________ Date __________
Case Returned by BEAC__________ Date __________

Reason for return from
BEAC______________________________

LAW OFFICES
APRUZZESE, MCDERMOTT, MASTRO & MURPHY
A PROFESSIONAL CORPORATION
SOMERSET HILLS CORPORATE CENTER
25 INDEPENDENCE BOULEVARD
P.O. BOX 112
LIBERTY CORNER, N.J. 07938
(908) 580-1776
—
FAX: (908) 647-1492

VINCENT J. APRUZZESE (1) (2)
FRANK X. MCDERMOTT (1) (2)
FRANCIS A. MASTRO (1)
FREDERICK T. DANSER, III
MAURICE J. NELLIGAN, JR. (4)
RICHARD C. MARIANI (2)
MELVIN L. GELADE
BARRY MARELL
ROBERT T. CLARKE
JERROLD J. WOHLGEMUTH (3)
SHARON P. MARGELLO (2)
TARQUIN JAY BROMLEY (2) (3) (5)
ROSEMARY S. GOUSMAN
DANIEL F. CROWE
J. VINCENT REPPERT (1) (2)
JAMES M. COONEY*

ALSO D.C. (1) N.Y. (2)
PA. (3) MD. (4) CO. (5)
*D.C. & FL. ONLY

JAMES F. MURPHY
(1936-1990)
—
FOUR GATEWAY CENTER
100 MULBERRY STREET
NEWARK, N.J. 07101
(201) 802-1234
—
521 FIFTH AVENUE
SUITE 1700
NEW YORK, N.Y. 10017
(212) 682-5844
—
IN REPLY PLEASE REFER
TO FILE NO.

December 20, 1991

CERTIFIED: RETURN RECEIPT REQUESTED

Mr. Gary Sanderson
Bureau of Environmental Evaluation and
Clean-Up Responsibility Assessment
New Jersey Department of Environmental Protection
& Energy
401 E. State Street, 5th Floor
Trenton, N.J. 08625

Re: Norton & Son, Inc./Mobay Chemical Co.
ECRA Case No. 84242

Dear Mr. Sanderson:

This letter will serve to confirm our telephone conversation of Thursday, December 19, 1991 during which I advised you of certain activities occurring at the Rollins Terminal site adjacent to the property owned by Norton & Son, Inc., which is the subject matter of the referenced ECRA case. As advised, Norton & Son, Inc. has reported that Rollins Terminals is in the process of dismantling and removing all of the above ground storage tanks located on its property. All of the tanks adjacent to the westerly boundary of Norton & Son, Inc.'s property have been removed and the dismantling operation is

16.

proceeding in a southerly and easterly direction. Enclosed is a sketch prepared by Norton & Son, Inc. of the area described showing the tanks that have been dismantled and removed. Norton & Son, Inc. has observed that the soils in the area of removed tanks are visibly stained. No remediation of the soils appears to be taking place and the visibly stained soils are now exposed to the elements.

Norton & Son, Inc. has advised the New Jersey Department of Environmental Protection & Energy ("NJDEPE") on numerous occasions of its contention that a significant source of the contamination of the soils and groundwater on its property has been and continues to be the result of the tank farm operations of Rollins Terminal. Moreover, the direction of the groundwater flow, from the Rollins Terminal property to the property owned by Norton & Son, Inc., has been demonstrated. The exposure of the foregoing visibly stained soils to the elements and the resulting flow of any contamination therein contained may have a significant adverse impact upon Norton & Son, Inc.'s efforts to remediate its site.

In response to the foregoing information, you stated that since this would be an enforcement matter you would refer this information to the appropriate enforcement element within the NJDEPE.

Very truly yours,

Barry Marell

Barry Marell

BM:ja
cc: Ms. Tessie W. Fields, Acting Section Chief
    Norton & Son, Inc.
      Attention: Mr. Edward F. Norton, Jr.
    ENSR
      Attention: Mr. Matthew Cousino
    Metcalf & Eddy Technologies
      Attention: Mr. Keith Ryan

Let's protect our earth

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
METRO BUREAU OF REGIONAL ENFORCEMENT
2 BABCOCK PLACE
WEST ORANGE, NEW JERSEY 07052

(201) 669-3900

February 4, 1991

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Henry J. Tyszka, Terminal Manager
Bayonne Terminals, Incorporated
East Second Street
Bayonne, NJ 07002

Re: The New Jersey Pollutant Discharge Elimination System
Bayonne Terminals, Incorporated
Bayonne/Hudson County

Dear Mr. Tyszka:

An inspection of your facility was conducted on October 15, 1990 by a representative of this Division. During this inspection, product was observed on the ground resulting from improper handling of materials in the various transfer areas. The materials spilled from transfer hoses, rail cars and tank trucks have been discharged to the ground and ultimately to the ground waters of the State. This activity is governed by the New Jersey Pollutant Discharge Elimination System (NJPDES) Regulations, N.J.A.C. 7:14A-1 et seq. These regulations state: "No person shall discharge any pollutant except in conformity with a valid NJPDES permit." Our records indicate no such permit exists for your facility.

Bayonne Terminals, Incorporated is therefore directed to eliminate the discharges to the ground and apply for a NJPDES Discharge to Ground Water (DGW) permit within thirty (30) calendar days of the date of this correspondence. Permit applications can be obtained by contacting:

Mr. George Caporale, Chief
Bureau of Information Systems
Management Services Element
Division of Water Resources
P.O. Box CN-029
Trenton, NJ 08625

Any questions concerning the completion of the application should be addressed to Mr. Caporale or the BIS staff, who may be reached at (609) 984-4425. The completed application must be sent to Mr. Caporale, with a copy of the cover letter to this writer.

Failure to comply with this directive may result in further enforcement action by this office, including the imposition of penalties, pursuant to N.J.S.A. 58:10A-10. Therefore, kindly devote your full attention to this matter. If you have any questions, please contact Rodger E. Fedak, the Senior Environmental Specialist responsible for this case, who can be reached at (201) 669-3900, or be letter through this Division.

Very truly yours,

Gloria T. Grant

Gloria T. Grant
Acting Section Chief
Ground Water and Safe
Drinking Water Enforcement
Metro Bureau of
Regional Enforcement

E19:G25

c: Mr. George Caporale, BIS
Mrs. Jeanne Massavelli, H.O.
Mr. Gary Sanderson, ECRA

4/89

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DUTY OFFICER NOTIFICATION REPORT

PAGE 1 OF ____

09-01-08

CASE NO. 90 . 08 . 03 . 1053
(Yr) (Mo) (Day) (Time)

DATE 08 03 90 (Mo) (Day) (Yr) REC'D BY Hoy C TIME 1105

INCIDENT REPORT BY:

Name Frank Carr Phone 201 436 5000

Street ____ 201 436 5433

City ____ State ____

Affiliation/Title Vice

INCIDENT LOCATION: ____ Transportation ✓ Facility ____ Other: ____

Name (Site): Bayonne Terminals Phone ____

Street 22nd St

City Bayonne County Hudson State ____ Zip Code ____

Date of Incident: 08 03 90 (Mo) (Day) (Yr) Time: 1050

IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.: ✓ Suspected ____ Unknown

Name of Substance(s) [Gas [✓ Liquid] Solid]: MORPHOLINE

Amount Released/Spilled 500 gallon or more ____ Actual ____ Potential ____ Estimated Substance Contained [✓ Y] N U

Type of Release/Spill: ✓ Terminated ____ Continuous ____ Intermittent Hazardous Material [✓ Y] N U

INCIDENT DESCRIPTION:

____ Fire ____ Explosion ____ Air Rel ✓ Spill ____ MVA ____ Derailment ____ Smoke/Dust

____ Odors ____ Sewage ____ NJPDES ____ Noise ____ Wildlife ____ Illegal Dumping ____ Drums

____ Equip Start-Up/Shutdown, Equip Fail/Upset, etc. ____

____ Other (specify) ____

Injuries Y [✓ N] U

Facility Evacuation Y [✓ N] U

Population Evacuation Y [✓ N] U

Potable Water Source Y N U

Contamination of ____ Air ✓ Land ____ Water

Receiving Water ____

Public Exposure Y [✓ N] U

Fire Department at Scene Y [✓ N] U

Police at Scene Y [✓ N] U

Assistance Requested Y [✓ N] U

Precipitation Y N U

Wind Direction/Speed ____ / ____

Location Type: ____ Residential ✓ Industrial ____ Commercial ____ Rural ____ Sensitive Population (Hosp., School, Nurs. Home)

STATUS AT INCIDENT SCENE Transfer hose leaked product inside facility - Contractor [illegible]

RESPONSIBLE PARTY: ✓ Suspected ____ Unknown

Company Name Bayonne Terminal Co Phone (201) 436-5000

Contact Frank Carr Title Vice President

Street 22nd St

City Bayonne County Hudson State NJ Zip Code ____

OFFICIALS NOTIFIED (Name/Title):

NJSP: ____ / ____ Phone ____ Date/Time ____ / ____ (T/M)

Local Health: [illegible] / ____ Phone [illegible] Date/Time ____ / ____ (T/M)

Local Munic: ____ / ____ Phone ____ Date/Time ____ / ____ (T/M)

USEPA: ____ / ____ Phone ____ Date/Time ____ / ____ (T/M)

INCIDENT REFERRED TO:

____ DEQ ____ DWR ✓ DSWM ____ DHSM ✓ DHWM ____ DOH ____ DFG ____ DPF ____ DCJ ____ DCR

Region: ____ Northern ✓ Metro ____ Central ____ Southern ____ ER1 ____ ER2

1. Name/Affil ____ / ____ Phone ____ (T/M)
2. Name/Affil ____ / ____ Phone ____
3. Name/Affil ____ / ____ Phone ____

DEP RESPONSE: Emergency Immediate Priority No Response

COMMENTS Called Frank Carr - Process of transferring material from railcar to storage tank when transfer hose ruptured. Approx. 500 gallons of material spilled. Material [illegible]

COPIES: *White - Lead Agency* *Yellow - BC & SS* *Pink - Other*

Form REP-061 B
4/88

PAGE ____ OF ____

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

DUTY OFFICER UPDATE LOG

CASE NO. 90 . 08 . 03 . 1053
(Yr.) (Mo) (Day) (Time)

TIME	UPDATE/COMMENTS
	on railroad tracks - Supervisor
	diluted material -
	Tank Cap. 19,000 X 2 = 38,000
	Railcar holds 20,000 gallons. Basically
	railcar was almost empty
	Henry TYSZKA - TERMINAL MGR.
1113	Called H.R.H.C. They will investigate
	and update as required -
	Gary Haretano
1134	Gary Haretano En enroute to scene.
8/10	Called Gary Haretano - 500 gallons
	of Naphthalene - Ross Marine cleaned
	up material.
	NFA BERT Ref DAWN - M

COPIES: White - Lead Agency Yellow - BC & SS Pink - Other

12/26 MW NW 4/9

J

09-01-08

NEW JERSE DEPARTMENT OF ENVIRONMENTAL PI ECTION

DUTY OFFICER NOTIFICATION REPORT

CASE NO. 90 - 12 - 24 - 1045 (Yr.) (Mo) (Day) (Time)

DATE 12 - 24 - 90 (Mo) (Day) (Yr) REC'D BY Casey / R14 TIME 1055

INCIDENT REPORT BY:

Name Noble DARROW Phone (201) 339-5222

Street

City State

Affiliation/Title Gen. Mgr. / Standard Tank

INCIDENT LOCATION: ____ Transportation ____ Facility ____ Other:

Name (Site): Rollins Terminal Phone

Street Foot of 2nd ST.

City Bayonne County Hudson State Zip Code

Date of Incident: 12 - 24 - 90 (Mo) (Day) (Yr) Time: 1000

IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, ETC.: ____ Suspected ____ Unknown

Name of Substance(s) (Gas, Liquid, Solid): Blue Liquid

Amount Released/Spilled UNK ____ Actual ____ Potential ____ Estimated Substance Contained Y [✓ N] U

Type of Release/Spill: ____ Terminated ✓ Continuous ____ Intermittent Hazardous Material [✓ Y] N U

INCIDENT DESCRIPTION:

____ Fire ____ Explosion ____ Air Rel ✓ Spill ____ MVA ____ Derailment ____ Smoke/Dust

____ Odors ____ Sewage ____ NJPDES ____ Noise ____ Wildlife ____ Illegal Dumping ____ Drums

____ Equip Start-Up/Shutdown, Equip Fail/Upset, etc.

____ Other (specify)

Injuries Y [✓ N] U

Facility Evacuation Y [✓ N] U

Population Evacuation Y [✓ N] U

Potable Water Source Y [✓ N] U

Contamination of ____ Air ____ Land ✓ Water

Receiving Water Kill Van Kull

Public Exposure Y [✓ N] U

Fire Department at Scene [✓ Y] N U

Police at Scene Y [✓ N] U

Assistance Requested [✓ Y] N U

Precipitation Y N U

Wind Direction/Speed /

Location Type: ____ Residential ____ Industrial ____ Commercial ____ Rural ____ Sensitive Population (Hosp., School, Nurs. Home)

STATUS AT INCIDENT SCENE Blue liquid emanating from pipe (36") flowing into Kill Van Kull from Rollins Terminal

RESPONSIBLE PARTY: ✓ Suspected ____ Unknown

Company Name Rollins Terminal Phone

Contact Title

Street

City County State Zip Code

OFFICIALS NOTIFIED (Name/Title):

NJSP: / Phone Date/Time / (T/M)

Local Health: / Phone Date/Time / (T/M)

Local Munic: / Phone Date/Time / (T/M)

USEPA: / Phone Date/Time / (T/M)

INCIDENT REFERRED TO: BAA000019

____ DEQ ____ DWR ____ DSWM ____ DHSM ____ DHWM ____ DOH ____ DFG ____ DPF ____ DCJ ____ DCR

Region: ____ Northern ____ Metro ____ Central ____ Southern ____ ER1 ____ ER2 ____ BUST

1. Name/Affil J-Hoffe / R11 Phone Date/Time 12/24/90 1830 (T/M)

2. Name/Affil / Phone Date/Ti

3. Name/Affil / Phone Date/Ti

19.

DEP RESPONSE [✓ Emergency] Immediate Priority No Response

COMMENTS 1100 phoned Dir. Bridget Bri Vog/ Bayonne H.D will phone back 1104 phoned Noble Darrow/ Standard Tank State Police at Scene - substance = blue organic [illegible] [illegible] — 1105 Bayonne H.D - stated FD found nothing at scene [illegible] State Marine Police will phone back

COPIES: White - Lead Agency Yellow - Other Pink - Other

4788

PAGE ____ OF ____

NEW JERS[illegible] DEPARTMENT OF ENVIRONMENTAL [illegible]OTECTION

DUTY OFFICER UPDATE LOG

CASE NO. 90 (Yr) - 12 (Mo) - 24 (Day) - 1045 (Time)

TIME	UPDATE/COMMENTS
1105	NJ ST. Police - officer YANNUZZI - Report back from units on scene indicate that slick is 600 ft long - smells like sulfur - will investigate incident and phone back w/ status
1115	phoned Bridgette Beilvogle → will send out Jim Monkowski ASAP
1120	Monkowski → will respond E.T.A. 20 min
1130	(officer Yannuzzi) green substance emanating from rocks on Collins property - retaining wall oozing unknown liquid with sulfur odor
1132	Joe Hoyle dispatched to Scene
1135	Notified U.S.C.G - MRPO. Del Ross → (212) 668-7936 → unsure whether the USCG will dispatch a unit
1140	→ Notified Criminal Justice Vince Matolevich doubtfull whether he'll send peronnel To scene
1240	Joe Hoyle - ~~[illegible]~~ update - 1½ Million Gallon Tank Leaking from ~~[illegible]~~ bottom - Liquid has pH =1 - chemical unknown, A.T.T. - Material leaking from Tank - 3ft Berm can't hold material - < 450 ft from water body
1242	phone RIO - No Answer paged RIO
1245	USCG updated P.O. Del Ross - COTP
1255	paged RIO - phone Mobil RIO -
1300	Joe Hoyle update - ZIRCONIUM OXIchloride contents - Tank capacity 427000 gal - currently has 83,000 gal - currently working on offloading contents - Zirconium oxichloride $ZrOCl_2$ - mixes readily w/ water [illegible] solution acids - IDLH 500 mg/m³ - corrosive Liquid
1310	paged Gary Allen
1315	Notified NYC DEP - (212) 669-838 Ken FRADKIN
1318	Notified Criminal Justice → phoned No Answer

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3/87

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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIV. OF ENVIRONMENTAL QUALITY – BUR. OF COMMUNICATIONS AND SUPPORT SERVICES

COMMUNICATIONS CENTER UPDATE LOG

CASE NO. 90-12-24-1045
(Yr) (Mo) (Day) (Time)

TO LOG # ____

TIME	UPDATE/COMMENTS	INITIALS
1327	Joe Hoyle (201)-436-5006	
	- MSDS FAXed	
	- Ken's Marine Enroute will Transfer	
	to other Tanks on Property	
	- Tank Adjacent To $ZnCl_2$ / contains Ethylene Glycol	
	- Recovery Not possible -	
	- Leak from Under Tank foundation	
	- if Tank Ruptures it will be contained on Land	
1335	Notified Gary Allen	
1345	Notified Sedlack - DWR-M	
1342	Notified - DHWM-M	

Copies: White - Lead Agency Yellow - Comm. Center Pink - A310 Goldenrod - Other

09-01-08

Bayonne Terminals, Inc.

JAN 15

January 11, 1991

Mr. Michael Walker
New Jersey Department of
Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, NJ 07052

Mr Joseph Hoyle
New Jersey Department of
Environmental Protection
Bureau of Emergency Response
2 Babcock Place
West Orange, NJ 07052

Re: Response to Notice of Violation
12/27/90

Dear Sirs:

As you know December 24, 1990 it was discovered that our tank T-11 containing Zirconium Oxychloride owned by, Magnesium Electron Inc. had developed a leak. Attached is my statement which to the best of my recollection states what happened that day.

We worked very hard to minimize the impact of this spill and perhaps the greatest obstacle we had was the lack of other rubber lined tanks for storage in the North Jersey area. In fact we had a very hard time locating rubber lined tank trucks in the area.

Based on our investigations subsequent to the accident we find that an elbow on the discharge pipe under the tank had a hole in it the size of an egg. We have had tests done on the tank which indicate that the tank bottom and lining is sound. Therefore the only source of this leak appears to have been the discharge pipe beneath the tank. We can only speculate that the hole developed as the result of internal erosion of the lining and then corrosion of the metal pipe. Tank T-11 has been completely emptied as well as the adjacent tank which contained Ethylene Glycol. We neutralized the containment area with over 400, 100 pound bags of lime. We also covered the entire area with wood chips to enable an even settling of the lime into the ground when it rains. We have tested the soil 2 feet below the ground on both sides of T-11 and found the pH to be around 6. So we think the lime and chips have worked very well.

In order to make sure that this does not happen again we have taken these tanks out of service and do not intend to use them again.

We appreciate your help during the response and we are sorry of course that it happened. We will do everything we can to be sure an incident such as this does not happen again.

If you have any questions please contact me at (201) 436-5000.

Respectfully,

Henry Tyszka

Henry Tyszka
Terminal Manager
Bayonne Terminals

HT/sw

Statement

I, Henry Tyszka, Terminal Manager for Bayonne Terminals Inc to the best of my recollection state the following facts.

After Mr James Hankowski (Bayonne Environmental Specialist & myself) determined that T-11 containing Zirconium Oxychloride was discharging product into the diked area.

Immediately, I notified the proper regulatory agencies & reported the problem.

I also notified Mr John Mcafee of Matlack Inc, our sister Company & requested that he proceed and mobilize units from his emergency environmental response team & assist us with the problem.

I also proceeded to contact BTI employees to report to work in an ~~emg~~ emergency situation.

Also contacted Ken's Marine Services and Clean Venture to render assistance

I then proceeded to the area & tried to contain material in the containment area, using plastic sheets, sand & gravel. During this process I noticed that several public officials were already on the scene.

At approx 14:30 - 1500 hrs 12/24/90 BTI employees started also to arrive on the scene and assisted me in attempting to further contain the Zirconium Oxychloride spill within the diked area. Shortly Ken's Marine Crew arrived & they also assisted & spill containment as well as the use of lime to neutralize the acidic nature of Zirconium Oxychloride. Once the spill was fairly well isolated in the diked area within a closed proximity of T-11, Mark Sheridan, BTI supervisor was placed in charge & I proceeded back to the office & commenced to contact tank truck carriers to send units to BTI to quickly load material from T-11 and thus minimize & slow down discharge from the storage tank. I also attempted to contact, P+D, Ascher, Gaty etc if these companies would be able to provide suitable equipment. Experienced considerable difficulty on my part being that it was Christmas Eve and number of companies were closed for the holiday or did not respond at all. I also kept in constant touch with Matlack Inc Emergency Response Team.

At approx 19:00 hrs 12/24/90 the first Nappi Trucking trailer arrived & we proceeded to pump material from the ground in the diked containment area into the truck.

Shortly after Matlack & Liquid Cargo units also started to arrive.

Mr Gene Bonacci & other Matlack Inc. Emergency Response Team also arrived.

Greg from Liquid Cargo arrived on the scene & provided us with another suitable air pump for Zirconium Oxychloride.

We managed to gain access to T-11 discharge line, hooked up the pump and started pumping material directly from T-11 while the second pump was being used to pick up material from the ground.

During the night of 12/24 & early hours of 12/25 we experienced several pump freeze up. The temperature dropped from high 50's during day time to low teens at night.

With several well experienced members of the Emergency Response Team we managed to overcome a number of obstacles due to freezing temperature and continued to make progress. I was highly disappointed with Clean Venture; their team arrived at 21:00 h after the progress of spill containment, product recovery + neutralization process was well under way + control.

Most of the evening Dec 24, 1990 and morning of Dec 25, 1990, I kept monitoring if there was any danger of harm to the adjacent tank T-12. I myself physically loaded tank trucks along with other members. Kept track of trailers would not be overloaded with material. Maintained constant touch with Emergency Response Team + various regulatory agents to keep them informed as the progress. I believe all of us were ~~[illegible]~~ completely physically exhausted but do not remember anyone attempting to give up.

Around 02:00 Dec 25, 1990, we reached a point where the liquid level in the tank was below the tank entry manway.

We removed the manway + switched pumping system to use directly from the tank into T/W's. I vaguely recall at this time the amount of product discharging into the trough area was minimal. The usage of 2 air pump hook ups from T-11 into tank wagons helped us to speed up emptying T-11.

By 10 AM Dec 25, 1990, we successfully managed to stop the flow of material from the storage tank!

We set up another system to strip material from the back of the storage tank using PVC piping extentions along with hoses.

The system worked. Visually we noted that there were only couple puddles in the tank and no longer a threat to further spill.

The members of the US Coast Guard finally gave us their approval at 11:30 hrs 12/25/ and agreed that the situation was under control.

At this time I noticed the majority of members from various agencies we no longer on the terminal.

Additional bags of lime were spread throughout area to confirm neutralization process of the acidic substance. Well over 300 bags of lime were used.

By noon Dec 25, 1990 response crews started to departed from BTI.

Trucks containing material were sent directly to Magnesium Elektron, Flemington NJ.

The last Ken's Marine crew departed 1PM 12/25/90.

I proceeded to check the area for the last time, when I was finally satisfied there was no longer any danger of leaks, I secured the terminal gates, went back to the office, discharged Bill Ostendorf from his office post, washed up, took a deep breath or a sigh of relief and proceeded to go home at 13:30 12/25/90.

Henry

New Jersey Department of Environmental Protection
Division of Environmental Quality
Bureau of Emergency Response
Region I

INVESTIGATION

Case #: 90-12-24-1045 File #:

Date: 24 Dec 90

JEH

Investigator: Joseph E Hoyle Jr Time Arrived: 1212

Time Departed: 2230

Location: Rollins Terminal Ft. of 2nd St
Address: Bayonne, Hudson Cty, New Jersey

Responsible Party: Bayonne Terminals Inc.
Mailing Address: P.O. Box 513
Bayonne, New Jersey, 07002
Location Phone #:
Health Dept. Rep: James Monkowski Phone#:

Origin of Complaint: Noble Darrow Phone#: 201-339-5222
Nature of Complaint: Blue liquid emanating from pipe into the Kill Van Kull, from Rollins Terminal.

Findings: Arrived on scene and met with James Monkowski, Bayonne Emergency Management Coordinator, Gary Garetano and Carlos Rodriquez of Hudson Regional Health Commission, and Marine Police Officers S. Kopp and J. DeMartino. According to reports received the had been some sort of discharge into the water and reported by the representatives of Standard Tank. There were associated odors of a sulfur product and the water was a opaque color. Mr Monkowski was taking a ph indicator check of the water. The results indicated that the water had a ph of 1. Checking further we found that the unknown liquid was coming from a drain pipe and leaching from the ground. Following the general contour of the terrain we were able to ascertain where the liquid was coming from.

There were two large black above ground storage tanks in a berm area, but one was identified as leaking. The liquid could be observed coming from underneath and leaching through the bottom seams of the tank. A check of the liquid revealed that it had the same ph as the river, and exiting the vessel at an alarming rate. There was a berm around the tank but, through visual inspection, the berm would not be sufficient in the event of total failure of the tank. The ground around the tank had the same ph as did the river and the liquid. The marine police officers secured the scene to have the owner of the property respond. Still checking around the tank area it was observed that the flow of liquid getting greater. It became obvious that the liquid was causing material failure of the tank. A drain in the middle of the dike area was filled with the liquid and made it's way into the river.

Mr Hank Tyszka representative for the company arrived and was asked the name of the material, plus how long had the tank been leaking. Mr Tyszka stated, he did not know, and during his rounds of the facility it was not observed. The name of the material is Zirconium Oxy Chloride. Great concern was expressed to Mr Tyszka to control the flow of material into the drain. According to Mr Tyszka, this particular vessel is holding 83,000 gallons of material. The company holds certain commodity materials for customers and dispenses as required. The affected tank in question houses material used in the making of deodorant. During our conversations with Mr Tyszka, it was noted that the capacity of the tank is rated at 427,000 gallon. At this point there were no stressed or dying fish observed in the water.

1303 hr: Returning back to the main office, Mr Tyszka tries to contact several agencies to respond and assist in the cleanup and containment of the material. The current agencies are Kens Marine Service and Clean Venture Inc. While waiting for a reply from the anticipated contractors, a check of records indicated that minimal maintenance was done in 1965. This action mainly consisted of painting the exterior of the tank. When inquired as to the frequency the tanks are maintained, the reply from Mr Tyszka "as needed". The question was also posed can the material be transferred to another empty tank, there were no other tanks available. According to our conversations with Mr Tyszka, the material is highly acidic and needs special handling applications. This application included rubber lined tanks, tank wagons or trailers. No carbon or stainless steel vessel could be used.

1400 hr: United States Coast Guard arrives on scene, P.O. Jones and P.O. Moore. They are briefed on the chain of events and what actions have been taken by the responsible party. After gathering all pertaining documents, the inspecting group returned back to the affected tank farm. Closer observations concluded that the integrity of the tank was in grave danger. A more larger area underneath of the tank indicated the material failure rate was increasing. Several points along the bottom seams were being eaten away by the material. Around the welds along vertical manholes just above the out pouring liquid, it was observed that the material was starting to leach through the metal. PVC piping was observed leading from the bottom of the tank and appeared to have a transfer valve connected to it. The second tank did not appear to be affected by the material discharge. The contents of this tank is ethylene glycol. Amount unknown.

1435 hr: Still there has not been any effort to contain the material by the responsible party. Mr David Poesl, Ken's Marine Inc., arrives on scene. He is briefed on the status of the material and it's associated hazards. It is also explained the need for special handling equipment and storage capacities. Mr poesl indicates that he will be able to have a crew of men to neutralize the free standing liquid but he is unable to supply the necessary trucks to contain and store the material. Mr Tyszka is advised that it is more than imperative to try to control the flow of material into the river. A dirt dike was built to halt the flow of material through the drain. This method is only a "bandaid" approach to controlling the flow. Two Notice(s) of Violations were issued by the Department of Environmental Protection under the Spill Compensation Act. These violations were cited under NJSA 58:10-23.11.c Discharge of a hazardous substance - material Zirconium Oxy Chloride into the Kill Van Kull. 427,00 gallon tank capacity. Tank had 83,000 gallons available. NJSA 58:10-23.11.e Failure to notify the Department of Environmental Protection concerning the discharge of a hazardous substance - delay on notification. (90-12-24-1436). Each one of the violations were explained to Mr Tyszka and the maximum penalty each carries. Checking further with Mr Tyszka it was known that the material belongs to a company in Flemington. The company is Magnesium Elektron Inc., 500 Point Breeze Rd, Flemington, New Jersey, 08822. Several calls were placed to them in hopes that they might have the specialized equipment needed for this incident.

1530 hr: Conferring with the USCG on the status of the incident and it's lack of responsiveness. I expressed concern that the USCG be able to generate enough influence to gain access to all of the equipment necessary to do the cleanup. P.O. Jones confers with his superiors on the matter. There is a strong possibility that the USCG will federalize the incident. The terminal manager is asked how was the material brought to his facility, by railcar, though none is available at this point. The nearest suitable one is several hours away, whereby the need to coordinate rail passage with an existing terminal. Cosmo Zingaropoli, City of New York, Department of Environmental Protection., 212-669-8930 arrives on scene. His office was called as a precaution should the material finally breech the vessel and impact the Staten Island shoreline. According to other unnamed sources a Frank Carr of PCA Engineering did a spar test in the spring 1990, and they checked the bladder. A check of the improvised containment effort indicated that the material was still leaching by. The liquids were running down through another drain pipe and this one was now closed off. Several workers from the Ken's Marine Inc., were applying neutralizing agents to the ground in an effort to control the ground saturation.

1622 hr: Still there has not been any trucks on scene to remove the material from the dike area. The hole where the material is coming from has grown excessively, permitting more of the hazardous liquid to escape. Spoke to Mr Glenn McIntyre, Senior Vice President, Magnesium Elektron, Inc., stated that they have been bleeding the material from the tank every few months, but have since stopped. The company has several railcars with an estimated capacity of 18-20,000 gallons each, but there are none available. All of the railcars are rubber lined and for further information concerning the storage capacity of the facility we would have to call a Mr Lance Kunkle. Mr Kunkle is Manufacturing Group Manager. He will have Mr Kunkle call the command post at once. Mr Monkowski, spoke to Mr Robert Cunliffe, Western Zirconium, Senior Environmental Engineer, 1-801-546-4662, and indicated that only on a short term basis can the material be placed into stainless steel tanks. The estimated time these tanks will fail is within 2 - 3 weeks. This method will only provide for a short term storage. Should the material stay in the steel containers longer, rapid decomposition will happen because of the extremely low ph value

1725 hr: Checked the river at fifteen feet from the shoreline and the ph was neutral, which indicates the material is diluting. With the second drain covered there is minimal amounts of material leaching into the river. One of the facility workers climbs to the top of the tank to take a measurement. This measurement indicates that there is approximately two (2) ft of liquid in the tank, an estimated 17,853 gallons. A ph of the river is taken at the shoreline and at 15 ft out. The results indicated that the material is diluting. Other information indicated that as of 1 December 90, there was approximately 84,123 gallons of material in the tank. This constituted an estimated 66,267 gallon lost of material over the past 23 days. More accurate data will follow after the tank has been thoroughly drained.

More of the neutralizing agent is applied to the dike area. Spoke to a Jerry Trippitelli, Matlack, stated that they are still trying earnestly to find the right equipment for the incident. They have one tanker in northern New Jersey which is being dispatched, plus several hundred bags of lime.

1804 hr: Chief Miller, USCG, arrives on scene and confers with all agencies. Makes area inspection and reiterates the need for a more concentrated effort to mitigate the discharge. The first truck arrives on scene. MACK# 3576, XS-60NT (tractor), #A42, T660-GA (tractor), starting to pump the liquid from the dike area using a two (2)" line. The truck is owned by the Quadrell Brothers. Contact has been made with the receiving company, Magnesium Elektron, they will handle the material as off-specification product. The reason: they may be able to reuse the material. Workers for Ken's Marine still neutralizing the shoreline. The flow of liquid from the tank has not lessened. The hole has steadily increased in size. At this point it is unknown how many gallons per minute is being discharged into the dike area.

1950 hr: A pump used in the recovery operation has frozen and workers are trying to thaw it out. Neutralization of the shoreline still in-progress. Lance Kunkle for Magnesium Elektron, on scene. Conferring with him, it was noted that the company has several holding tanks which are specially lined to handle the materials. They will store the off-spec product in hopes of recovering the zirconium.

2020 hr: Eugene C. Bonacci, Vice President of Operations, on scene. According to Mr Bonacci they have three (3) rubber lined trucks coming from Matawan, Transport Resources, Jersey City, and Liquid Cargo. In addition, there will be a replacement pump with plastic diaphragm. Neutralization of the shoreline still in-progress. Another truck arrives on scene. Nappi Trucking Corp., Matawan, NJDEP S10342, NYJA 207, 5499 LIQ. The first truck is nearing completion of the onloading.

2100 hr: First truck completing onloading operations, to be weighed and enroute to Flemington, New Jersey. The material is classified as off-spec. Second truck hooking up to the pump, and onloading operation in-progress. Neutralization of the shoreline has been completed and Ken's Marine will maintain this process throughout the entire operation. Clean Venture finally arrives on scene. Their primary job will be to remove all of the contaminated soil from the dike area and stage for disposal. Mr Bonacci will supervise this operation. At this point there were no further discharges to the water.

2150 hr: The first truck is weighed, 72,240 lbs and all subsequent other trucks are weighed prior to accepting the material. Conferring with the other agencies on scene and noting that no other environmental damage has occurred, secured the scene at 2230 hrs.

Conclusions: BER1 responded to a complaint of blue liquid on a river. Arrived on scene and met with state, county and local officials. A check of the liquid indicated that it was extremely hazardous, with a ph of 1. Checking the general area found that an above ground tank was leaking from the bottom to a drain which led to the river. The owner of the facility was contacted and several attempts to control the discharge failed. Finally, contractors were hired and the discharged materials was contained. Offloading procedure were also in effect. The material is classified as zirconium oxy chloride is used in deodorant. Two Notice of Violations were issued to the company.

Recommendations: No further action required by the Bureau Emergency Response. This incident referred to the following agencies for their input and final disposition:

1- Division Water Resources - Metro Enforcement
2- Division Hazardous Waste Mgmt - Metro Region
3- Division of Fish, Game, and Wildlife
4- State Attorney Generals, Division of Criminal Justice,
   Environmental Crimes Unit

Joseph E Hoyle Jr — 24 Dec 90

Joseph E. Hoyle Jr. — **Date**

______________________ ______________

Investigator — **Date**

______________________ ______________

Supervisor — **Date**

HUDSON REGIONAL HEALTH COMMISSION
313 HARRISON AVENUE
HARRISON, NEW JERSEY 07029

(201) 485-7001 (201) 485-7002

EMERGENCY RESPONSE REPORT

January 19, 1987

Location: Rollins Terminals, Inc.
East Second St., Bayonne, N.J.
436-5000

Nature of Incident: Spill of approximately 500,00 gallons of caustic soda from storage tank #24 from rupture in a seam at the base of the tank.

Findings:

7:55am: Contacted Trenton Dispatch after my pager alarmed without caller phone #. Informed by Dispatch that no call had been made.

8:05am: Page received from Bayonne Fire Department Dispatcher who reported a spill of caustic solution at Rollins Terminal. B.F.D. informed that I would respond.

8:10am: Contacted NJDEP Trenton Dispatch re: this spill. Dispatch had received notification of this incident. I was informed that the spill was contained and the leaking tank was being offloaded to adjacent storage tanks.

8:20am: Call received from MaryAnn Walsh, Bayonne Health Officer. Informed her that I was about to respond.

8:50am: Arrived at site and attempted to locate Rollins Official and Fire Official in command. Trenton Dispatch notified of my arrival.

9:00am: Met with Chief Brennan and Chief Lennon, Bayonne Fire Dept., and Hank Tyszka, Engineer -Rollins. Tank #24 presently leaking 50% caustic solution through what appears to be a separation in the bottom seam of the tank. Flow rate of material being discharged was estimated at 500 GPM. Material was stored at 90° F. A substantial portion of the runoff was observed to be entering the Kill Van Kull at the southwestern end of the Rollins property. Runoff was found to be PH 13 using PH paper. The remainder of the runoff was flowing towards a public access road and adjoining property owned by GTK Duplicating, 59 East 1st Street. Fire officials were attempting to prevent flow of materials onto the public streets with firehoses stationed on the north end of the access road. (See Attached Map). The discharge was first noted at 7:15-7:30am according to Mr. Tyszka. Mr. Tyszka stated that Ken's Marine Services was enroute, as well as sand from Nicoretta Construction Co. Ken's Marine and 1 load of sand arrived at approximately 9:30am. Sand was placed to dike flow onto the access road. Mr. Tyszka was informed that immediate efforts should be made to cease the discharge to the waterway.

9:30am: GTK Duplicating had been evacuated at the onset of this incident by order of the Fire Dept. Mr. Joe Shavat of GTK came to site to determine whether of not his employees should return to work. I accompanied Mr.Shavat to the GTK facility at the request of Chief Brennan. No material from the spill was observed to be entering the facility and no incompatible or reactive materials were noted at points of potential entry. Findings were reported to Chief Brennan and GTK employees were allowed to return to work. Mr. Shavat was instructed to notify myself or fire officials should runoff enter the building.

10:00am: Met with Mr. Frank Carr, V.P. and General Manager of Rollins. It was estimated that 586K gallons of 50% caustic was in tank #24, material was being pumped to adjoining tanks atapproximately 25K gallons per hour. The need to prevent discharge of materials to waterways was again reiterated. Mr. Carr reported that more sand was enroute. The possibility of neutralyzing unavoidable runoff with a non-hazardous material such as citric acid was discussed.

10:30am: Met with U.S.C.G. personnel, Steve Gordon, Mark Westphal, Eric Johnson and reviewed status to present. An additional contactor, Clean Venture, was called at the request of the Coast Guard. Monitoring of activities at the site maintained. PH of all runoff tested remained greater than PH 12. At approximately 11:35am flow from tank 24 ceased. At this time it was postulated that there may have been a leak in a side seam of the tank which discharged at the bottom of the tank jacket. Based on tank volume, offloading rate, and estimated flow of leaking materials, it was anticipated that the discharge would have continued several hours more. Discharge to the Kill Van Kull continued at this time (runoff PH 13). No dikes to prevent this runoff had been established at this time. The majority of flow to the access road had been contained by the earlier placement of sand dikes. It was also determined that a storm sewer on the access road was discharging to the Kill.

12:00pm: Monitoring of site status maintained. Runoff to waterway from Rollins property and adjacent GTK property was contained by sand berms during this period. Runoff from storm sewer continued. Sodium Bicarbonate was placed in the area of the berms by Clean Venture personnel. PH of material passing through the bicarbonate was approximately 12. Recovery of pooled materials using 'vac' trucks was initiated by Ken's Marine Services. Areas of caustic solution in the Kill were visually identifiable in the area of the Rollins bulkhead extending approximately 15 yards into the Kill. PH of this area was 13. Lt. McCarthy of the USCG contacted technical support personnel to evaluate potential impacts and remediation of any material in the waterway. Decision was made that material in the waterway could not be treated or contained. USCG had previously notified vessels and facilities in the area of the incident.
Presently remediation consists of containment and removal of pooled liquids. Liquid wastes are to be stored on site until proper disposal. Andy Tynan, NJDEP, updated with status and ultimate remediation strategy discussed.

3:30pm: Senior Coast Guard personnel arrived on site - Capt. Henn and Lt. Cdr. Eldridge. Status to present discussed as well as status of ongoing remediation. Decision was made that recovery of liquid wastes should continue. Meeting to be held on Jan. 20, 1987 regarding continuing remediation.
During this time it was estimated that 39,000 gallons of product had been recovered by offloading. Mr. Carr reported that Tank 24 was now assumed to be empty. Accurate gauging was not possible due to icy conditions. At present it appeared that 547,000 gallons of solution had been discharged. Mr. Tyszka of Rollins provided the information that the original tank contents represented 1,830 tons of dry NaOH. Thus, it appears that the total material discharged was the equivalent of 1708 tons of NaOH.

5:15pm: Liquid recovery ongoing, sand berms appeared to be effectively containing surface runoff. Trenton Dispatch informed that I was departing the site.

6:00pm: Andy Tynan updated and informed of proposed meeting for 1/20/87. Involvement of DEP Waste Management and Water Resources personnel discussed due to extent of remediation yet to be conducted.

Summary:

A spill of 547,000 gallons of 50% caustic solution resulted from a rupture in the bottom welded seam of tank #24 at the Rollins facility. The tanks last internal visual inspection was reported to be in 1983. It is not known when the vessel was last 'sonically' tested.

The tank was not permanently diked nor were materials for implementing temporary containment available on site.

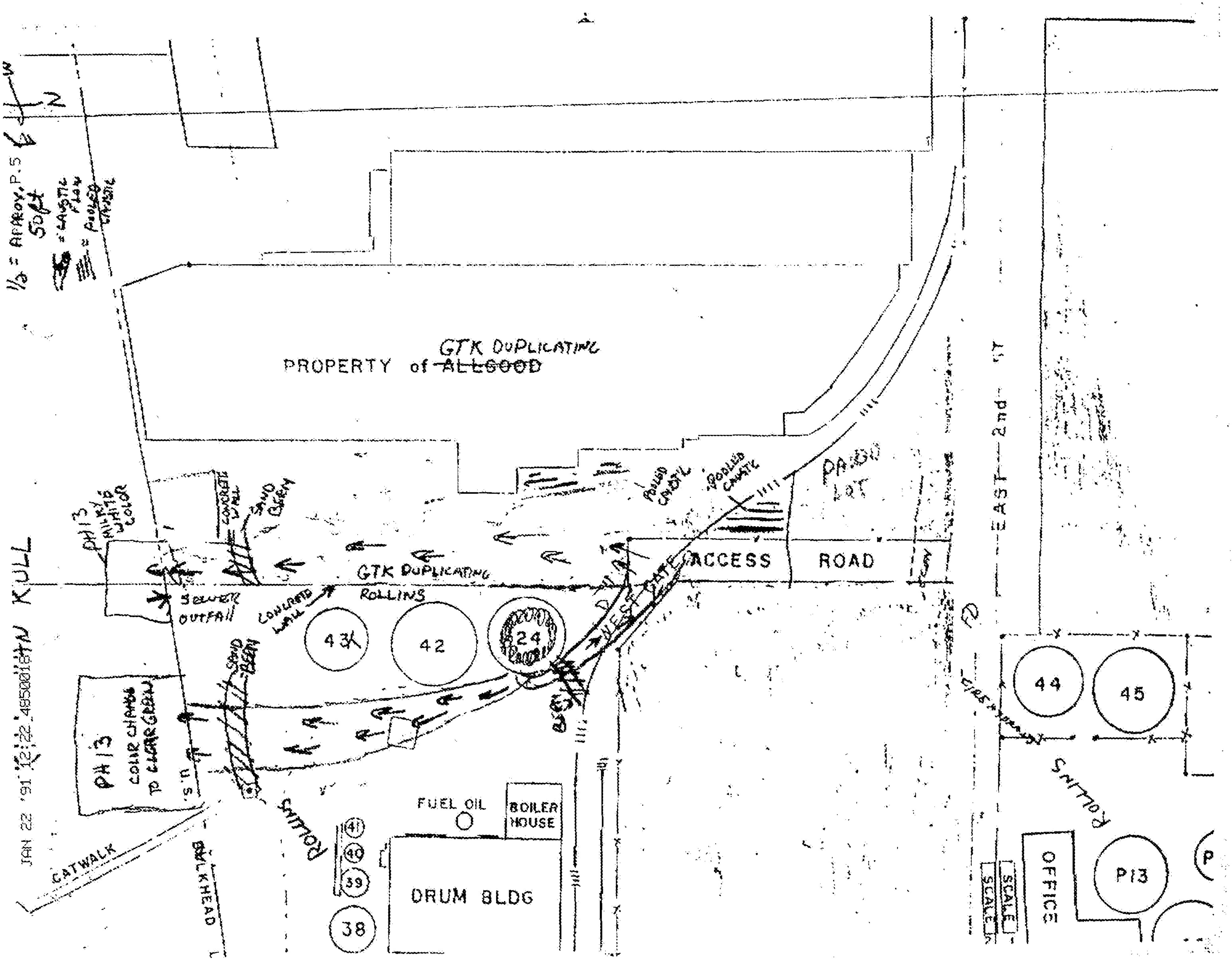
On this occasion approximately 2 hours transpired after the onset of the incident before remediation was initiated by Rollins contractors. It was four hours after the onset before surface runoff to the waterway was effectively contained.

No plant personnel or response personnel were known to have sustained injuries requiring hospital treatment.

Large quantities of material entered the Kill Van Kull resulting in significant PH change in areas adjacent to the Rollins bulkhead. No fish kill was noted at this time.

Substantial surface contamination remains both on Rollins property and that of GTK Duplicating Co. Ongoing remediation will be addressed further.

Gary Garetano
C.E.H.A. Coordinator



JAN 22 '91 12:22 48500184

HUDSON REGIONAL HEALTH COMMISSION
313 HARRISON AVENUE
HARRISON, NEW JERSEY 07029
(201) 485-7001 (201) 485-7002

FOLLOW UP

File # [redacted]

Jan. 20, 1987
Log# 87-002B

Location: Rollins Terminals Inc.
East Second St., Bayonne

Findings: 9:15am-12pm / Jan. 20, 1987

Follow up investigation as to status of remedial actions conducted as a result of spill on Jan. 19, 1987. Meeting was also conducted with U.S.C.G., N.J.D.E.P., H.R.H.C. and Rollins regarding plan for ongoing remedial activities. Those in attendance were:

Bart Pelizzari, USCG
Jan Feldstein, Scientific Support to USCG
Phil Cole, NJDEP, Div. Waste Management
Andy Tynan, NJDEP, Emergency Response
Gary Garetano, HRHC
Frank Carr, VP, Rollins Terminals
Hank Tyszka, Plant Engineer, Rollins
Joe Angellone, Clean Venture

A survey of area affected was conducted. Ken's Marine Services was on site with 'vac' trucks recovering pooled liquids, a total of 10,000 gallons of this material has been recovered to present. The majority of soil contamination appears to be on the property of GTK Duplicating. All PH readings of pooled liquids were 12 or greater. Caustic solution which was noted to have accumulated in the Kill Van Kull near the Rollins bulkheads appeared to be largely dissipated. Water PH of 9 was obtained near the Rollins 'catwalk', this area had been PH 13 on Jan. 19, 1987.

Phil Cole of NJDEP led general discussion of the extent of remedial activities which will be required.

Generally remediation will consist of:

- Ongoing recovery of liquid wastes utilizing 'vac'trucks. These wastes will be stored on Rollins property until classified with appropriate disposal ensuing.

- Contaminated soils will be removed, the depth of removal is contingent upon the extent of contamination. The majority of contaminated soils appear to be on the property of GTK Duplicating. These wastes will be classified and disposed of accordingly.

- NJDEP requested that a groundwater monitoring plan be drawn up for evaluation of the affected areas.

Mr. Carr indicated that Rollins would conduct the necessary remedial efforts. Mr. Carr was advised to contact representatives of GTK Duplicating regarding anticipated activities to be conducted on that property.

Additional conversation was held regarding the facilities Discharge Prevention Containment and Countermeasure (DPCC) Plan which should have been submitted to NJDEP as required in NJAC 7:1-E. Mr. Carr reported this plan had been submitted several years ago. Follow up will be conducted to verify the submission of the plan and its adequacy.

FOLLOW UP JAN. 21, 1987

Joe Shavat at GTK Duplicating was contacted and informed of remedial activities proposed for his firms' property. It was recommended that he contact Rollins for details of proposed activity.

JAN. 22, 1987

Phil Cole, NJDEP, contacted re: status of remedial plan. He reported that Mr. Carr had informed him that remediation proposals will have to be reviewed by the firms' corporate office due to the anticipated costs involved. Rollins was cited for a hazardous substance discharge by NJDEP. Additional enforcement actions may be taken by NJDEP in the event that remedial activities are not instituted promptly.

Gary Garetano

Gary Garetano
Coordinator CEHA

Form DWM-051
1/86

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 1 of 3

INVESTIGATION

CASE #: 90-12-24-1045

DWM FILE #: 09-01-08

TIME ARRIVED:

INVESTIGATOR: MICHAEL WALKER

DATE: 12/27/90

TIME DEPARTED:

LOCATION: Rollins TERMINAL Inc.

PROPERTY OWNER: Bayonne Terminals

ADDRESS: Foot of 2nd St.
Bayonne County - Hudson

MAILING ADDRESS: P.O. 513 MgR/John Curtis
Bayonne, N.J. 07002

BLOCK: 54 D

LOT: 52B 52C4

RESPONSIBLE PARTY MR Henry Tyszka / Facility MgR

LOCATION TELEPHONE #: 436-5000

ADDRESS: Foot of 2nd Ave
Bayonne, N.J. 07002

EPA ID #: N.J.D060794153

LOCAL HEALTH DEPT. REP. Jim Monkowski

TELEPHONE #: 858-6107

ORIGIN OF COMPLAINT: NOBLE DARROW / STC, Bayonne

TELEPHONE #: 339-5222

NATURE OF COMPLAINT:

PHOTOGRAPHS TAKEN: Yes

SAMPLE #:

FINDINGS: on 12/27/90, Rollins Terminal was inspected in receipt of an incident report which indicated blue liquid, subsequently identified as ZIRCONIUM OXYCHLORIDE, leaked from an above ground storage tank and eventually reached the Kill Van Kull. Marc Commandatore of MBFO and Carlos Rodriguez of HCRH were also present for the inspection. Arriving at the site we met with MR. Henry Tyszka, Plant Manager and MR John Mckee, Environmental manager of Rollins Terminal who accompanied us on a tour of the facility.

MR Tyszka confirmed all of the information on the incident report. He further stated that a total of 47,862 gallons of Zirconium Oxychloride spilled from the tank. This amount was determined by taking the tanks inventory amount before the leak and Subtracting the amount that was recovered from the tank. MR Mckee stated that lime was spread over the liquid in order to nuetralize it. It was observed at this juncture that three Ken's Marine employees were layering wood chips over the lime to prevent precipitation and wind from washing away the lime.

It was noted that the water in the Kill van Kull ~~River~~ displayed a cloudy coloration streching approximately forty yards from the shoreline. Carlos Rodriguez stated that on 12/26/90. the

Supervisor Signature

Michael Walker
Investigator Signature

COPIES: White - DWM File Yellow - Local Health Dept.

Form DWM-051 A
1/86

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 2 of 3

INVESTIGATION

CASE # 9012241045

DATE: 12/27/90

FINDINGS AND SUMMARY:

day of the incident, the water fifteen feet from the bank had a P.H. of Six.

AT this point we proceeded back to MR. Tyszkas' office were an N.O.V. was issued to him for discharge of a hazarodous substance. I indicated to both MR. Tyszka and MR. McKee that sampling of the affected Soil around the tank for P.H. Levels would be required due to the large amount of Zirconium Oyxchloride spilled. we then went back to the spill site to take photographs of the affected areas and subsequently left the facility.

Supervisor Signature

Michael Walker
Investigator Signature

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Form DWM-051 B
1/86

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 3 of 3

INVESTIGATION

CASE # 90-12-24-1045

DATE 12/27/90

RECOMMENDATIONS AND CONCLUSIONS:

1.) Contact Jim Monkowski of Bayonne Health and Environmental Department. Discuss current status of Rollins Terminal and also past history of site.

2.) Send letter to Rollins Terminals Henry Tyszka indicating that soil will need to be sampled and analyzed for P.H. levels.

3.) Make a site visit on 1/3/90 to observe how well wood chips are protecting lime layer.

Supervisor Signature

Michael Walker
Investigator Signature

COPIES: White - DWM File Yellow - Local Health Dept. Pink - Investigator

HWM-004C
1/90

Let's protect our earth

New Jersey Department of Environmental Protection
Division of Hazardous Waste Management
2 Babcock Place
West Orange, N.J. 07052
(201) 669-3960

NOTICE OF VIOLATION

ID NO. 90-12-24-1045 DATE 12/27/90

NAME OF FACILITY Rollins TERMINAL

LOCATION OF FACILITY 2nd AVE Boyonne HUDSON

NAME OF OPERATOR MR. HENRY TYSZKA / Facility MANAGER

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION N.J.S.A. 58:10-23.11 (C)
Discharge of a Hazardous substance (Specifically
Zirconium Oxychloride with a PH of <1)

Remedial action to correct these violations must be initiated immediately and be completed by immediatly. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $50,000 per violation.

Michael Walker
Investigator, Division of Hazardous Waste Management
Department of Environmental Protection

MICHAEL WALKER

Form DWM-002 B
2/84

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
120 ROUTE 156, YARDVILLE, N.J. 08620

~~[illegible]~~

NOTICE OF VIOLATION

ID NO. ______________ DATE 21 Jan 87

NAME OF FACILITY Rollins Terminals, Inc

LOCATION OF FACILITY East 2nd Street, Bayonne

NAME OF OPERATOR Frank J. Carr. V.P.

You are hereby NOTIFIED that during my inspection of your facility on the above date, the following violation(s) of the Solid Waste Management Act, (N.J.S.A. 13:1E-1 et seq.) and Regulations (N.J.A.C. 7:26-1 et seq.) promulgated thereunder and/or the Spill Compensation and Control Act, (N.J.S.A. 58:10-23.11 et seq.) and Regulations (N.J.A.C. 7:1E-1 et seq.) promulgated thereunder were observed. These violation(s) have been recorded as part of the permanent enforcement history of your facility.

DESCRIPTION OF VIOLATION Discharge of Hazardous Substances (Sodium Hydroxide Solution 38.9%) over 500,000 Gallons into N.J. State Waters on 19 Jan. 1987 from tank T24. NJSA 58:10-23.11 et seq.
→ Remove contaminated soils + dispose of by NJDEP approved methods
→ Conduct ground water monitoring/investigation

Remedial action to correct these violations must be initiated immediately and be completed by 5 February 1987. Within fifteen (15) days of receipt of this Notice of Violation, you shall submit in writing, to the investigator issuing this notice at the above address, the corrective measures you have taken to attain compliance. The issuance of this document serves as notice to you that a violation has occurred and does not preclude the State of New Jersey, or any of its agencies from initiating further administrative or legal action, or from assessing penalties, with respect to this or other violations. Violations of these regulations are punishable by penalties of $25,000 per violation.

Philip Cole 233
Investigator, Division of Waste Management
Department of Environmental Protection

09-01-08 [illegible]

RECEIVED
OCT 2 1989

Bayonne Terminals, Inc.
Subsidiary of Matlack Systems, Inc.
East Second Street, P.O. Box 513, Bayonne, N.J. 07002 • 201/436-5000

N.J. DEPT. of ENVIRONMENTAL PROTECTION
Assistant Director
Water Quality Director
Division of Water Resources
CN 029
Trenton N.J. 08625

Sept. 19, 1989

Subject; Product Spill
Date Sept. 18, 1989
Time: 10:20 AM

Plant ID# 10355

Gentlemen,

On subject date at our facility in Bayonne N.J. We experienced a Minor product Spill. As required by N.J. Environmental Regulations, We are confirming our oral report of same.

This discharge contained approximately Two Hundred gallons of Mineral oil. The product spilled onto a black top area on our Terminal property. This spill was confined to one area by our operating personnel immediately by the use of oil absorbent material dikes. Our emergency Clean up contractor responded within 10 minutes of our call. He proceeded to remove all of the product by the use of Vacuum truck and associated equipment.

Calls to the N.J. DEP hot line were made within 20 minutes of the report of the occurrence. This report was recorded by your Operator Number 4. Additionally, the Hudson Regional Health Comisson Commission and the Bayonne Fire were notified and Subsequently responded to inspect the area.

The cause of this incident was determined to be that a Truck loading valve had opened partially due to line vibration during a tank to tank transfer.This line valve is on a line common to the transfer line and is normally closed during this operation. We have now included in our Proceedures that valves must be chained shut during this operation. This must be confirmed by the Supervisor in charge.

We trust that the above information Fufills our reqirements under applicable N.J. DEP Regulations. If Further information is required, We shall respond immediately.

Yours Very Truly,

Frank J. Carr V.P.

File
09-91-08

RECEIVED
AUG 28 1987

PHIL COLE
DHWM - BFO
Metro - West Orange

Phil - attached are ground water results at Mobay Chemical, Bayonne, NEXT TO Rollins. NOTE Volatile Organics aT 119,000 & 371,000 ppb in wells 2 & 6 on Rollins property line. Do you have any wells or other info on Rollins?

Bill Kramer
20668

28.

TABLE 4-9

CONCENTRATION OF VOLATILE AND SEMIVOLATILE COMPOUNDS, PETROLEUM HYDROCARBONS, AND TRIMETHYL BASE IN WATER
(mg/l)

Adjacent to Rollins

PPM !!

Next To Rollins

Volatile Compounds (a)	MW-1	MW-2	MW-2A	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	Field Blank (3/25)	Field Blank (3/27)	Trip Blank (3/25)	Trip Blank (3/26)
Acetone	--	--	--	--	--	--	--	--	--	--	0.11	--	--	0.022	--	--
Chlorobenzene	--	--	--	--	--	--	--	--	--	0.006	--	--	--	--	--	--
Chloroethane	--	7.00	8.00	--	--	--	--	--	--	--	0.05	--	--	--	--	--
Chloroform	--	--	--	--	--	0.55	2.5	--	--	0.006	--	0.008	--	--	--	--
1,1-Dichloroethane	--	14.0	2.50	--	0.5	2.20	5.0	--	--	--	0.26	--	--	--	--	--
1,1-Dichloroethene	--	2.50	--	--	--	--	2.5	--	--	--	--	--	--	--	--	--
Trans-1,2-Dichloroethene	--	24.0	27.0	--	--	7.10	41.0	--	--	--	0.36	--	--	--	--	--
Methylene Chloride	--	--	6.00	0.023	--	--	82.0b	--	--	--	0.035	--	0.004c	--	0.004c	0.004c
Trichloroethene	--	4.00	4.00	--	--	1.90	10.0	0.035	--	0.016	--	--	--	--	--	--
1,1,1-Trichloroethane	--	46.0	42.0	--	--	1.90b	150b	0.095b	0.014	--	--	--	0.002c	--	0.002c	0.002c
Tetrachloroethene	--	22.0	18.0	--	17.0	0.85	78.0	0.25	.029	0.019	--	0.024	--	0.012	--	--
Toluene	--	--	--	--	--	--	--	--	--	--	0.035	--	0.001c	--	0.001c	0.001c
Vinyl Chloride	--	--	--	--	--	0.30	--	--	--	--	0.17	--	--	--	--	--
TOTAL VOLATILE ORGANICS	--	119.5	107.5	0.023	17.5	14.80	371	0.38	0.043	0.047	1.020	0.032	0.007	0.034	0.007	0.007
Trimethyl Base				--							65.2		--	--		
Petroleum Hydrocarbons	--	8.20	4.70		--		--						--			
Semivolatile Compounds																
4-methylphenol	--	--	--	--	--	--	--	--	0.054	--	--	--	--	--		

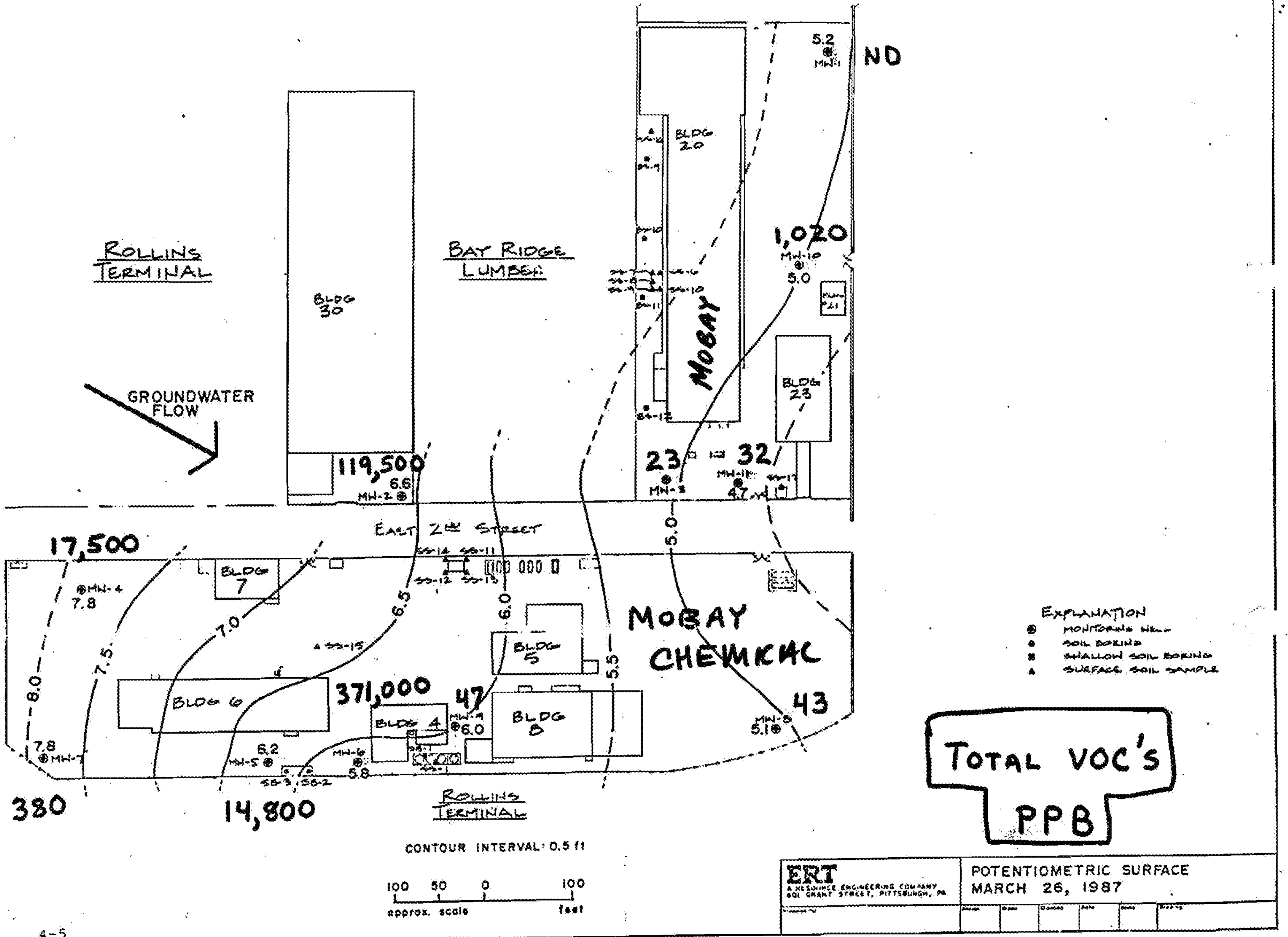
A = Only compounds with concentrations above the detection limit are tabulated.

-- = Not Detected

B = Found in blank as well as sample

C = Estimated value below method detection limits

FIGURE 4


ROLLINS TERMINAL
BAY RIDGE LUMBER
BLDG 30
BLDG 20
BLDG 23
BLDG 7
BLDG 6
BLDG 5
BLDG 4
BLDG 8
MOBAY
MOBAY CHEMICAL
GROUNDWATER FLOW
EAST 2nd STREET
ROLLINS TERMINAL
ND
5.2
MW-11
1,020
MW-10
5.0
119,500
6.6
MW-2
23
MW-3
32
MW-1
4.7
17,500
MW-4
7.8
7.8
MW-7
380
6.2
MW-5
14,800
MW-6
5.8
371,000
47
MW-9
6.0
43
MW-8
5.1
8.0
7.5
7.0
6.5
6.0
5.5
5.0
SS-14
SS-11
SS-12
SS-13
SS-15
SB-3
SB-2
EXPLANATION
MONITORING WELL
SOIL BORING
SHALLOW SOIL BORING
SURFACE SOIL SAMPLE
TOTAL VOC'S PPB
CONTOUR INTERVAL: 0.5 ft
100 50 0 100
approx. scale feet
ERT
A RESOURCE ENGINEERING COMPANY
601 GRANT STREET, PITTSBURGH, PA
POTENTIOMETRIC SURFACE
MARCH 26, 1987

09-01-08

HW/CF ~~1055~~

HAZARDOUS WASTE INVESTIGATION

Inspector: D. Dawson Date: 9/3/82

Location: Rollins Terminals Inc.

St: Foot of E. 2nd St. Property owner: Rollins Terminals
10 W. Baltimore Ave.
Lansdowne, Pa 19050

Town: Bayonne

County: Hudson

Lot: 52B, 52C4 Block: 540

Origin of Complaint:

Complaint: Follow up visit to 1) get paperwork on off-spec material sold to Rambach 2) determine the final TSDF for drums of waste from a spill 3) check status of sample bottles

Findings:

Spill Cleanup

At 11:00 A.M. I met with Frank Carr. The 5 drums containing acid waste left over from their spill were disposed of at American Recovery, manifest #0103069 (see attached) on 6/24/82.

Off Spec Material

The material sold to Rambach Chemical (almost 1 million pounds) was trichloroethylene that was contaminated with perchlorethylene. It was shipped in 16 tank trailer loads between 4-6-82 and 4-23-82 (see attached log sheet). The bills of lading state that the destination is Rambach, NY, however, some of the attached requests for loading state the destination and consignee is Inland Chemical, Newark, NJ (see attached). Mr. Carr said he did not know what Rambach did with the material; he did not manifest it because he said that this off-spec material was not waste - he was told Rambach had a buyer who could use it in its contaminated state. The transporters who hauled the loads were Vanguard & Amtruk.

Mr. Carr said Rollins has 38 drums left of old material in their warehouse; he said they are negotiating with Dow (the owner of the material) to remove these drums. All of the material has now been identified; the first 85 drums were returned to Dow, Freeport, Texas unmanifested since Dow is going with the EPA definition of off-spec material not being considered waste. Mr. Carr does now know what Dow will do with the off-spec material. He said Rollins will gladly manifest the drums, however, the TSDF will be Dow. Mr. Carr mentioned speaking with Jonathan Berg when he sold off-spec material to Chemage (a broker): Mr. Berg said it is alright to sell it without manifesting (according to Mr. Carr).

I asked Mr. Carr what they have done in the past with material flushed out of lines when they change products in their tanks. He said it is not done often, as they handle the same material most of the time. He said one time glycol was flushed out and it was analyzed and sold as product. I asked Mr. Carr what other bulk chemical terminals do with material flushed out of line, and he said it is probably sold as off-spec.

Sample Bottles

I asked Mr. Carr if Rollins has disposed of the sample bottles yet; he said no. There are presently between 50,000 and 100,000 pint bottles stored in cardboard cartons in the warehouse. They are glass bottles marked with date, customer, product, carrier, and tank number. Mr. Carr said he has received estimates from 6 companies for segregating and consolidating the samples for use as products or as waste; the cost has been prohibitively high. He does not know what they will do with the samples.

Photos and Samples

No samples or photographs were taken.

HAZARDOUS WASTE INVESTIGATION

HW/EF 10-55

Inspector: D. Dawson
Date: 5/19/82

Location: Rollins Terminals, Inc.

St: Foot of E. 2nd St.
Property owner: Rollins Terminals
10 W. Baltimore Ave.
Lansdowne, PA 19050

Town: Bayonne

County: Hudson

Lot: 52B, 52C4
Block: 540

Origin of Complaint: Jim Ross, Chief, Bureau of Emergency Response

Complaint: Check on proper disposal of spilled muriatic acid

Findings:

At 10:45 a.m., I met with Henry Tyzka, the terminal manager. He told me that on 5/18/82 at approximately 1:40 p.m., a 55 gallon drum containing muriatic acid was noted smoking by one of his workers. The acid had eaten a 6" hole in the side of the drum; the top of the drum had no bung and about a 3" hole in it. A 6' x 6' spill of the acid was on the asphalt (Mr. Carr, the general manager, estimated 15-20 gallons had spilled on the ground). Mr. Carr flushed the acid with water from a fire hose; a sand dike was built around the spill to contain run-off. Lime was added to neutralize the material further.

One Rollins worker, 3 Matlack workers (an adjacent facility) and 20 residents were treated at Bayonne Hospital when overcome with fumes (the wind was blowing to the southwest, a residential area). They were all released the same night.

The drum of diluted muriatic acid was placed in a recovery drum; the sand and lime from the ground was swept into 2 other recovery drums. These 3 drums are presently stored on a pallet in the rear of the warehouse. Mr. Carr said they will be labeled and disposed of properly.

Leonard B. Goldman, P.E. of Leonard Engineering, Inc., arrived at about 11:30 a.m; Mr. Carr said this is his consultant who would make the disposal arrangements. Mr. Goldman said he would get Rollins an EPA ID # and possibly have the drums hauled by Paul Pruss to Chemical Waste Management, Emelle, Ala. He did not know when the material would be moved out, but he expressed the desire to do so as soon as possible.

Inspector Reynolds of the Bayonne fire department was also present.

<u>Follow-up on 3/3/82 investigation</u>

I asked Mr. Goldman about the caustic material that was cleaned out of a Rollins tank in the summer 1981; he said the material was sold to ChemAge, not as waste but to be used and therefore, it was not manifested. The part B of 2 manifests that Mr. Carr had showed me were not from the cleaning of the caustic tank. Mr. Carr said he did not know what these manifest parts were used for or when they were used.

Continuing, I asked Mr. Carr why he did not mention that Rollins stored muriatic acid during my last visit. He told me that the rear of the warehouse contains about 150 drums of raw material which he inherited when he came to Rollins 1½ years ago. He said he is in the process of identifying the chemical in the drums and who owns them. (Rollins only stores chemicals for the owners); the muriatic acid was one of these 150 drums. He said he thinks it was the only drum of muriatic acid. Mr. Carr said the owners will be notified and asked to remove their drums; if the owners cannot be determined, as is the case with the muriatic acid, Mr. Carr said he will probably dispose of them as waste. I asked why he does not sell them since he said it is all raw material and he said it would be cost effective to dispose of them as waste since Rollins is not in the business of selling chemicals.

Mr. Carr could not tell me how long the 150 drums have been stored there, other than to say, over 1½ years. No dates are obvious on the drums and he has no paperwork on them.

I also asked Mr. Carr if he has his NPDES permit now(last time he said Mr. Goldman had his environmental file), but he said Mr. Goldman still has it. I wanted to check on his permit number.

I questioned what progress Mr. Carr had made in disposing of the bottles and drums of samples. He said he had a buyer who was interested in buying and using the chemicals, but the deal fell through. Therefore, he is back at square one and does not know what he will do with them. They have not moved the samples out of the warehouse.

I asked Mr. Carr if he had used Samson Tank Cleaning and he said no, however, he said Rollins had used their services in the past, before they went out of business and prior to his employment with Rollins. The only tank cleaner Mr. Carr has used here was Paul Pruss who sold the caustic unmanifested to ChemAge.

Samples & photos

No samples were collected, but 3 photographs were taken of the spill area.

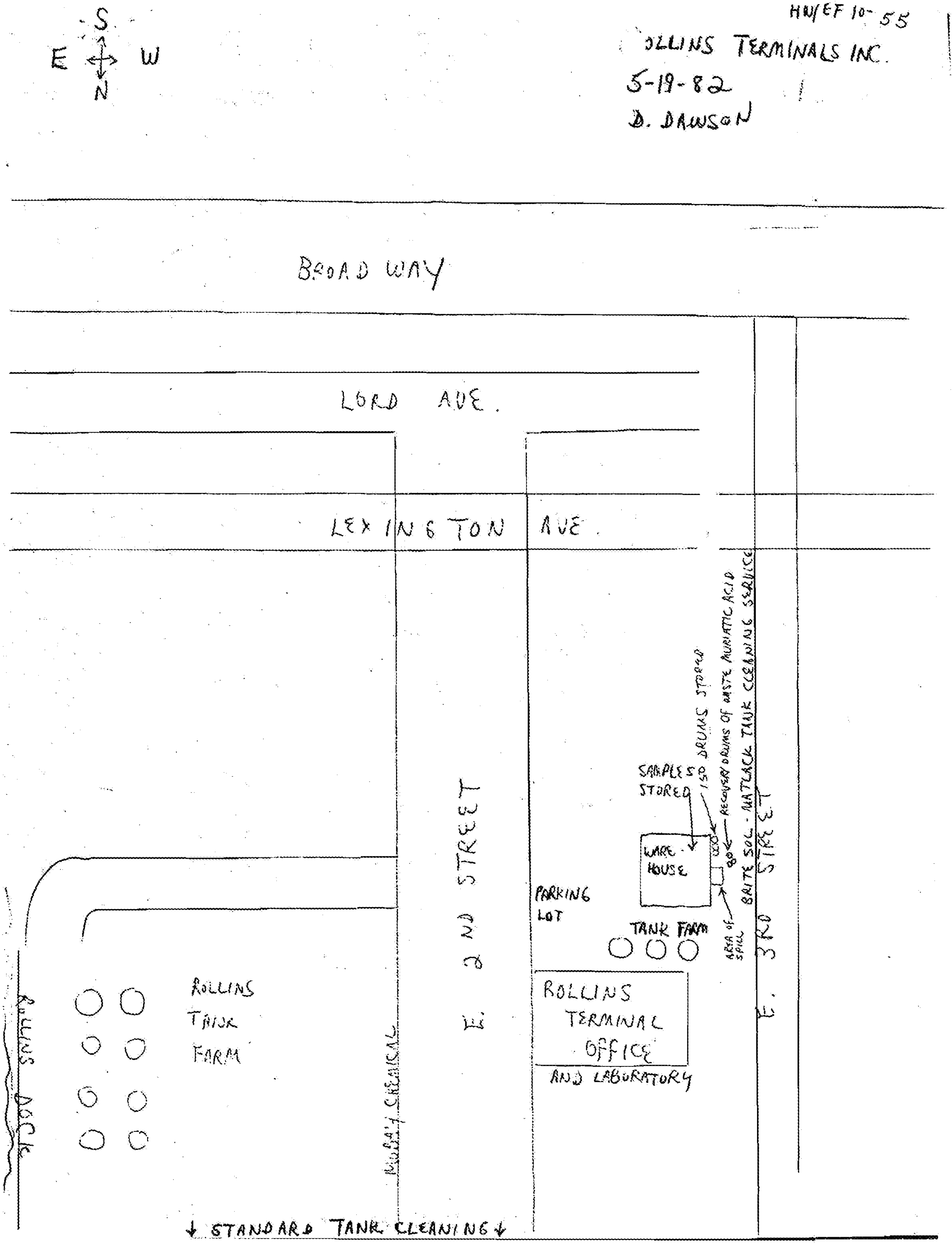
Reviewed 5/30/82, SC

HW/EF 10-55

OLLINS TERMINALS INC.

5-19-82

D. DAWSON



CASE : *Rollins Terminals, Inc   Priority:

Incident #: 87-01-26-14M   File: 09-01-08
Location: Foot of East 2nd Street   CMC:
Town: Bayonne City   Manager: P Cole
County: Hudson   Cause: Above Ground Tank Failed   Cause 2:
Substance: Sodium Hydroxide Solution   Quantity: 550,000 Gallons

Responsible Party: Rollins Terminals, Inc   RP Phone #: 201-436-5000
RP AKA: RP 2:
Address: Foot of East 2nd Street   RP 3:
RP Contractor: CT Phone #:
RP Consultant: Rollins Env. Services (NJ)   CS Phone #:
RP Cleanup: Cost: $109,300   RP Contact: Frank Carr

Case AKA 1: 87-01-19-0755   Emer/Urgent R:
Case AKA 2:   Date Received:
All Managers: Time Received:

Field NOV: 1/21/87   NOV/OOS:
Request Dir Ltr: DL:

Request A Order: AO: ACO:

Water Affected: Kill Van Kull
Reqst Geologist: Date Assigned:
Geologists: G Phone:

Spill Fund Opened: Contractor:
Rqst Authorization: CT Phone #:
Amount Authorized: Expended:
Funds Deauthorized:

Referred To: R Date:
HD Notified: Contact: HD Phone:
Agencies Involved: Followup:

Status: cleanup of cont. soils completed; G.W. monitoring necessary; RSO necessary
Updated: 2/3/88   Closed:
Inspections: 2/17/87
2/25/87

COMMENTS :

Form DWM-051
10/85

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 1 of 3

INVESTIGATION

CASE #: 87-01-26-14M

DWM FILE #: [redacted]

TIME ARRIVED:

INVESTIGATOR: P. Cole

DATE: 25 Feb 87

TIME DEPARTED: 1535

LOCATION: Rollins Terminals

PROPERTY OWNER: Rollins Terminals Inc

ADDRESS: E. 2nd Street
Bayonne

MAILING ADDRESS:

LOCATION TELEPHONE #: 436-5000

BLOCK: N/A

LOT: N/A

EPA ID #:

LOCAL HEALTH DEPT. REP. N/A

TELEPHONE #:

ORIGIN OF COMPLAINT: Follow up

TELEPHONE #:

NATURE OF COMPLAINT: Follow-up

PHOTOGRAPHS TAKEN: No

SAMPLE #: No

FINDINGS:

P. Cole inspected GTK, Inc facility located next to Rollins' terminals
Contacted Paul Biss
Joe Shabot 436-0050

Mr Shabot reports that the GTK, Inc facility was evacuated the day of the Rollins tank failure and sodium hydroxide solution discharge, by order of fire marshall. On the 17 Feb 87 Mr Shabot called MFO to report seepage of material into the sumps at GTK's warehouseing building.

Inspection

Mr Biss escorted me to the warehouse area, to the sprinkler room (former boiler room). The sump area along the foot of the wall was flooded with the dark liquid pH 12.0 that ~~previously~~ is identical to standing puddles previously found on the surface of the GTK yard. Mr Biss stated the sumps usually are flooded with water, especially during rains or high tides. This dark colored material is the first time it was observed. I

[illegible]

COPIES: *White - DWM File* *Yellow - Local Health Dept.* *Pink - Investigator*

Form DWM-051 A
10/85

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 2 of 3

INVESTIGATION

CASE # 87-01-26-14M

DATE: 25 Feb 87

FINDINGS AND SUMMARY:

determined the pH 12.0 by testing the liquid in 3 areas along the sump using pH paper supplied by DEP.

I informed Mr Shabot that I will direct Rollins to remove the liquid from the sump by Thursday 26 Feb. 87. Mr Shabot was also informed that Rollins is studying soil removal for clean-up compliance. Mr Shabot said he will not oppose cleanup on GTK property as long as Rollins informs GTK of scope of activities prior to site entry.

I departed GTK to meet Mr Frank Carr Rollins Terminals V.P. I issued Mr Carr a 2nd NOV. ~~for~~ This one is for ground water discharges ~~to the first~~ specifically the contaminated water in the sumps at GTK.

This NOV also reflects two RCRA violations as per my conversation with Wayne Green.

I also recieved a copy of Rollins Terminals Inc Soil Sampling + Analysis Plan this will be reviewed prior to cleanup.

[illegible] 11/10/87

P Cole

COPIES: White - DWM File Yellow - Local Health Dept. Pink - Investigator

3 of 3

Form DWM-051 C
1/86

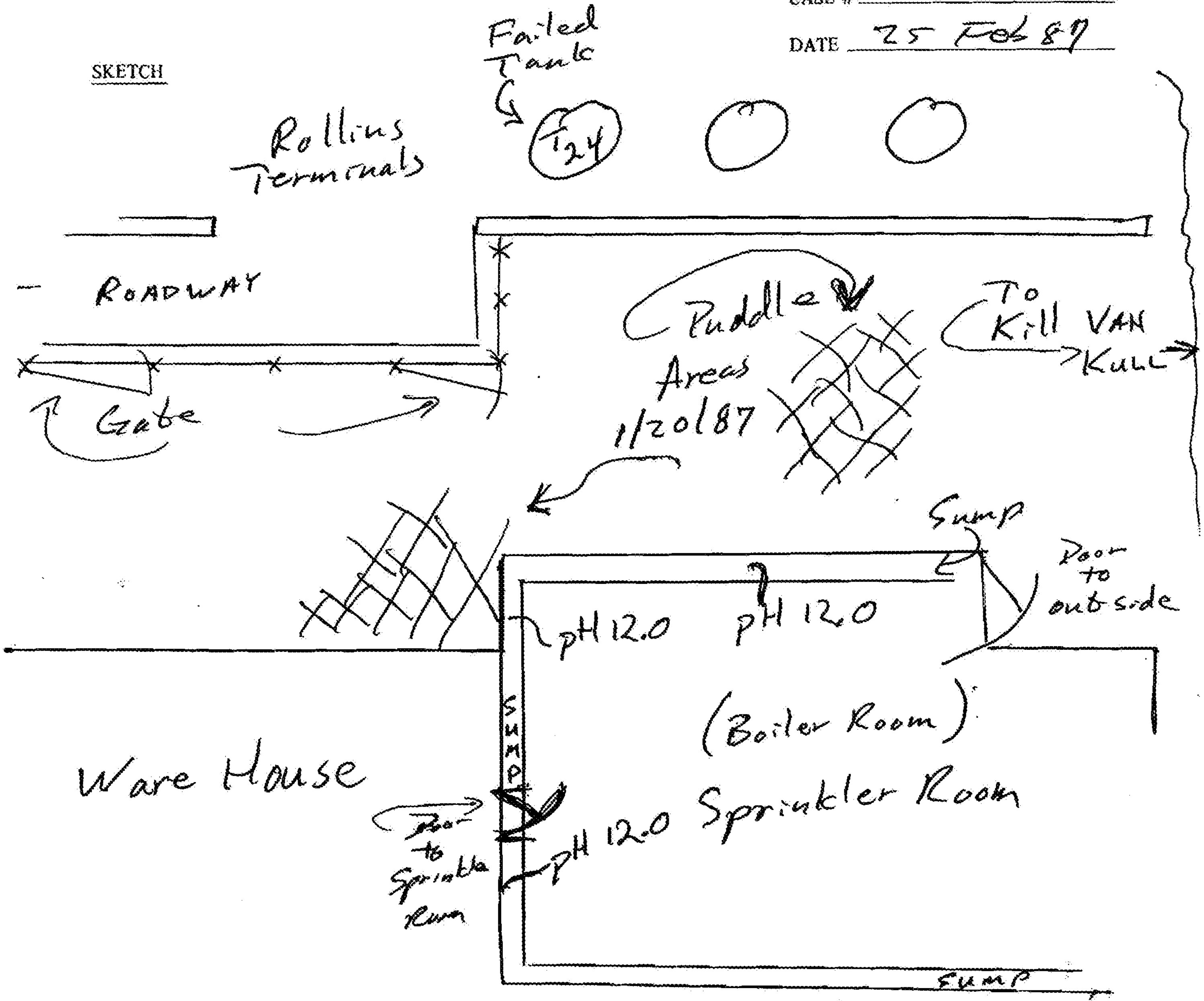
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

INVESTIGATION

CASE # 87-01-26-14M

DATE 25 Feb 87

SKETCH



Boiler Room/Sprinkler Room floor ~ 3 ft below warehouse floor

SCALE: No Scale
Include directional arrow.

9/30/87
Supervisor Signature

R. Cole
Investigator Signature

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Form DWM-051
10/85

NE RSEY DEPARTMENT OF ENVIRONMENTAL PRO TION
DIVISION OF WASTE MANAGEMENT

Page 1 of 2

INVESTIGATION

CASE #: 87-01-26-14M

DWM FILE #: [redacted]

TIME ARRIVED: 1350 HRS

INVESTIGATOR: Phil Cole

DATE: 2/18/87

TIME DEPARTED: 1510 HRS

LOCATION: Rollins Terminals

PROPERTY OWNER: Rollins Terminals

ADDRESS: East 2nd Street
Bayonne
Hudson Cty

MAILING ADDRESS:

LOCATION TELEPHONE #: 436-5000

BLOCK:

LOT:

EPA ID #:

LOCAL HEALTH DEPT. REP. Gary Garatano

TELEPHONE #:

ORIGIN OF COMPLAINT:

TELEPHONE #:

NATURE OF COMPLAINT: Follow-up / Spill investigation & Meeting

PHOTOGRAPHS TAKEN:

SAMPLE #:

FINDINGS:

Phil Cole o/s to meet with:
Mr Frank Carr, V.P. Rollins Terminals
Mr. Ron Buchannon, Env. Consultant from Rollins Env. Services (NJ).

Discussion:

The meeting was to address two phases of cleanup at the Rollins Terminals resulting from the 26 January 87 loss of 500,000 gallons(+) of sodium hydroxide solution (50%). The first phase will be contaminated soils identification and removal. The second phase of cleanup will be the contaminated groundwater identification and remediation.

Ron Buchannon will prepare a report proposing the area of concern as 1) Tank 24 area and 2) the GTK property (neighbor). The areas will be divided into grid sections for soil sampling. Soils exhibiting a pH 9.0 or greater will be addressed for removal. Mr Buchannon believes no ground water impact was sustained from the discharge. I argued the contrary stating that the sodium hydroxide solution was heated to 80°F, and discharged the

PC 2/18/87

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Form DWM-051 A
10/85

NEW JE[illegible] DEPARTMENT OF ENVIRONMENTAL PROTEC[illegible]
DIVISION OF WASTE MANAGEMENT

Page 2 of 2

INVESTIGATION

CASE # 87-01-26-14M

DATE: 2/17/87

FINDINGS AND SUMMARY:

entire contents of 500,000 gallons + in 4 hours all onto the permeable soils. I stated the conclusion of this office is that the ground water was impacted by the discharge, only a monitoring well program will identify the extent.

Summary:

A soil contamination investigation plan will be submitted in one week to the Rollins Terminal from Mr. Buchannon ROS (NJ).

This plan will be reviewed by NJDEP and if satisfactory, clean up will begin within 2 wks of approval.

The ground water investigation plan will be submitted separately as it is expected that this investigation may be argued as unnecessary by corporate HQ. and I did not want the delay of one plan to delay the other plan as well.

I also reminded Mr. Frank Carr that my involvement is with the spill and it's cleanup. Mr Carr must also work with the other divisions and regulations which I do not represent ie NJPDES and DPCC plans.

Phil Cole
2/17/87

2/18/87

COPIES: White - DWM File Yellow - Local Health Dept. Pink - Investigator

Hudson

GROUP NEW YORK COMMUNICATIONS

GROUP | COTP | SECT
CDR/DEP | OPS | PERS | SUPP | ENG | SDPRSD | RED DESCH
NY | NY | NY | CASUALTY | LINE | WIRE | HAWSER | GBO
A – ACTION OFFICE
I – INFO OFFICE

EPA
DEC
DEP

ZCZC
ADD3
AD D3 DE N9
ISN-N9/20
P 102135Z FEB 87 ZZB
FM COGARD COTP NEW YORK NY
TO D3/CCGDTHREE NEW YORK NY//MER//
INFO ZEN/EPA REGION TWO EDISON NJ
ZEN/NEW YORK STATE DEC ALBANY NY
ZEN/NEW JERSEY STATE DEP YARDVILLE NJ
AD/COGARD NATIONAL RESPONSE CENTER WASHINGTON DC
BT
UNCLAS //N16460//
SUBJ: POLREP FOUR MAJOR CAUSTIC SODA DISCHARGE ROLLINS TERMINAL, BAYONNE, NEW JERSEY, KILL VAN KULL
PIN 86-01-19/4/0034 MP#87000554

1. SITUATION:
   A. 101000R FEB 87 CLEANUP PROGRESSING SLOWLY DUE TO FREEZING TEMPERATURES.
   B. WX: TEMP: 30 DEG F. WINDS: CALM
   SEAS: CALM
2. ACTION TAKEN:
   A. 101030R FEB 87 COTP INVESTIGATORS ALEXANDER AND LIEBOWITZ O/S, MET WITH TERMINAL MANAGER, MR. HENRY TYSZKA, WHO STATED THAT APPROX. 3.000 ADDITIONAL GALLONS OF MATERIAL REMOVED BY VAC-TRUCK. CLEANUP PROGRESSES SLOWLY DUE TO FROZEN GROUND.
   B. 1130R INVESTIGATORS DEPARTED SCENE.
3. FUTURE PLANS AND RECOMMENDATIONS:
   A. COTP NY TO CONTINUE MONITORING CLEANUP.
   B. CONTRACTED ENGINEERS STILL CONDUCTING SURVEY AS TO CAUSE OF TANK FAILURE.
4. CASE PENDS, MESSAGE TO FOLLOW AS DEVELOPMENTS OCCUR.

BT
NNNN
N9 DE D3 R AR TOR-02:10:22:24:56
NNNN

New Jers Department of Environmental Pr ection
ision of Environmental Quality
Bureau of Emergency Response

INVESTIGATION

Case #: 87-01-19-0755
File #: 09 - 01

Investigator: Andrew Tynan
Date: 1/20/87 Time Arrived: 0930 Time Departed: 1200

Location: Rollins Terminals
Property Owner: Same

Address: E. Second Street
Bayonne

Mailing Address: P.O. Box 268
Bayonne

Location Phone #:

Health Dept. Rep: Gary Garetano
Phone #:

Origin of Complaint: Frank Carr
Phone #:

Nature of Complaint: Leaking storage tank.

Findings: January 20, 1987 0945 - 1200

I responded to this site, at Gary Allen's request, to get additional accurate information with Phil Cole (DHWM). Purpose of the meeting - attended by Hudson County Health, D.E.P. USCG, and Rollins - was to outline/suggest cleanup procedures. This is being handled by DHWM-Metro. A short inspection was conducted at the area near the affected tank. At this time, there are still some standing pools of liquid which are being collected by Ken's Marine Service. Clean Venture has been contracted for the long-term cleanup.

The following is the most recent information on the spill. The tank #24 contained 586,000 gallons of 38.9 % caustic soda. (Approximately 1830 tons of dry sodium hydroxide.) The company offloaded approximately 39,000 gallons and vacced up an additional 10,000 gallons. Approximately 525,000 gallons were lost to the ground and Kill Van Kull. The tank completely drained in four hours and the discharged ceased at approximately 1130. The dikes were not completed by this time. Cause is speculated to be a split seam at the tank bottom. Tank was constructed in 1960 and is plastic lined.

Due to rapid tank failure, Rollins Terminals, Inc. experienced a discharge of approximately 525,00 gallons of caustic soda. The affected tank was not in diked area an all the product escaped to either the Kill Van Kull or soil at the property and also offsit to neighboring property.

Initial reports of the incident status were low key and essential initial updates were not completely relayed. These factors led to the fact that NJDEP was represented only by Gary Garetano, Hudson County Health Dept.

Recommendations:

1. Incident be referred to DHWM and DWR to oversee a long-term monitoring and cleanup of the incident.

2. Incident be referred to the above for possible enforcement actions, as a result of the spill; and to review prevention plans, (diking, etc.), that may prevent future spills.

3. Fish & Game for their files and possible enforcement.

09-01-08

HUDSON REGIONAL HEALTH COMMISSION

313 HARRISON AVENUE
HARRISON, NEW JERSEY 07029

(201) 485-7001 (201) 485-7002

FOLLOW UP

Jan. 20, 1987
Log# 87-002B

Location: Rollins Terminals Inc.
East Second St., Bayonne

Findings: 9:15am-12pm / Jan. 20, 1987

Follow up investigation as to status of remedial actions conducted as a result of spill on Jan. 19, 1987. Meeting was also conducted with U.S.C.G., N.J.D.E.P., H.R.H.C. and Rollins regarding plan for ongoing remedial activities. Those in attendance were:

Bart Pelizzari, USCG
Jan Feldstein, Scientific Support to USCG
Phil Cole, NJDEP, Div. Waste Management
Andy Tynan, NJDEP, Emergency Response
Gary Garetano, HRHC
Frank Carr, VP, Rollins Terminals
Hank Tyszka, Plant Engineer, Rollins
Joe Angellone, Clean Venture

A survey of area affected was conducted. Ken's Marine Services was on site with 'vac' trucks recovering pooled liquids, a total of 10,000 gallons of this material has been recovered to present. The majority of soil contamination appears to be on the property of GTK Duplicating. All PH readings of pooled liquids were 12 or greater. Caustic solution which was noted to have accumulated in the Kill Van Kull near the Rollins bulkheads appeared to be largely dissipated. Water PH of 9 was obtained near the Rollins 'catwalk', this area had been PH 13 on Jan. 19, 1987.

Phil Cole of NJDEP led general discussion of the extent of remedial activities which will be required.

Generally remediation will consist of:

- Ongoing recovery of liquid wastes utilizing 'vac'trucks. These wastes will be stored on Rollins property until classified with appropriate disposal ensuing.

- Contaminated soils will be removed, the depth of removal is contingent upon the extent of contamination. The majority of contaminated soils appear to be on the property of GTK Duplicating. These wastes will be classified and disposed of accordingly.

- NJDEP requested that a groundwater monitoring plan be drawn up for evaluation of the affected areas.

Mr. Carr indicated that Rollins would conduct the necessary remedial efforts. Mr. Carr was advised to contact representatives of GTK Duplicating regarding anticipated activities to be conducted on that property.

Additional conversation was held regarding the facilities Discharge Prevention Containment and Countermeasure (DPCC) Plan which should have been submitted to NJDEP as required in NJAC 7:1-E. Mr. Carr reported this plan had been submitted several years ago. Follow up will be conducted to verify the submission of the plan and its adequacy.

FOLLOW UP JAN. 21, 1987

Joe Shavat at GTK Duplicating was contacted and informed of remedial activities proposed for his firms' property. It was recommended that he contact Rollins for details of proposed activity.

JAN. 22, 1987

Phil Cole, NJDEP, contacted re: status of remedial plan. He reported that Mr. Carr had informed him that remediation proposals will have to be reviewed by the firms' corporate office due to the anticipated costs involved. Rollins was cited for a hazardous substance discharge by NJDEP. Additional enforcement actions may be taken by NJDEP in the event that remedial activities are not instituted promptly.

Gary Garetano

Gary Garetano
Coordinator CEHA

9:30am: GTK Duplicating had been evacuated at the onset of this incident by order of the Fire Dept. Mr. Joe Shavat of GTK came to site to determine whether of not his employees should return to work. I accompanied Mr.Shavat to the GTK facility at the request of Chief Brennan. No material from the spill was observed to be entering the facility and no incompatible or reactive materials were noted at points of potential entry. Findings were reported to Chief Brennan and GTK employees were allowed to return to work. Mr. Shavat was instructed to notify myself or fire officials should runoff enter the building.

10:00am: Met with Mr. Frank Carr, V.P. and General Manager of Rollins. It was estimated that 586K gallons of 50% caustic was in tank #24, material was being pumped to adjoining tanks atapproximately 25K gallons per hour. The need to prevent discharge of materials to waterways was again reiterated. Mr. Carr reported that more sand was enroute. The possibility of neutralyzing unavoidable runoff with a non-hazardous material such as citric acid was discussed.

10:30am: Met with U.S.C.G. personnel, Steve Gordon, Mark Westphal, Eric Johnson and reviewed status to present. An additional contactor, Clean Venture, was called at the request of the Coast Guard. Monitoring of activities at the site maintained. PH of all runoff tested remained greater than PH 12. At approximately 11:35am flow from tank 24 ceased. At this time it was postulated that there may have been a leak in a side seam of the tank which discharged at the bottom of the tank jacket. Based on tank volume, offloading rate, and estimated flow of leaking materials, it was anticipated that the discharge would have continued several hours more. Discharge to the Kill Van Kull continued at this time (runoff PH 13). No dikes to prevent this runoff had been established at this time. The majority of flow to the access road had been contained by the earlier placement of sand dikes. It was also determined that a storm sewer on the access road was discharging to the Kill.

12:00pm: Monitoring of site status maintained. Runoff to waterway from Rollins property and adjacent GTK property was contained by sand berms during this period. Runoff from storm sewer continued. Sodium Bicarbonate was placed in the area of the berms by Clean Venture personnel. PH of material passing through the bicarbonate was approximately 12. Recovery of pooled materials using 'vac' trucks was initiated by Ken's Marine Services. Areas of caustic solution in the Kill were visually identifiable in the area of the Rollins bulkhead extending approximately 15 yards into the Kill. PH of this area was 13.
Lt. McCarthy of the USCG contacted technical support personnel to evaluate potential impacts and remediation of any material in the waterway. Decision was made that material in the waterway could not be treated or contained. USCG had previously notified vessels and facilities in the area of the incident.
Presently remediation consists of containment and removal of pooled liquids. Liquid wastes are to be stored on site until proper disposal. Andy Tynan, NJDEP, updated with status and ultimate remediation strategy discussed.

3:30pm: Senior Coast Guard personnel arrived on site - Capt. Henn and Lt. Cdr. Eldridge. Status to present discussed as well as status of ongoing remediation. Decision was made that recovery of liquid wastes should continue. Meeting to be held on Jan. 20, 1987 regarding continuing remediation.
During this time it was estimated that 39,000 gallons of product had been recovered by offloading. Mr. Carr reported that Tank 24 was now assumed to be empty. Accurate gauging was not possible due to icy conditions. At present it appeared that 547,000 gallons of solution had been discharged. Mr. Tyszka of Rollins provided the information that the original tank contents represented 1,830 tons of dry NaOH. Thus, it appears that the total material discharged was the equivalent of 1708 tons of NaOH.

5:15pm: Liquid recovery ongoing, sand berms appeared to be effectively containing surface runoff. Trenton Dispatch informed that I was departing the site.

6:00pm: Andy Tynan updated and informed of proposed meeting for 1/20/87. Involvement of DEP Waste Management and Water Resources personnel discusssed due to extent of remediation yet to be conducted.

Summary:

A spill of 547,000 gallons of 50% caustic solution resulted from a rupture in the bottom welded seam of tank #24 at the Rollins facility. The tanks last internal visual inspection was reported to be in 1983. It is not known when the vessel was last 'sonically' tested.

The tank was not permanently diked nor were materials for implementing temporary containment available on site.

On this occasion approximately 2 hours transpired after the onset of the incident before remediation was initiated by Rollins contractors. It was four hours after the onset before surface runoff to the waterway was effectively contained.

No plant personnel or response personnel were known to have sustained injuries requiring hospital treatment.

Large quantities of material entered the Kill Van Kull resulting in significant PH change in areas adjacent to the Rollins bulkhead. No fish kill was noted at this time.

Substantial surface contamination remains both on Rollins property and that of GTK Duplicating Co. Ongoing remediation will be addressed further.

Gary Gaetano

Gary Garetano
C.E.H.A. Coordinator

HUDSON REGIONAL HEALTH COMMISSION

313 HARRISON AVENUE
HARRISON, NEW JERSEY 07029

(201) 485-7001

(201) 485-7002

09-01-08

EMERGENCY RESPONSE REPORT

January 19, 1987

Location: Rollins Terminals, Inc.
East Second St., Bayonne, N.J.
436-5000

Nature of Incident: Spill of approximately 500,00 gallons of caustic soda from storage tank #24 from rupture in a seam at the base of the tank.

Findings:

7:55am: Contacted Trenton Dispatch after my pager alarmed without caller phone #. Informed by Dispatch that no call had been made.

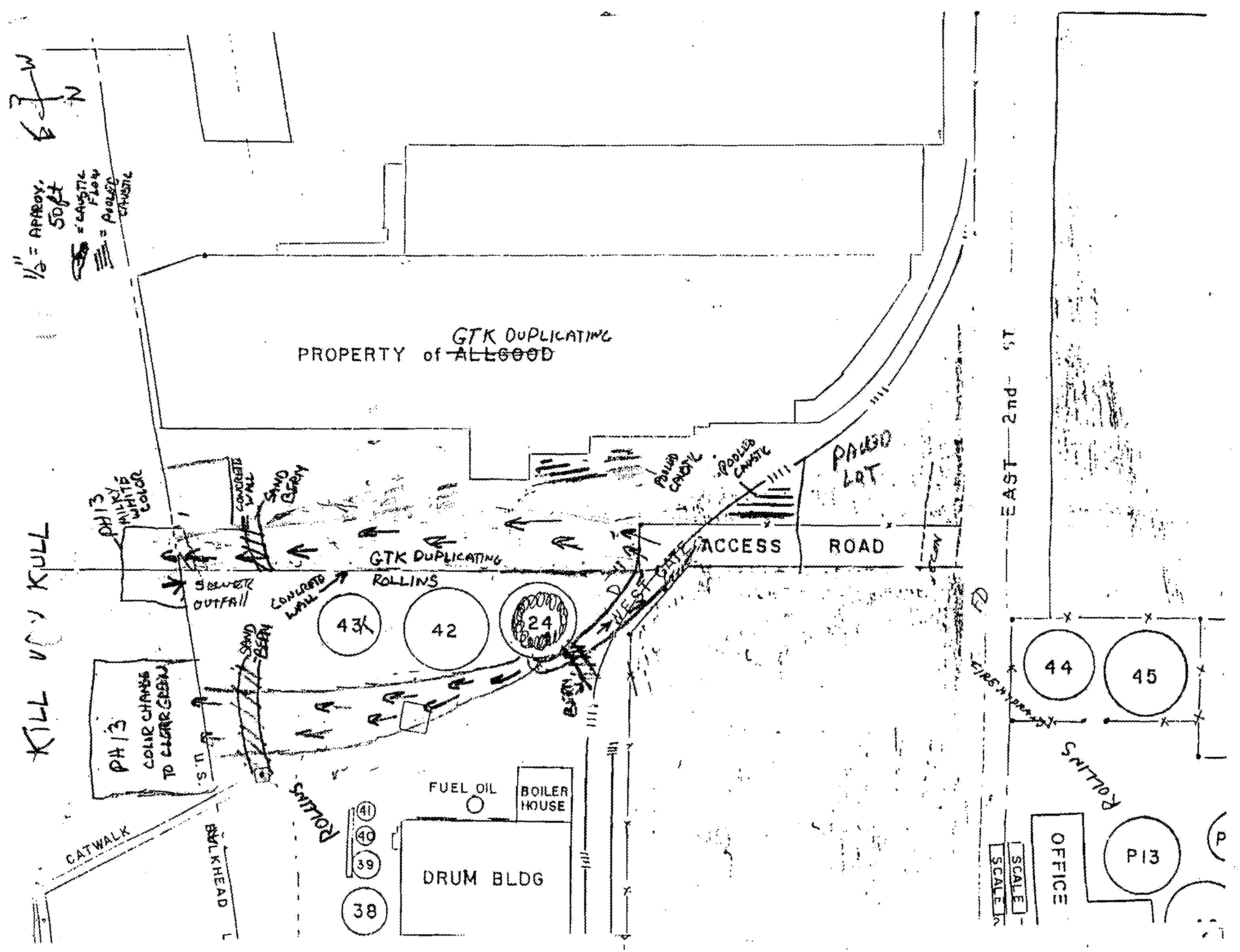
8:05am: Page received from Bayonne Fire Department Dispatcher who reported a spill of caustic solution at Rollins Terminal. B.F.D. informed that I would respond.

8:10am: Contacted NJDEP Trenton Dispatch re: this spill. Dispatch had received notification of this incident. I was informed that the spill was contained and the leaking tank was being offloaded to adjacent storage tanks.

8:20am: Call received from MaryAnn Walsh, Bayonne Health Officer. Informed her that I was about to respond.

8:50am: Arrived at site and attempted to locate Rollins Official and Fire Official in command. Trenton Dispatch notified of my arrival.

9:00am: Met with Chief Brennan and Chief Lennon, Bayonne Fire Dept., and Hank Tyszka, Engineer -Rollins. Tank #24 presently leaking 50% caustic solution through what appears to be a separation in the bottom seam of the tank. Flow rate of material being discharged was estimated at 500 GPM. Material was stored at 90° F. A substantial portion of the runoff was observed to be entering the Kill Van Kull at the south-western end of the Rollins property. Runoff was found to be PH 13 using PH paper. The remainder of the runoff was flowing towards a public access road and adjoining property owned by GTK Duplicating, 59 East 1st Street. Fire officials were attempting to prevent flow of materials onto the public streets with firehoses stationed on the north end of the access road. (See Attached Map). The discharge was first noted at 7:15-7:30am according to Mr. Tyszka. Mr. Tyszka stated that Ken's Marine Services was enroute, as well as sand from Nicoretta Construction Co. Ken's Marine and 1 load of sand arrived at approximately 9:30am. Sand was placed to dike flow onto the access road. Mr. Tyszka was informed that immediate efforts should be made to cease the discharge to the waterway.


W
N
E
1/2" = APPROX. 50 ft
= CAUSTIC FLOW
= POOLED CAUSTIC
PROPERTY of ~~ALLGOOD~~ GTK DUPLICATING
GTK DUPLICATING
ROLLINS
POOLED CAUSTIC
POOLED CAUSTIC
PAUGO LOT
ACCESS ROAD
EAST 2nd ST
KILL VAN KULL
PH13 MILKY WHITE COLOR
CONCRETE WALL
SAND BERM
SEWER OUTFALL
CONCRETE WALL
43K
42
24
WEST GATE
BERM
SAND BERM
PH13 COLOR CHANGE TO CLEAR GREEN
U.S.
BULKHEAD
CATWALK
ROLLINS
FUEL OIL
BOILER HOUSE
41
40
39
38
DRUM BLDG
FD
FIRE HYDRANT
44
45
ROLLINS
OFFICE
SCALE
SCALE
P13

Form VSC-005
8/86

04-01-08

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

TRENTON DISPATCH NOTIFICATION REPORT

CASE NO. 87 (YR) 01 (MO) 26 (DAY) ~~TD~~ 14M (CASE NO.)

DATE 1-19-87 TIME (Military) 1330 REC'D BY Brennan PHONE NO. ______

INCIDENT REPORTED BY:

NAME Frank Carr PHONE 201-436-5000
STREET Foot of E. 2nd St
CITY Bayonne STATE NJ
AFFILIATION/TITLE Rollins Terminal - General Manager

NATURE OF INCIDENT:

EMERGENCY: ☐ FIRE ☐ EXPLOSION ☐ AIR REL ☒ SPILL ☐ MVA ☐ DERAILMENT
COMPLAINT: ☐ SMOKE/DUST ☐ ODORS ☐ SEWAGE ☐ OTHER *(Specify)* ______ *(Noise, Illegal Dumping, Fish Kill)*
NOTIFICATION: *(Specify)* ______ *(Equipment Start-up/Shutdown, Equipment Failure/Upset, etc.)*

INCIDENT LOCATION:

NAME (Site) [illegible] ☐ UNK PHONE 436-5000
STREET Foot of E 2nd St
CITY [illegible] COUNTY Hudson STATE NJ ZIP CODE ______

STATUS AT SCENE OF INCIDENT (Mitigative Actions): Leaks from bottom of tanks. Spill contained & being pumped to a [illegible] tank HRHC responsibility

DATE OF INCIDENT: 1-19-87 TIME 0730

ANYONE INJURED	☐ YES	☒ NO	PUBLIC EXPOSURE	☐ YES	☒ NO
ANYONE HOSPITALIZED	☐ YES	☒ NO	POLICE AT SCENE	☐ YES	☒ NO
AREA EVACUATED	☐ YES	☒ NO	FIREMAN AT SCENE	☐ YES	☒ NO
CONTAMINATION OF	☐ AIR	☒ LAND ☒ WATER	ASSISTANCE REQ	☐ YES	☒ NO
POTABLE WATER SOURCE	☐ YES	☒ NO	WIND DIRECTION		
RECEIVING WATER	GW/Kill Van Kull/Newark Bay		WIND SPEED		

LOCATION TYPE ☐ CITY ☒ INDUSTRIAL ☐ RURAL ☐ SENSITIVE POPULATION *(Hospital, School, Nursing Home)*

SOURCE OF INCIDENT/PROBLEM: ☒ KNOWN ☐ UNKNOWN

COMPANY NAME Same as I. L. PHONE ______
CONTACT ______ TITLE ______
STREET ______
CITY ______ COUNTY ______ STATE ______ ZIP CODE ______

IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, DISCHARGED, ETC.: ☒ KNOWN ☐ UNKNOWN

NAME OF SUBSTANCE *(Gas, Liquid, Solid)* Na OH 50% soln
AMOUNT RELEASED/SPILLED Several thousand gal A/P/E [illegible]
SUBSTANCE CONTAINED ☐ YES ☒ NO ☐ UNKNOWN
TYPE OF RELEASE/SPILL ☐ TERMINATED ☒ CONTINUOUS ☐ INTERMITTENT

OFFICIALS NOTIFIED: (A-310) ☐ BY FACILITY ☐ BY NJDEP

USEPA: PERSON ______ PHONE ______ DATE ______
0811 LOCAL HEALTH DEPT.: PERSON Mary Ann Walsh PHONE 437-9007 DATE 1-19-87
LOCAL MUNIC. (Fire/Police) PERSON ______ PHONE ______ DATE ______

INCIDENT REFERRED TO: ☒ DEQ ☐ DWR ☐ DSWM ☐ DHSM ☒ DHWM ☐ DOH ☐ F&G

REGION: ☐ NORTHERN ☒ METRO ☐ CENTRAL ☐ SOUTHERN

1. PERSON Andy Tynan BER PHONE paged DATE 1-19-87 TIME 0805
2. PERSON [illegible] State Police PHONE 882-2000 DATE ______ TIME 0814
3. PERSON Cole 1/20/87 ______ PHONE ______ DATE ______ TIME ______

COMMENTS 0918 hrs - Material entering Newark Bay USCG notified
TD 87-01-19-TD 0755

COPIES: *White - Division* *Yellow - Trenton Dispatch* *Pink - Other*

(1)

Form VSC-005
9/86

RECEIVED
TRENTON DISPATCH
1987 JAN 19 A 7:55
COMMUNICATIONS AND SUPPORT SERVICES

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

09-01-08

TRENTON DISPATCH NOTIFICATION REPORT

CASE NO. 87 (YR) 1 (MO) 19 (DAY) TD 0755 (CASE NO.)
87-1-19 260

DATE 1 - 19 - 87 TIME (Military) 0755 REC'D BY HART PHONE NO. 2-7172

INCIDENT REPORTED BY:

NAME FRANK CARR PHONE 201-436-5000
STREET FOOT OF EAST SECOND ST.
CITY BAYONNE STATE N.J.
AFFILIATION/TITLE ROLLINS TERMINAL

NATURE OF INCIDENT:

EMERGENCY: __ FIRE __ EXPLOSION __ AIR REL [✓ SPILL] __ MVA __ DERAILMENT
COMPLAINT: __ SMOKE/DUST __ ODORS __ SEWAGE __ OTHER (Specify) ______ (Noise, Illegal Dumping, Fish Kill)
NOTIFICATION: (Specify) ______ (Equipment Start-up/Shutdown, Equipment Failure/Upset, etc.)

INCIDENT LOCATION:

NAME (Site) ROLLINS TERMINAL __ UNK PHONE 201-436-5000
STREET FOOT OF EAST SECOND ST.
CITY BAYONNE COUNTY HUDSON STATE N.J. ZIP CODE ______

STATUS AT SCENE OF INCIDENT (Mitigative Actions): LEAK FROM BOTTOM OF TANK. SPILL IS CONTAINED AND being PUMBED INTO ANOTHER TANK. HUDSON REGIONAL HEALTH IS RESPONDING TO SCENE.

DATE OF INCIDENT: 1 - 19 - 87 TIME 0730

ANYONE INJURED __ YES [✓ NO]
ANYONE HOSPITALIZED __ YES [✓ NO]
AREA EVACUATED __ YES [✓ NO]
CONTAMINATION OF __ AIR [✓ LAND] __ WATER
POTABLE WATER SOURCE __ YES [✓ NO]
RECEIVING WATER ______
LOCATION TYPE __ CITY [✓ INDUSTRIAL] __ RURAL __ SENSITIVE POPULATION (Hospital, School, Nursing Home)

PUBLIC EXPOSURE __ YES [✓ NO]
POLICE AT SCENE __ YES [✓ NO]
FIREMAN AT SCENE __ YES [✓ NO]
ASSISTANCE REQ __ YES [✓ NO]
WIND DIRECTION ______
WIND SPEED ______

SOURCE OF INCIDENT/PROBLEM: [✓ KNOWN] __ UNKNOWN

COMPANY NAME ROLLINS TERMINAL PHONE 201-436-5000
CONTACT FRANK CARR TITLE GENERAL MANAGER
STREET FOOT OF EAST SECOND ST.
CITY BAYONNE COUNTY HUDSON STATE N.J. ZIP CODE ______

IDENTITY OF SUBSTANCE(S) SPILLED, RELEASED, DISCHARGED, ETC.: [✓ KNOWN] __ UNKNOWN

NAME OF SUBSTANCE (Gas, Liquid, Solid) CAUSTIC SODA 50% SOLUTION
AMOUNT RELEASED/SPILLED SEVERAL THOUSAND GALLON'S e
SUBSTANCE CONTAINED [✓ YES] __ NO __ UNKNOWN
TYPE OF RELEASE/SPILL __ TERMINATED [✓ CONTINUOUS] __ INTERMITTENT

OFFICIALS NOTIFIED: (A-310) __ BY FACILITY [✓ BY NJDEP]

USEPA: PERSON ______ PHONE ______ DATE ______
0811 LOCAL HEALTH DEPT.: PERSON MARY ANN WALSH PHONE 201-437-9007 DATE 1-19-87
LOCAL MUNIC. (Fire/Police) PERSON ______ PHONE ______ DATE ______

INCIDENT REFERRED TO: [✓ DEQ] __ DWR __ DSWM __ DHSM [✓ DHWM] __ DOH __ F&G

REGION: __ NORTHERN [✓ METRO] __ CENTRAL __ SOUTHERN

1. PERSON ANDY TYNAN BER PHONE PAGED DATE 1-19-87 TIME 0805
2. PERSON TROOPER LEGG STATE P.D. PHONE 882-2000. DATE 1-19-87 TIME 0814
3. PERSON ______ PHONE ______ DATE ______ TIME ______

COMMENTS ~~THIS REPORT WILL BE TELEXED TO DHWM-M~~ 0918 HRS. VIA GARY GARITANO TANK IS LEAKING 500 GALLONS A MINUTE, THE TANK IS ALSO BEING PUMPED OUT AT 25,000 GALLONS AN HOUR, KEN'S MARINE SERVICES IS ON SCENE FOR CLEAN UP, SPILL IS RUNNING INTO NEWARK BAY, U.S. COAST GUARD IS NOTIFIED.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

INCIDENT NOTIFICATION REPORT

(2)

☐ TRENTON DISPATCH ☐ DIV. OF WASTE MANAGEMENT ☐ DIV. OF ENVIR. QUALITY ☐ DIV. OF WATER RESOURCES

☐ HQ FIELD OFFICE: ☐ NORTHERN ☐ METRO ☐ CENTRAL ☐ SOUTHERN

DATE 01-19-92 TIME (Military) 0905 REC'D BY JIM / TYNAN PHONE NO. ______

INCIDENT REPORTED BY: CASE NO. TD 92.01.19.0755

NAME FRANK CARR PHONE 436-5000

STREET FOOT OF E 2ND ST.

CITY BAYONNE STATE ______

AFFILIATION ROLLINS

NATURE OF INCIDENT:

EMERGENCY: ☐ FIRE ☐ EXPLOSION ☐ DRUMS ☒ SPILL ☐ DERAILMENT ☐ MVA

COMPLAINT: ☐ SMOKE ☐ ODORS ☐ DUST ☐ SEWAGE ☐ NUISANCE ☐ ILLEGAL DUMPING

OTHER: ☐

INCIDENT LOCATION:

NAME (Site) SAME ☐ UNK PHONE ______

STREET ______

CITY BAYONNE COUNTY HUDSON STATE ______ ZIP CODE ______

STATUS AT SCENE OF INCIDENT: 300,000 TANK IS LEAKING NEAR THE BOTTOM. TANK IS BEING OFFLOADED AT THIS TIME FASTER THAN IT IS LEAKING. SPILL IS CONTAINED.

DATE OF INCIDENT: 01-19-92 TIME: 0730

ANYONE HOSPITALIZED ☐ YES ☒ NO

AREA EVACUATED ☐ YES ☒ NO

CONTAMINATION OF ☐ AIR ☒ LAND ☐ WATER

PUBLIC EXPOSURE ☐ YES ☒ NO

RECEIVING WATER N/A

WIND DIRECTION ______

POLICE AT SCENE ☐ YES ☒ NO

FIREMAN AT SCENE ☒ YES ☒ NO

ASSISTANCE REQUIRED ☐ YES ☒ NO

POTABLE WATER SOURCE ☐ YES ☐ NO

LOCATION TYPE ☐ CITY ☒ INDUSTRIAL ☐ RURAL

SOURCE OF INCIDENT/PROBLEM: ☒ KNOWN ☐ UNKNOWN

COMPANY NAME ______ PHONE ______

CONTACT ______ TITLE ______

STREET ______

CITY ______ COUNTY ______ STATE ______ ZIP CODE ______

IDENTITY OF SPILLED AND/OR DISCHARGED SUBSTANCE: ☒ KNOWN ☐ UNKNOWN

NAME OF SUBSTANCE SEVERAL THOUSANDS CAUSTIC SODA 50%

AMT. GALS. A/P/[✓ E] SUBSTANCE CONTAINED ☒ YES ☐ NO ☐ UNKNOWN

OFFICIALS NOTIFIED: (A-310) VIA TRENTON

HEALTH DEPT.: HUDSON COUNTY PERSON GARY GARETAND. PHONE ______ DATE ______

LOCAL MUNIC.: PERSON ______ PHONE ______ DATE ______

INCIDENT REFERRED TO: ☒ BEO METRO ☐ BERC ☐ DCJ ☒ DWR METRO ☒ F&G ☐ BAPC ☐ HD ☒ USEPA

1. PERSON ______ PHONE ______ DATE ______

2. PERSON ______ PHONE ______ DATE ______

COMMENTS:

0855. SPOKE TO KARR. OFF LOADING TANK AT ± 10,500 GAL./MIN. & ESTIMATES ANOTHER ONE HOUR UNTIL COMPLETED. HE NOTIFIED COAST GUARD. MATERIAL IS BEING CONTAINED ON THE PROPERTY.

0900. SPOKE TO TRENTON. GARETAND IS ON SITE AND REPORTS ONLY MINIMAL AMOUNTS LOST TO THE GROUND. THE REST IN THE DIKE.

0905 - UPDATE GARY ALLEN (R-1 SUPV.)

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PROTECTION
DIVISION OF WASTE MANAGEMENT

3

D.W.M. ASSIGNED CASE NUMBER 87-01-19-0755 Page ___ of ___
DATE __ __-__ __-__ __ TIME __ __ __ __ D.W.M. ID NO. __ __ __ __

1045 UPDATE FROM GARY GARETANO. TANK SIZE WAS 600,000 GALS. WITH 500,000 GALS. BEING STORED. TANK IS BEING PUMPED OFF AT 25,000 GALS/HR WITH ≈ 2 HOURS OF OFF LOADING REMAINING. MATERIAL HAS ENTERED A WATERWAY AND U.S.C.G. IS NOW ON SITE. THE AREA WAS NOT DIKED & SAND IS NOW BEING DELIVERED FOR THAT PURPOSE. SOME MATERIAL HAS LEFT THE PROPERTY AND FLOWED DOWN A PUBLIC STREET. A WAREHOUSE HAS BEEN EVACUATED BY F.D. BUT GARETANO HAS RECOMMENDED THEY RETURN. THE LEAK DISCHARGE IS CONTINUING, BUT GARETANO DOES NOT REQUEST ADDITIONAL ASSISTANCE AT THIS TIME. KEN'S MARINE SERVICE (CLEAN UP CONTRACTOR) ARRIVED AT 0930 BUT NEUTRALIZATION HAS NOT YET BEGUN. GARY BELIEVES THE INCIDENT COULD HAVE BEEN HANDLED MORE EXPEDITIOUSLY BY ROLLINS AND BELIEVES A VIOLATION IS WARRANTED.

1055 UPDATE TRENTON DISPATCH AND REQUESTED THIS INFO BE FORWARDED TO USEPA, F&G AND DWR-METRO.

1105 NO ANSWER AT GARY ALLENS HOME # REQUESTED HE BE PAGED AND GIVEN THIS UPDATE THRU TRENTON DISPATCH.

1515. CONTACT GARY GARETANO ~~403~~ 436-5000. HIS UPDATE IS THAT THE COMPANY OFF LOADED 39,000 GALS. THE REMAINING Δ 475,000 IS LOST TO EITHER THE GROUND OR THE AURTHUR KILL. CLEAN VENTURE IS NOW ON SITE VACCING ANY POOLED PRODUCT BEHIND THE DIKES. THERE IS HEAVY SOIL CONTAMINATION WITH THE PRODUCT PH OF 14. EITHER THE SOIL MUST BE REMOVED OR THE COMPANY CAN NEUTRALIZE THE SOIL WITH EITHER CITRIC OR ACETIC ACIDS. THEY MAY WORK THROUGH THE NIGHT & HE WOULD THEN NEED SOME RELIEF. I INFORMED HIM THAT I WILL HAVE GARY ALLEN CALL HIM & ANSWER HIS QUESTIONS.

1525 NEG. CONTACT AT GARY ALLENS HOUSE & REQUESTED HE BE TRENTON PAGED AND CALL ME AT MY HOME.

6/82

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

(4)

D.W.M. ASSIGNED CASE NUMBER 82-01-19-0755 Page 3 of 4

DATE __ __-__ __-__ __ TIME __ __ __ __ D.W.M. ID NO. __ __ __ __

1620 I SPOKE TO GARY ALLEN & UPDATED HIM OF THE PRESENT REPORTED CONDITIONS. HE WAS CONCERNED WITH THE AMOUNT LOST AND SUDDENNESS OF THE ESCALATION OF THE INCIDENT'S SEVERITY. I REQUESTED HE CONTACT GARY GARETANO DIRECTLY.

1830 I SPOKE TO GARY GARETANO. HE HAS CLEARED FROM THE SCENE. NO ADDITIONAL WORK TO BE DONE UNTIL AFTER A 1/20 0900 MEETING. HE REQUESTED NJDEP BE PRESENT TO ASSIST IN PROPER CLEANUP PROCEDURES. HE SUGGESTED A DHWM & DWR REPRESENTATIVE. ALL STANDING MATERIAL HAS BEEN VACCED BUT USCG BELIEVES IT WILL BE SEVERAL DAYS UNTIL THE SHORELINE WATERS ARE DILUTED TO NORMAL PH LEVELS.

1/20/87 0945 - 1200 I RESPONDED TO THIS SITE, AT GARY ALLEN'S REQUEST, TO GET ADDITIONAL ACCURATE INFORMATION WITH PHIL CALE (DHWM). PURPOSE OF THE MEETING, ATTENDED BY HUDSON COUNTY HEALTH, D.E.P., USCG AND ROLLINS, WAS TO OUTLINE/SUGGEST CLEAN UP PROCEDURES. THIS IS BEING HANDLED BY DHWM-METRO. A SHORT INSPECTION WAS CONDUCTED AT THE AREA NEAR THE AFFECTED TANK. AT THIS TIME, THERE ARE STILL SOME STANDING POOLS OF LIQUID WHICH ARE BEING COLLECTED BY KEN'S MARINE SERVICE. CLEAN VENTURE HAS BEEN CONTRACTED FOR THE LONG TERM CLEANUP.

THE FOLLOWING IS THE MOST RECENT INFORMATION ON THE SPILL. THE TANK #24 CONTAINED 586,000 GALS. OF 38.9% CAUSTIC SODA. (≃ 1830 TONS OF DRY SODIUM HYDROXIDE). THE CO. OFFLOADED ± 39,000 GALS. AND VACCED UP AN ADDITIONAL 10,000 GALS. APPROX 525,000 GALS. WERE LOST TO THE GROUND AND KILL VAN KULL. THE TANK COMPLETELY DRAINED IN 4 HOURS AND THE DISCHARGE CEASED ± 1130. THE DIKES WERE NOT COMPLETED BY THIS TIME. CAUSE IS SPECULATED TO BE A SPLIT SEAM AT THE TANK BOTTOM. TANK WAS CONSTRUCTED IN 1960 AND IS PLASTIC LINED.

Form DWM-051 B
1/86

③

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT

Page 4 of 4

INVESTIGATION

CASE # 87-01-19-0755

DATE

RECOMMENDATIONS AND CONCLUSIONS:

DUE TO RAPID TANK FAILURE, ROLLINS TERMINALS INC. EXPERIENCED A DISCHARGE OF ≃ 525,000 GALS. OF CAUSTIC SODA. THE AFFECTED TANK WAS NOT IN A DIKED AREA AND ALL THE PRODUCT ESCAPED TO EITHER THE KILL VAN KULL. OR SOIL AT THE PROPERTY AND ALSO OFFSITE TO NEIGHBORING PROPERTY.

INITIAL REPORTS OF THE INCIDENT STATUS WERE LOW KEY AND ESSENTIAL INITIAL UPDATES WERE NOT COMPLETELY RELAYED. THESE FACTORS LED TO THE FACT THAT NJDEP WAS REPRESENTED ONLY BY GARY GARETANO, HUDSON COUNTY HEALTH DEPT.

RECOMD:

① INCIDENT BE REFERRED TO DHWM AND DWR TO OVERSEE A LONG TERM MONITORING AND CLEAN UP OF THE INCIDENT

② INCIDENT BE REFERRED TO THE ABOVE FOR POSSIBLE ENFORCEMENT ACTIONS AS A RESULT OF THE SPILL AND TO REVIEW PREVENTION PLANS, (DIKING ETC.) THAT MAY PREVENT FUTURE SPILLS.

③. FISH + GAME FOR THEIR FILES & POSSIBLE ENFORCEMENT

Supervisor Signature

Andrew Tyran
Investigator Signature

COPIES: White - DWM File Yellow - Local Health Dept. Pink - Investigator

HOLE

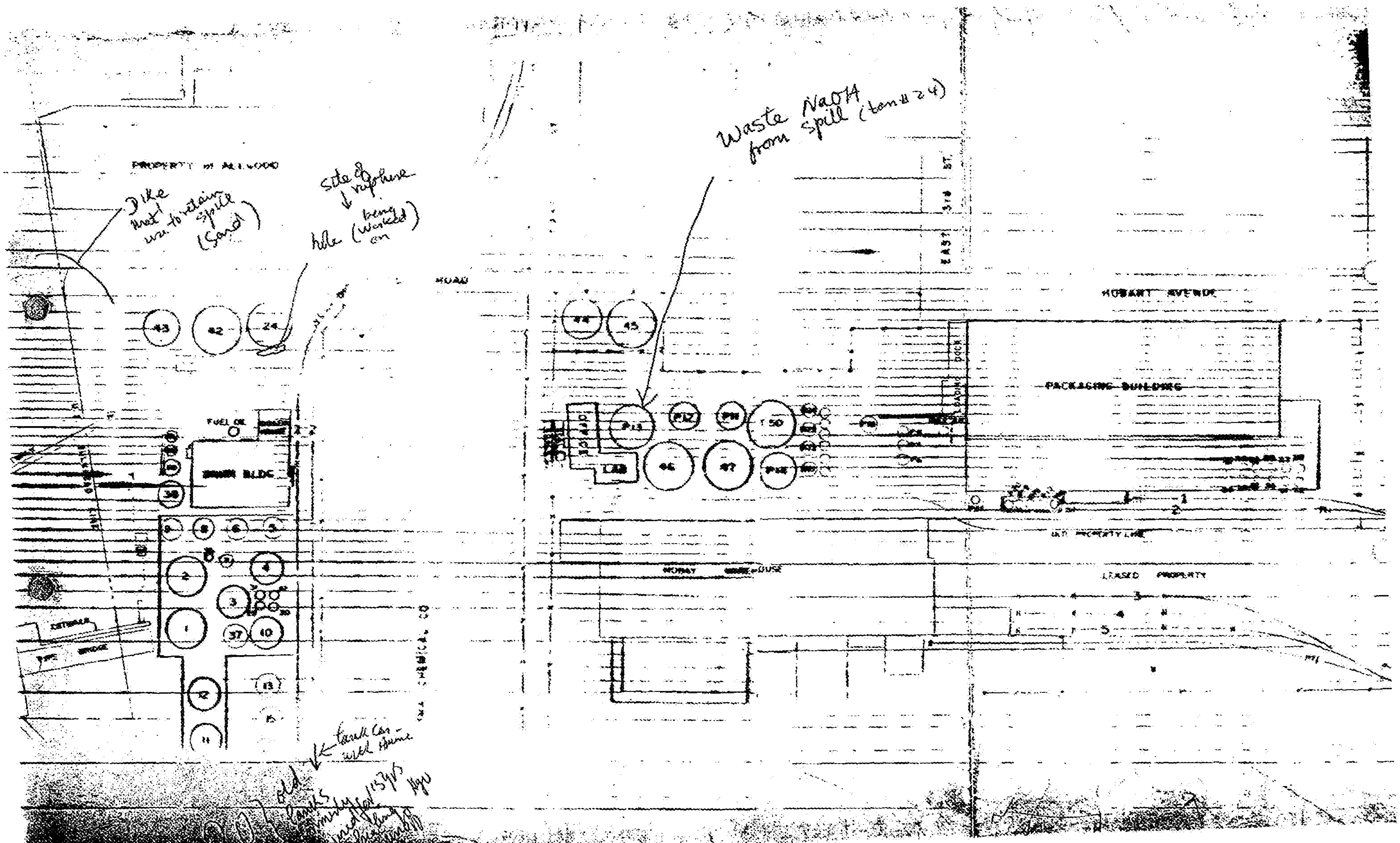
87119

AFFECTED TANK

SPILL AREA

⑥

870119 0755 [illegible]



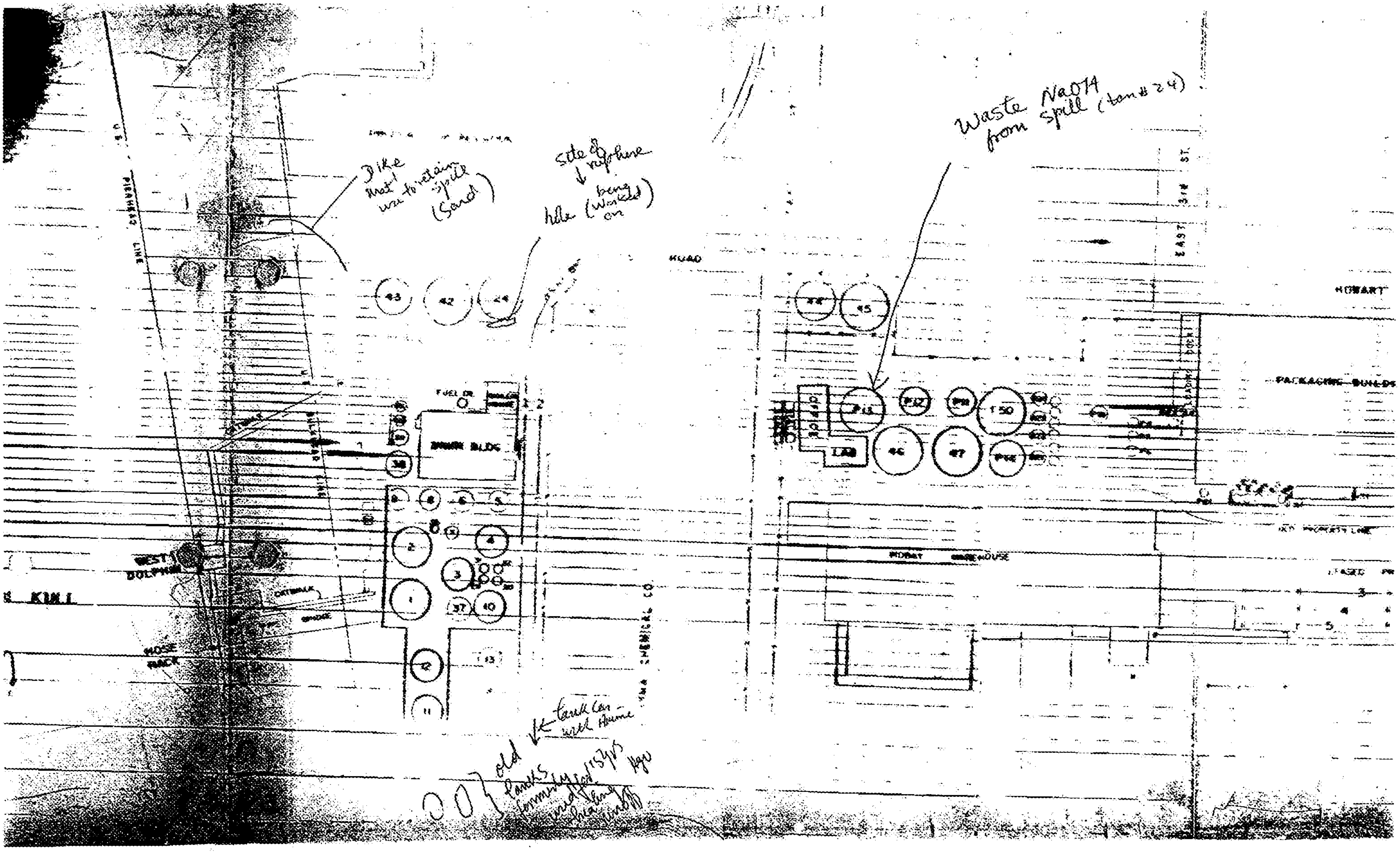
Dike that was to retain spill (Sand)

site of rupture ↓ hole (being worked on)

Waste NaOH from spill (tank #24)

← tank car with [illegible]

old tanks [illegible] used for 15 yrs [illegible]



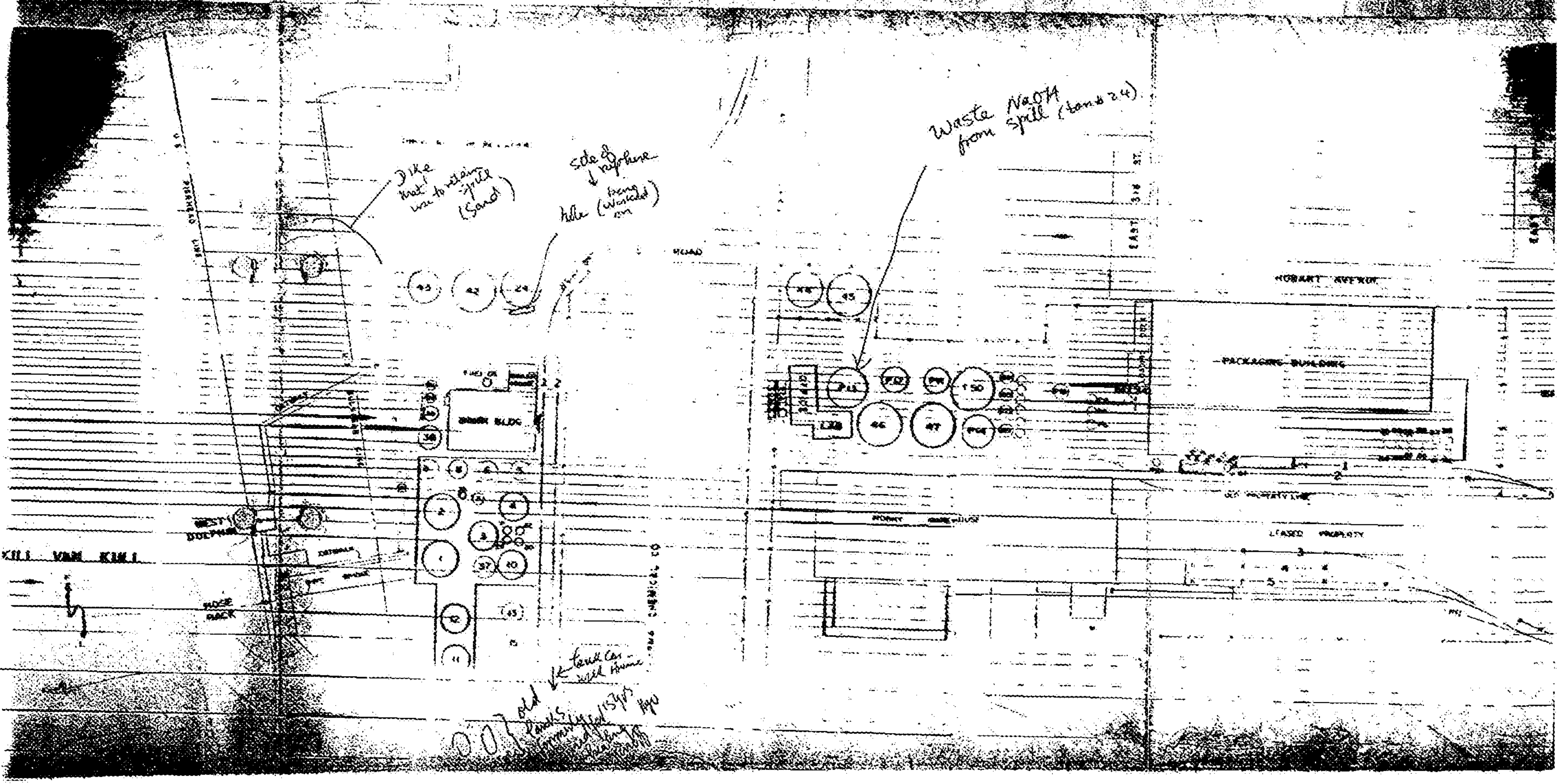
Dike mat'l use to retain spill (Sand)

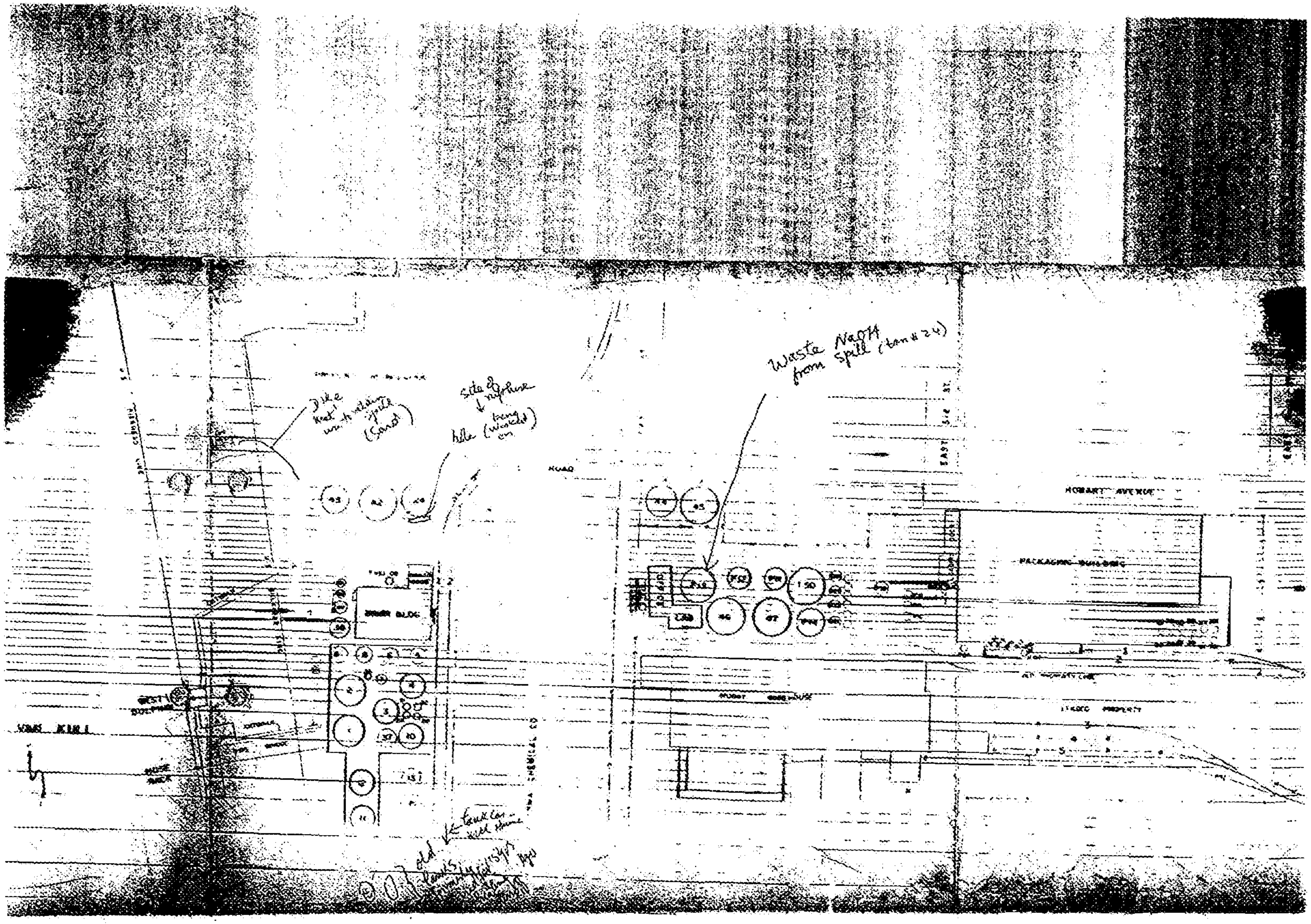
site of rupture hole (being worked on)

Waste NaOH from spill (tank # 24)

tank car with Amine

old tanks formerly used for 15 yrs ago holding runoff


Dike that I use to retain spill (Sand)
side of siphone
hole (being worked on)
Waste NaOH from spill (tank #24)
tank car still there
old
ROAD
HOBART AVENUE
PACKAGING BUILDING
EAST 31ST ST.
DRUM BLDG
WEST DOLPHIN
KILL VAN KULL
HOSE RACK
CATWALK
PIPE BRIDGE
PROPERTY LINE
LEASED PROPERTY
CHEMICAL CO
43
42
24
44
45
P11
P32
150
46
47
2
4
3
1
10
37
12
11
15
38



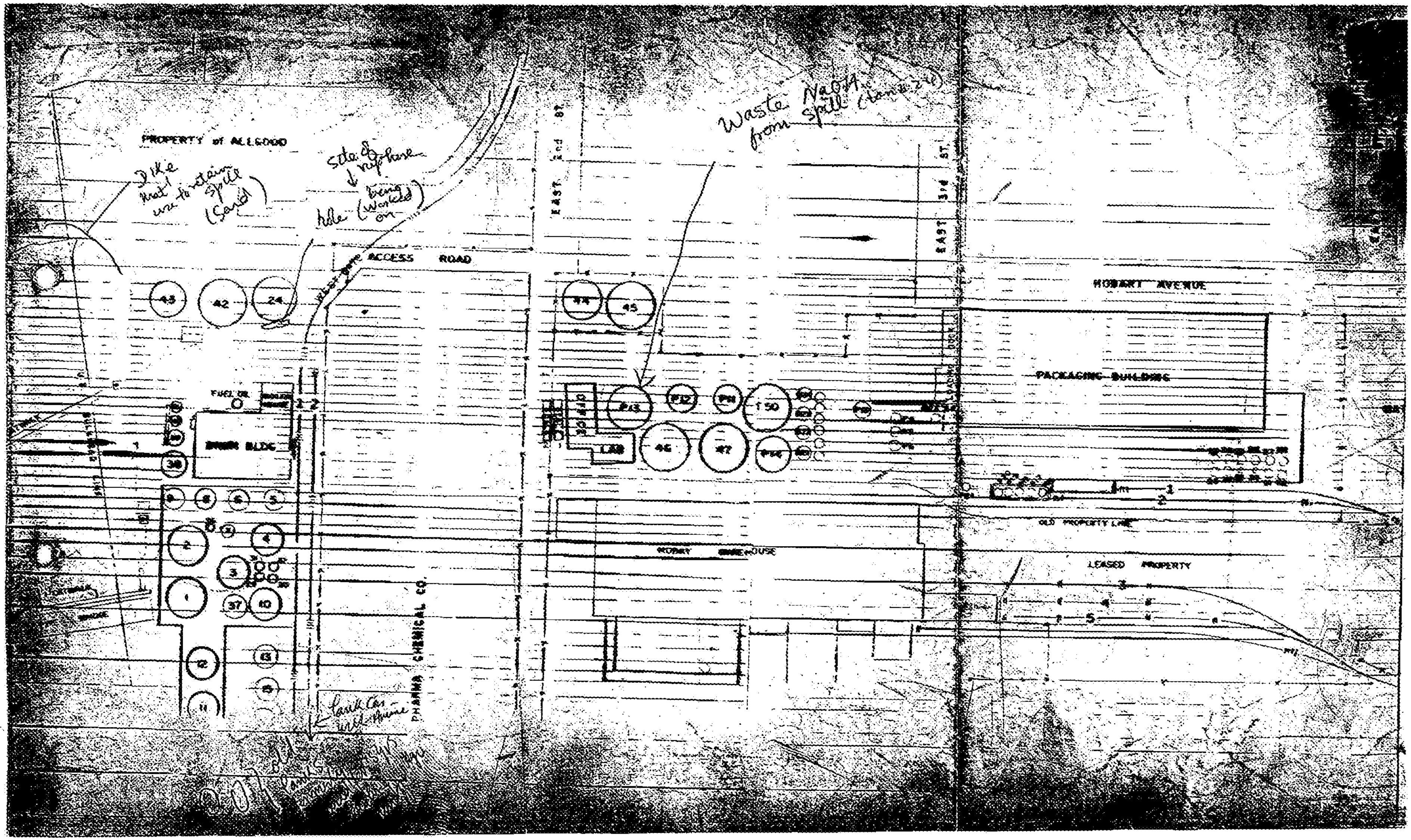
Dike Nat'l un-treated spill (Sand)

site of nightshade hole (being worked on)

Waste NaOH from spill (tan # 24)

tank car kill storage

old tanks [illegible] 15 yrs ago

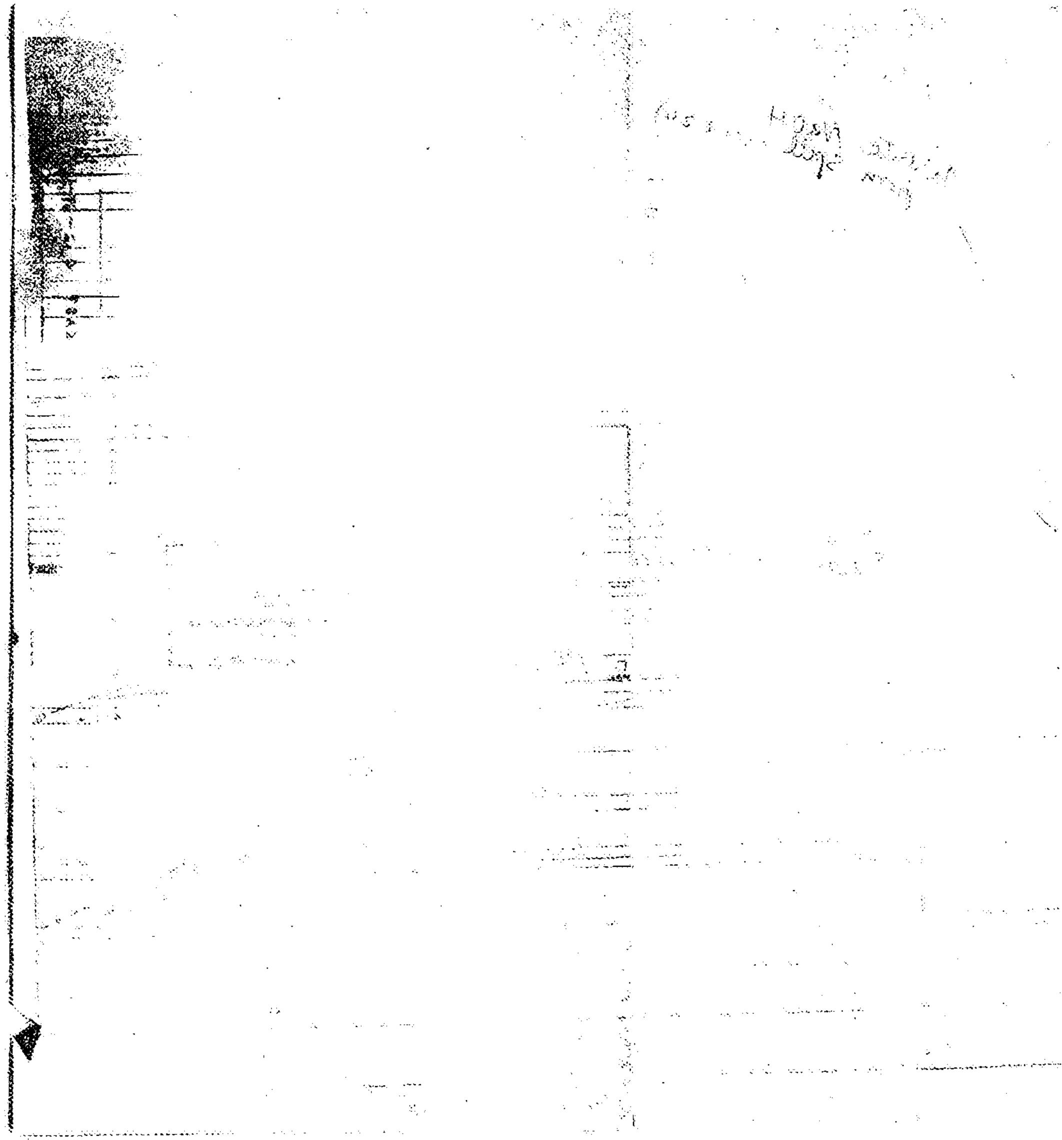


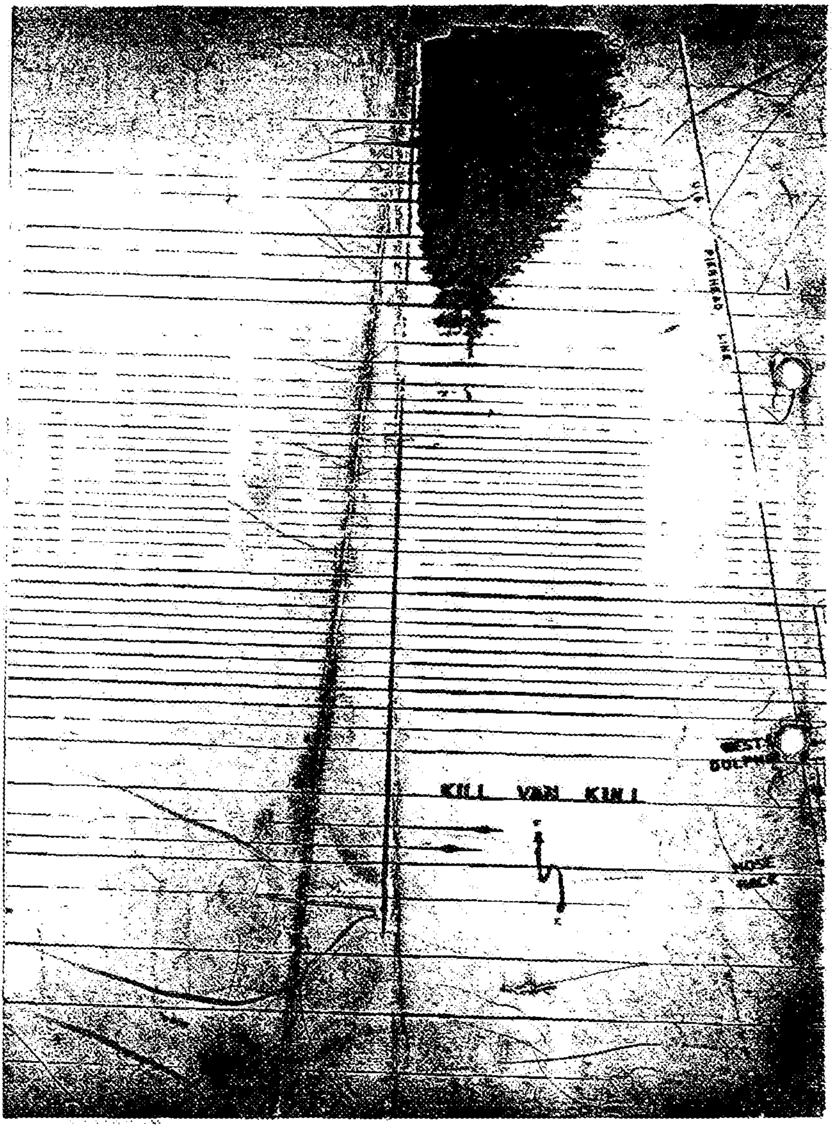
Dike
Mat'l
use to contain Spill
(Sand)

Site of naphtha
hole (being worked on)

Waste NaOH
from spill (tank #2-0)

Tank Car
[illegible]




U.S. PIERHEAD LINE
WEST DOLPHIN
KILL VAN KULL
HOSE RACK

WORK PLAN FOR SITE INVESTIGATION
BAYONNE TERMINALS, INC.
BAYONNE, NEW JERSEY

PREPARED FOR:

BAYONNE TERMINALS, INC.
FOOT OF EAST SECOND STREET
BAYONNE, NEW JERSEY

MAY 1995

MALCOLM PIRNIE, INC.

One International Boulevard
Mahwah, New Jersey 07495-0018

102 Corporate Park Drive
White Plains, New York 10602

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1.0 INTRODUCTION

The Bayonne Terminals facility is located at the foot of Second Avenue in Bayonne, Hudson County, New Jersey. It has been the site of industrial activities since the mid-1800's and has been operated by the present owners since 1969. Since 1969, there have been several documented spills of chemicals at the site. In October 1992, Bayonne Terminals entered into a Memorandum of Agreement with the New Jersey Department of Environmental Protection and Energy (Department) to conduct a remedial investigation to provide information on the nature and extent of contamination at the site, and to report on the results of that investigation.

This work plan outlines and provides the rationale for the sampling program, identifies site contact personnel, and presents a schedule for completion of the investigation. A Health and Safety Plan and a Quality Assurance Plan are also included as part of this document.

2.0 BACKGROUND

2.1 SITE HISTORY

This site history has been complied from review of historical aerial photos, Sanborn maps, facility maps, and state and local records. Discussions were also held with site personnel who have been long-time employees at the facility.

The Bayonne Terminals facility occupies an area of approximately 15 acres in an industrial section of Bayonne. The property is divided into two parcels, the warehouse packaging parcel and the waterfront parcel. To the best of our knowledge, the packaging warehouse parcel belonged to Wilcox and Babcock, a manufacturer of boilers, during the period from the mid 1800's to early 1900's. For some uncertain time after this, the packaging warehouse parcel was used as an ammunition factory, but the name of the company is unknown.

During World War II, the entire Bayonne Terminals property and the surrounding properties were used as a prisoner of war camp for Italian prisoners. There is no information on the use of the site from the late 1940's to the early 1950's.

From the mid 1950's to 1960, the packaging warehouse was occupied by a furniture company called EZEDO, which went out of business in 1961. In 1962, they sold the warehouse and surrounding land to Lehigh Tank Farm.

There is no information on the waterfront property prior to 1953. In 1953 and 1954, Lehigh Tank Farm built several storage tanks and acquired Dow Chemical Company as a client. Lehigh owned and operated both parcels of land until they went out of business in 1967. Dow Chemical took over the facility from 1968 to 1969 and operated it under the name of Distribution Center of Bayonne.

The facility was sold to Bayonne Terminals, Inc. in 1969. The site was operated as a tank farm consisting of 95 above ground storage tanks. These tanks were rented to various customers who used the tanks for the storage of various virgin materials and who retained ownership of the materials. Bayonne Terminals was responsible for maintaining the products in the tanks. In the mid 1980's, Bayonne Terminals began dismantling the tanks on the site, and there are currently no remaining tanks.

The Bayonne Terminals property is surrounded by other industrial properties. It is bounded to the north by Haddad & Sons, to the east by Bayridge Lumber and Norton Paint, and to the west by the closed Maidenform plant and housing projects. To the southwest, it is bordered by the GTK video factory. To the south, the Bayonne Terminals property is divided by East Second Street and land owned by Norton Paint Company. To the southeast, the property is bordered by Standard Tank, a slip and barge cleaning company. The waterfront parcel is bordered on the south by the Kill Van Kull.

2.2 GEOLOGY

Bayonne is located in the Piedmont physiographic province of New Jersey in the area of the contact between the rocks of the Newark Basin to the west and the Manhattan Prong to the east. The Newark Basin contains the Newark Supergroup which is a stratigraphic series of Triassic to Jurassic age sedimentary rocks containing intrusions of sills and dikes as well as extrusive volcanics. The Supergroup rocks generally dip slightly to the north and form a northward-thickening wedge that may have a composite thickness of greater than 33,000 feet. The Manhattan Prong is a body of Paleozoic to Pre-cambrian age metamorphic rocks which may also underlie of the Newark Supergroup.

In general, Pleistocene age glacial sediments overlie bedrock in most of the Bayonne area. The sediments may consist of stratified drift, deposited by glacial meltwater in streams or lakes, and till, which is a heterogeneous mix of fine and coarse grained material deposited directly by glacial ice.

Borings drilled in 1992 on the Norton Paint property show fill composed of cinders, slag, bricks, other debris, and some sand to a depth of approximately eight feet below the surface. Below the layer of fill, the borings were drilled into a gray or brown mix of sand, silt, and clay that is presumed to be natural material.

3.0 SAMPLING AND ANALYSIS

3.1 INTRODUCTION

This investigation is designed to determine whether contamination remains in the soils at the Bayonne Terminals property at the locations of several spills. Therefore, the soil sampling plan has been developed in accordance with the requirements in N.J.A.C. 7:26E-3.3. The number and locations of samples and the analytical methods to be used for each of the areas of concern are presented below. Each area has been described separately.

3.2 AREA 1: AREA OF ETHYLENE GLYCOL SPILL

On July 13, 1980, approximately 360,000 gallons of ethylene glycol and diethylene glycol spilled from Tank 43. The spilled material was cleaned up by Bayonne Terminals employees at the time of the spill. To determine whether the cleanup process was successful in removing all the spilled chemicals, we will dig two test pits to the water table at the locations shown on Figure 3-1. Two soil samples will be collected from each test pit, one from the interval 0 to 6 inches below ground surface (bgs) and one from the interval 0 to 6 inches above the water table (awt). The samples will be biased to include any visually stained soils and will be analyzed for ethylene glycol and diethylene glycol using a modification of USEPA analytical Method 8015.

3.3 AREA 2: AREA OF MURIATIC ACID SPILL

On May 18, 1982 there was a spill of approximately 15 to 20 gallons of muriatic acid from a 55 gallon drum onto an asphalt drum storage pad (Figure 3-1). Bayonne Terminals employees flushed the acid with water and built a temporary dike to contain it. Lime was used to further neutralize the acid and the diluted acid was stored in a recovery drum. We will inspect the current condition of the asphalt drum storage pad. If the pad is in good condition, with no cracks or breaks in it, there will be no further investigation at this location. If however, the pad appears damaged or has been removed, and it appears that the acid could have soaked into the ground, four shallow (0 to 6 inches bgs) soil samples will be collected and analyzed for pH using USEPA analytical Method 9045.

3.4 AREA 3: AREA OF CAUSTIC SODA SPILL

On January 19, 1987, approximately 500,000 gallons of caustic soda (sodium hydroxide) spilled due to the rupture of a seam at the base of Tank No. 24. The spilled caustic soda ran southward across the ground surface into the Kill Van Kull, and to the northwest toward the access road. Cleanup activities involved dilution and collection of the spilled material as well as the removal of contaminated soils. To confirm that the cleanup activities were successful, we will dig one test pit where the material flowed out of the tank. Two samples will be collected from the test pit, one from the interval 0 to 6 inches bgs, and the interval 0 to 6 inches awt. In addition, four surface soil samples will be collected from the areas across which the caustic soda flowed. Sampling locations are shown on Figure 3-1. The samples will be analyzed for pH using USEPA analytical Method 9045.

3.5 AREA 4: AREA OF MINERAL OIL SPILL

On September 18, 1989, approximately 200 gallons of food-grade mineral oil were spilled onto a blacktop area near the packaging building (Figure 3-1). The spill was caused by a loose valve on a truck, and was immediately cleaned up using oil absorbing material dikes. Because the spill was of a non-hazardous substance, was cleaned up immediately, and did not impact the environment, we do not propose conducting any investigations at this time.

On August 3, 1990, approximately 500 gallons of morpholine were spilled inside the warehouse and were immediately cleaned up. Because the spill occurred inside the building, was immediately cleaned up, and did not impact the environment, we do not propose any investigation.

3.6 AREA 5: AREA OF ZIRCONIUM OXYCHLORIDE SPILL

On December 27, 1990, approximately 48,000 gallons of zirconium oxychloride were spilled from Tank No. 11. The chemical flowed over the ground surface into the Kill Van Kull. Bayonne Terminals employees stopped the flow of the material into the river, neutralized it with lime, and cleaned up the neutralized material. To confirm that the cleanup was effective, we will dig two test pits in the spill area. Two samples will be

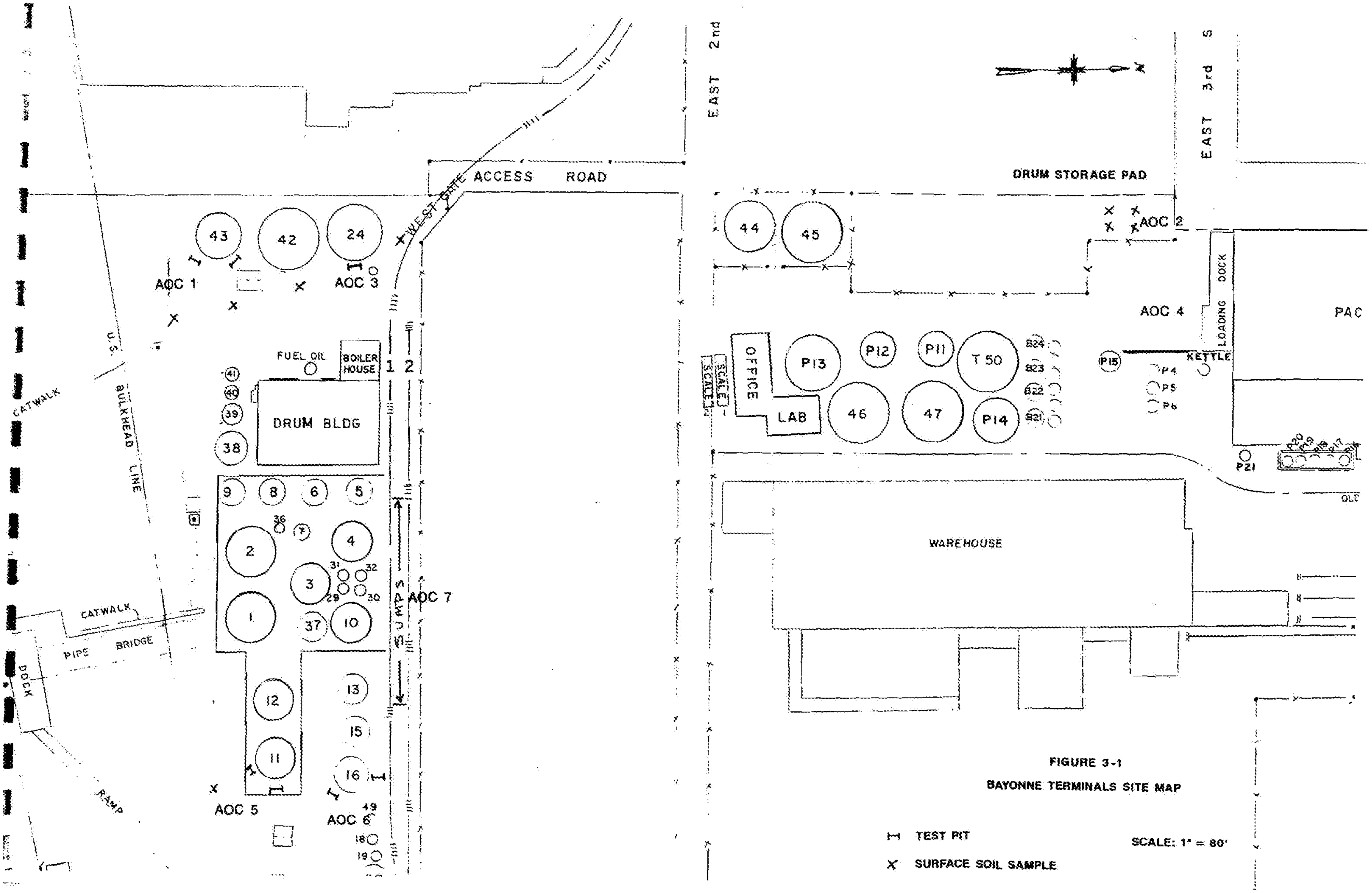


FIGURE 3-1

BAYONNE TERMINALS SITE MAP

collected from each test pit, one from the interval 0 to 6 inches bgs and the interval 0 to 6 inches awt. One surface soil sample will be collected in the area downstream from the tank where the chemical flowed to the river (Figure 3-1). Sampling will be biased toward areas of visibly contaminated soil. All samples will be analyzed for zirconium by atomic absorption (USEPA analytical Method 7000) and for pH by USEPA analytical Method 9045.

3.7 AREA 6: AREA OF PCE SPILL

On February 11, 1991, there was a spill of perchloroethylene (PCE) from a loading pipe associated with Tank No. 16. Bayonne Terminals employees cleaned up the spilled material immediately. To confirm that all contaminated material was removed, we will dig two test pits in the area of the spill (Figure 3-1) and will collect two samples from each test pit, one from the interval 0 to 6 inches awt and one at the depth with the highest HNu reading. Samples will be biased toward visibly contaminated soil. The samples will be analyzed for PCE using USEPA analytical Method 8010.

3.8 AREA 7: SUMPS

Two of the ten railroad sumps on the property (Figure 3-1) were cleaned out during previous work at the site. Water from the sumps was analyzed for priority pollutants volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, herbicides, and metals. The soil was analyzed for TCLP parameters and hazardous classification parameters. The water from the sump contained high concentrations of several VOCs, including chloromethane, methylene chloride, acetone, 1,1-DCE, 1,1-DCA, c-1,2-DCE, 1,2-DCA, 1,1,1-TCA, TCE, 1,1,2-TCA, PCE, AND 1,1,2,2-tetrachloroethane. Several SVOCs, including benzyl alcohol, 4-methylphenol, benzoic acid, and bis(2-ethylhexylphthalate were detected in the water. Lindane and 2,4-D were detected in very low concentrations. Barium was also detected at a very low concentration.

The soil removed from the sump contained very low concentrations of chloroform, 2,4-D, barium, cadmium, and lead. The soil from the sump did not classify as hazardous.

As part of this investigation, the remaining eight sumps will be cleaned out. A sample of the material removed from each sump will be analyzed for volatile organic compounds (VOCs) by USEPA Method 8240. The removed material will then be disposed of.

4.0 QUALITY ASSURANCE PLAN

4.1 INTRODUCTION

Quality Assurance (QA) objectives are developed to ensure that quality data are generated. Data quality is measured by how well the data meet the QA/QC goals of the project. For this project, data are required to be sensitive enough (achieving low enough detection limits) to accurately characterize the nature and extent of contamination in areas of the property affected by past spills. The data must also be reported in a clear, concise, and comprehensive manner. Analysis of blanks, instrument calibration, field data, holding times, and sample transport are QA elements that are important to this project.

Data Quality Objectives (DQOs) ensure that data are sufficient in quality and quantity to describe the nature and extent of contamination, the potential threat to human health and the environment, and to support any needed remedial design. DQOs are specified for each data collection activity in terms of six parameters. These parameters are:

- Precision - the agreement among individual measurements of the same property under similar conditions. The laboratory objective is to equal or exceed the precision demonstrated for the analytical method on comparable samples. Sampling precision is demonstrated by analyzing field blanks and duplicate samples.

- Accuracy - the closeness of an individual measurement to the true or expected value. Analyzing a reference material that has been spiked with a known concentration or amount is a way to determine accuracy. Sampling accuracy is demonstrated by evaluating the results of field and trip blanks.

- Representativeness - the degree to which data accurately represent the media and conditions being measured. Representativeness can be determined in a qualitative sense by comparing the quality control data for the samples in question against other data for similar samples analyzed at the same time.

- Completeness - a measure of the amount of valid data acquired from a measurement process compared to the amount that was expected to be acquired under the measurement conditions. The specific completeness objective of this project requires that a minimum of 80 percent of the data are valid.

- Comparability - the confidence with which one set of data can be compared to another. The laboratory QA program documents internal performance. Sampling comparability is achieved by consistent adherence to the specified sampling procedures.

- Sensitivity - the detection limits for the analytical methods. For this project, the detection limits should be low enough for meaningful use of the data, that is, less than or equal to the applicable Department cleanup standards. In some instances, this may not be possible if significant sample dilution is required for proper analysis.

The six parameters described above will be evaluated according to the applicable QA/QC requirements for each method. The more significant QA/QC requirements include the following:

- holding times
- initial calibrations
- continuing calibrations
- method blanks
- field blanks
- matrix spike/matrix spike duplicate analyses
- surrogate spike analyses
- duplicate samples

4.2 FIELD SAMPLING

As discussed in Section 3, soil samples will be collected and analyzed to provide data to determine whether soil has been contaminated by past spills of chemicals at several locations on the site. Proposed locations for soil samples are shown on Figure 3-1. These locations have been chosen to correspond to the areas of past spills and include the areas of spills near Tanks 43, 24, 11, and 16, as well as the drum pad near the office which was the location of the muriatic acid spill.

Soil samples will be collected in accordance with procedures given in N.J.A.C. 7:26E, "Technical Requirements for Site Remediation" and the Department's May 1992 Field Sampling Manual. Surface samples will be collected using laboratory-decontaminated hand trowels. Subsurface samples will be collected from test pits dug with a backhoe using laboratory-decontaminated hand trowels.

Sampling personnel will use a photoionization detector (HNu) or a flame ionization detector (OVA) while conducting the field investigation. The calibration of the instrument will be checked prior to each day's use. Dates and times of calibration checks, serial numbers of the instruments, and the signature of the technician will be entered into the field log book. Maintenance and procedures for use of the instrument will be in accordance with the manufacturer's specifications.

Each sample will be identified by a unique identification number, and sample labels will be affixed to the sample bottles before field activities begin. Sampling locations will be marked on a map, and a description of the sample location, number and types of samples, and sample identification numbers will be entered in the field log book.

A chain-of-custody form will be initiated at the laboratory and will accompany the bottles from the laboratory into the field and back to the laboratory. Upon receipt of the bottles and cooler, the sampling personnel will sign and date the first "received" blank space. After each sample is collected and appropriately identified, entries will be made on the chain-of-custody form and will include sampling personnel name and signature, sampling station identification, date, time, type of sample, and the required analysis.

After sampling has been completed, the sampling personnel will return the samples to the laboratory and sign and date the next "relinquished" blank space. One copy of the chain-of-custody form will remain with the sampling personnel and the remaining copies will accompany the samples to the laboratory. The samples will be shipped to the laboratory either by courier or by an air express service. All samples will be received by the laboratory within 24 hours of collection.

4.3 LABORATORY ANALYSES

Laboratory analyses will be performed by the Malcolm Pirnie, Inc. laboratory in Tarrytown, New York. The laboratory is certified by the State of New Jersey, certification No. 73171. Quality assurance at the laboratory is the responsibility of Mr. James Murphy, who can be reached at (914) 345-8230.

The analytical program, including the analytical methods to be used, is summarized in Table 4-1. The requirements for sample containers, preservation, and holding times are summarized in Table 4-2.

The laboratory will calibrate instruments in accordance with the USEPA methods used and at the frequency required by the specific method. Preventive maintenance will be performed in accordance with the manufacturer's specifications for each instrument.

The laboratory will employ procedures to adequately track the samples through the facility. Laboratory custody will begin when the samples are received, and will continue through delivery of the data package and archiving of sample data. Twenty-four hour security will remain at the sample storage and laboratory areas.

All data will be validated by the laboratory before being released, and will be checked by an independent reviewer before being submitted to the NJDEPE. Any problems with sample analyses will be reported immediately to Mr. John Curtis of Bayonne Terminals or to his designated representative.

4.4 DELIVERABLES

The laboratory will submit all data and reporting forms required by the NJDEPE for the Reduced Laboratory Data Deliverables - Non USEPA/CLP Methods reporting format as given in Appendix A to N.J.A.C. 7:26E. Data will be summarized on a spreadsheet that will be proofread by a separate reviewer before being submitted to the NJDEPE.

Table 4-1
Analytical Parameter Summary

Sample Number	Medium	Sample Depth	Analytical Parameters	Sampling Method
Area 1: Ethylene Glycol Spill				
TP-1A	Soil	0-6 inches bgs	(1)	(6)
TP-1B	Soil	0-6 inches awt	(1)	(6)
TP-2A	Soil	0-6 inches bgs	(1)	(6)
TP-2B	Soil	0-6 inches awt	(1)	(6)
Area 2: Muriatic Acid Spill				
SS-1A	Soil	0-6 inches bgs	(2)	(7)
SS-1B	Soil	0-6 inches bgs	(2)	(7)
SS-1C	Soil	0-6 inches bgs	(2)	(7)
SS-1D	Soil	0-6 inches bgs	(2)	(7)
Area 3: Caustic Soda Spill				
TP-3A	Soil	0-6 inches bgs	(2)	(6)
TP-3B	Soil	0-6 inches awt	(2)	(6)
SS-2A	Soil	0-6 inches bgs	(2)	(7)
SS-2B	Soil	0-6 inches bgs	(2)	(7)
SS-2C	Soil	0-6 inches bgs	(2)	(7)
SS-2D	Soil	0-6 inches bgs	(2)	(7)
Area 6: Zirconium Oxychloride Spill				
TP-4A	Soil	0-6 inches bgs	(2), (3)	(6)
TP-4B	Soil	0-6 inches awt	(2), (3)	(6)
TP-5A	Soil	0-6 inches bgs	(2), (3)	(6)
TP-5B	Soil	0-6 inches awt	(2), (3)	(6)
SS-3A	Soil	0-6 inches bgs	(2), (3)	(7)
SS-3B	Soil	0-6 inches bgs	(2), (3)	(7)
SS-3C	Soil	0-6 inches bgs	(2), (3)	(7)
SS-3D	Soil	0-6 inches bgs	(2), (3)	(7)

Table 4-1 (Continued)
Analytical Parameter Summary

Sample Number	Medium	Sample Depth	Analytical Parameters	Sampling Method
Area 7: PCE Spill				
TP-6A	Soil	0-6 inches bgs	(4)	(6)
TP-6B	Soil	0-6 inches awt	(4)	(6)
TP-7A	Soil	0-6 inches bgs	(4)	(6)
TP-7B	Soil	0-6 inches awt	(4)	(6)
Area 8: Sumps				
SED-1	Sediment	Composite	(5)	(7)
SED-2	Sediment	Composite	(5)	(7)
SED-3	Sediment	Composite	(5)	(7)
SED-4	Sediment	Composite	(5)	(7)
SED-5	Sediment	Composite	(5)	(7)
SED-6	Sediment	Composite	(5)	(7)
SED-7	Sediment	Composite	(5)	(7)
SED-8	Sediment	Composite	(5)	(7)

NOTES:

(1) Ethylene Glycol and diethylene glycol by modified USEPA Method 8015
(2) Soil pH by USEPA Method 9045
(3) Zirconium by USEPA Method 7000
(4) PCE by USEPA Method 8240
(5) VOCs by USEPA Method 8240
(6) Sample collected by stainless steel trowel from test pit
(7) Sample collected by stainless steel trowel from surface

Field equipment blanks will be collected at a frequency of one for every twenty samples or one for every sampling event

Trip blanks will be used for samples from Areas 5 and 6 only at a frequency of one for every twenty samples or one for every sampling event

Duplicate samples will be collected at a frequency of one for every twenty samples or one for every sampling event

Table 4-2
Sample Container, Preservation, and Holding Times

Matrix	Analysis	Container	Preservation	Holding Time
Soil	Ethylene Glycol Diethylene Glycol Method 8015*	4 oz amber glass	Cool to 4°C	14 days
	PCE Method 8240	4 oz amber glass	Cool to 4°C	14 days
	VOCs Method 8240	4 oz amber glass	Cool to 4°C	14 days
	Zirconium Method 7000	4 oz amber glass	Cool to 4°C	6 months
	pH Method 9045	4 oz amber glass	Cool to 4°C	48 hours

* Modified to report ethylene glycol and diethylene glycol

5.0 HEALTH AND SAFETY

A Health and Safety Plan (HASP) was prepared for previous activities at the Bayonne Terminals facility, and will be updated for the proposed activities. Malcolm Pirnie field personnel will become thoroughly familiar with the terms and requirements of the HASP before entering the site and will be required to sign the HASP to confirm that they are familiar with its terms and conditions. Any subcontractors will have access to the HASP, but will be responsible for the health and safety of their own personnel. A copy of the HASP follows.

SITE SAFETY PLAN – SHORT FORM

SECTION 1: GENERAL INFORMATION & ACKNOWLEDGEMENTS

CLIENT NAME: Bayonne Terminal

PROJECT NAME: Bayonne Terminal

PROJECT MANAGER: Donald Cohen

JOB NUMBER: 1173022-100

PROJECT LEADER: Kenneth Kaiser

REVISION: 0

SITE HEALTH & SAFETY OFFICER: Kenneth J. Kaiser

PREPARED BY: Kenneth J. Kaiser

DATE: June 10, 1993

SHORT FORM APPROVED BY:

		Date
Corporate Health & Safety:		
Regional H & S Coordinator:	Anna S. Kretz	6/14/93
Project Manager:	Donald K Cohen	6/14/93
Project Leader:	Kenneth J Kaiser	6/14/93

SECTION 2: PROJECT INFORMATION

(1) WILL POTENTIAL HAZARDS TO ON-SITE PERSONNEL EXIST? (YES OR NO)

Physical: ✓ [If yes, see Section 3]

Chemical: ✓ [If yes, see Section 4]

Confined space entry: ____ [If yes, see Section 6]

(2) SITE INFORMATION

Site Name: Bayonne Terminal

Address: East 2nd Street
Bayonne, New Jersey

Site contact: Hank Tyska

Phone No.: (201) 436-5000

(3) SITE CLASSIFICATION: [check all that apply]

____ Hazardous (RCRA)
____ Construction
____ Sanitary landfill

____ Hazardous (CERCLA)
____ UST/LUST
____ Manufacturing

✓ Other (Pre-EC RA)
____ Active
✓ Inactive

(4) PURPOSE AND DATE(S) OF FIELD VISIT(S): To observe the clean out and inspection of 8 sumps and nearby pipe. Visits to occur week of June 14 or June 21, 1993

(5) TASKS: (1) observe cleaning out of 8 sumps; (2) collect sample of sludges if present. (3) investigate associated piping and observe their video inspection. (4) Excavate at the property line to the pipe, investigate it and observe its pressure grouting.

(6) ON-SITE ORGANIZATION

MPI Personnel	Responsibilities
* Don Cohen	observe, collect field notes and photographs
Ken Kaiser	observe, collect field notes and photographs. Collect samples as necessary.

NOTE: Identify on-site field leader/supervisor with an asterisk (*).

NOTE: This site safety plan has been prepared for use by Malcolm Pirnie, Inc. employees. Malcolm Pirnie, Inc. claims no responsibility for its use by others. The plan is written for the specific site conditions, purposes, dates and personnel specified and must be amended if these conditions change.

Contractors and subcontractors whose work will be performed on-site, or who otherwise could be exposed to health and safety hazards, will be advised of known hazards through distribution of site information obtained by Malcolm Pirnie, Inc. from others, and this Site Safety Plan (SSP). They shall be solely responsible for the health and safety of their employees and shall comply with all applicable laws and regulations. All contractors and subcontractors are responsible for: (1) providing their own personal protective equipment; (2) training their employees in accordance with applicable Federal, State and local laws; (3) providing medical surveillance and obtaining medical approvals for their employees; (4) insuring their employees are advised of and meet the minimum requirements of this SSP and any other additional measures required by their site activities; and (5) designating their own site safety officer.

(7) BACKGROUND INFORMATION (attach existing description and map if available)

The Bayonne Terminal is located at the tip of Bayonne New Jersey near the Bayonne Bridge and directly off the Kill van Kull. This site is an inactive marine terminal where ships would dock with bulk chemicals and be off-loaded onto rail cars and into storage tanks. Blending operations for the production of anti-freeze (ethylene glycol) were also conducted on site.

SECTION 3: PHYSICAL HAZARDS INFORMATION

(1) IDENTIFY POTENTIAL PHYSICAL HAZARDS TO WORKERS:

- ☐ Confined space
- ☑ Heavy equipment
- ☐ Moving parts
- ☐ Steep/uneven terrain
- ☐ Heat stress
- ☐ Extreme cold
- ☐ Surface waters
- ☐ Drum handling
- ☐ Noise

Describe other unsafe environments ______

(2) PROTECTIVE EQUIPMENT REQUIRED? Yes ✓ No ____
If yes, complete Section 8.

(3) SAFETY EQUIPMENT REQUIRED:

___ Harnesses
___ Explosimeter
___ Blower
___ Lifeline
___ Ladder
✓ First aid kit

___ Stretcher
___ Eye wash
___ Shower
___ Barrier tape
___ Fire extinguisher
___ Emergency air horn

___ Lights
___ Lights – emergency
___ Safety cones
___ Communications – on-site
___ Communications – off-site

Describe other ______

(4) See Section 9 for additional safe work practices.

SECTION 4: CHEMICAL HAZARDS INFORMATION

(1) IDENTIFIED CONTAMINANTS

Known or suspected hazardous/toxic materials [attach tabulated data if available]

The following are contaminants found on the adjacent property:

Media	Substances Involved	Characteristics	Estimated Concentrations
soil	trichloroethylene (TCE)	VOA	unknown {IDLH=1,000ppm PEL=50ppm
water	perchloroethylene (PCE)	VOA	unknown {IDLH=500ppm PEL=25ppm

Note: the adjacent property soils have been removed. The water was within a pipe.

Media types: GW (ground water), SW (surface water), WW (wastewater), AI (air)
SL (soil), SD (sediment), LE (leachate), WA (waste), OT (other)
WL (waste, liquid), WS (waste, solid), WD (waste, sludge), WG (waste, gas)

Characteristics: CA (corrosive, acid), CC (corrosive, caustic), IG (ignitable), RA (radioactive),
VO (volatile), TO (toxic), RE (reactive), UN (unknown), OT (other, describe)

(2) DESCRIBE POTENTIAL HAZARDS FOR EACH MEDIA TYPE:

The greatest potential for exposure to contaminants is from the volatile organics and dust raised during the excavation. The VOAs will be monitored with an HNU and the dust generated is expected to be minimal since the excavations will be small. Care will be taken to be upwind of digging activities.

(3) SITE RECONNAISSANCE PERFORMED? Yes ✓ No ___

(4) OVERALL SITE HAZARD LEVEL:

___ Serious ___ Moderate ✓ Low ___ Unknown

(5) SITE MONITORING REQUIRED? Yes ✓ No ___

If yes, identify monitoring equipment below:

✓ HNU meter (lamp 10.2 eV)

___ Explosimeter

___ Organic vapor analyzer (OVA)

___ Geiger counter

___ Respirable dust monitor

___ Other

Describe other: ___

Monitoring equipment is to be calibrated according to manufacturers instructions. Record measured levels in log book.

Descibe method of surveillance (e.g., continuous, periodic, etc.). Indicate action levels and PPE required (total vapors, oxygen, LEL, radiation, other).

Periodic collection of ambient concentrations in the breathing zone. Particular attention will be paid to the areas around the sumps and pipe in questions.

(6) PROTECTIVE CLOTHING REQUIRED? ✓ Yes ___ No

If yes, complete protective equipment form (Section 8).

(7) RESPIRATORS REQUIRED? ✓ Yes ___ No

If yes, complete Section 8 and respirator log (Attachment 2).

SECTION 5: HAZARD COMMUNICATION PROGRAM

For each chemical introduced to the site by Malcolm Pirnie, Inc. (e.g. decontamination liquids), Material Safety Data Sheets (MSDSs) are attached to this form for review by all field personnel. These chemicals include the following:

No chemicals will be introduced on to the site by MPI.

SECTION 6: CONFINED SPACE ENTRY

(1) WILL CONFINED SPACE ENTRY TAKE PLACE? YES ___ No ✓

If yes, complete Attachment I, the Confined Space Entry Permit, prior to entering each confined space, each work shift. The Confined Space Permit must be posted outside the confined space.

SECTION 7: EMERGENCY INFORMATION

TO BE POSTED IN SITE-TRAILER/OFFICE OR IN FIELD VEHICLES.

(1) EMERGENCY ESCAPE ROUTES [attach map]: Work will be conducted at the nort central portion of the property at the inactive rail spur. Escape routes can be made by proceeding east to the facility exit onto the access road to East Second Street.

NOTE: When site is evacuated due to on-site emergency, personnel shall not re-enter until:

a. The conditions resulting in the emergency have been corrected.
b. The hazards have been reassessed.
c. The Site Safety Plan has been reviewed.
d. Site personnel have been briefed on any changes in the Site Safety Plan.

(2) LOCAL RESOURCES

Ambulance (name): Bayonne — Phone: (201) 436-7000
Hospital (name): Bayonne Hospital — Phone: 858-5000
Police (local or state): Bayonne — Phone: 858-6900
Fire Dept. (name): Bayonne — Phone: 858-6005
Nearest phone: In the office.

(3) CORPORATE RESOURCES

~~Richard Galifano~~ (Corporate H&S Officer) Mark McGowan	(914) 694-2100 work ~~(914) 664-0372~~ home
Catherine Bobenhausen, CIH	(914) 694-2100 work
Angelo Musone, CSP	(914) 694-2100 work
Robert Kerbel (Regional Health & Safety Coordinator)	(201) 529-4700
Joseph Cimino, MD (Corporate medical consultant)	(914) 993-4254
(Regional Medical Consultant)	

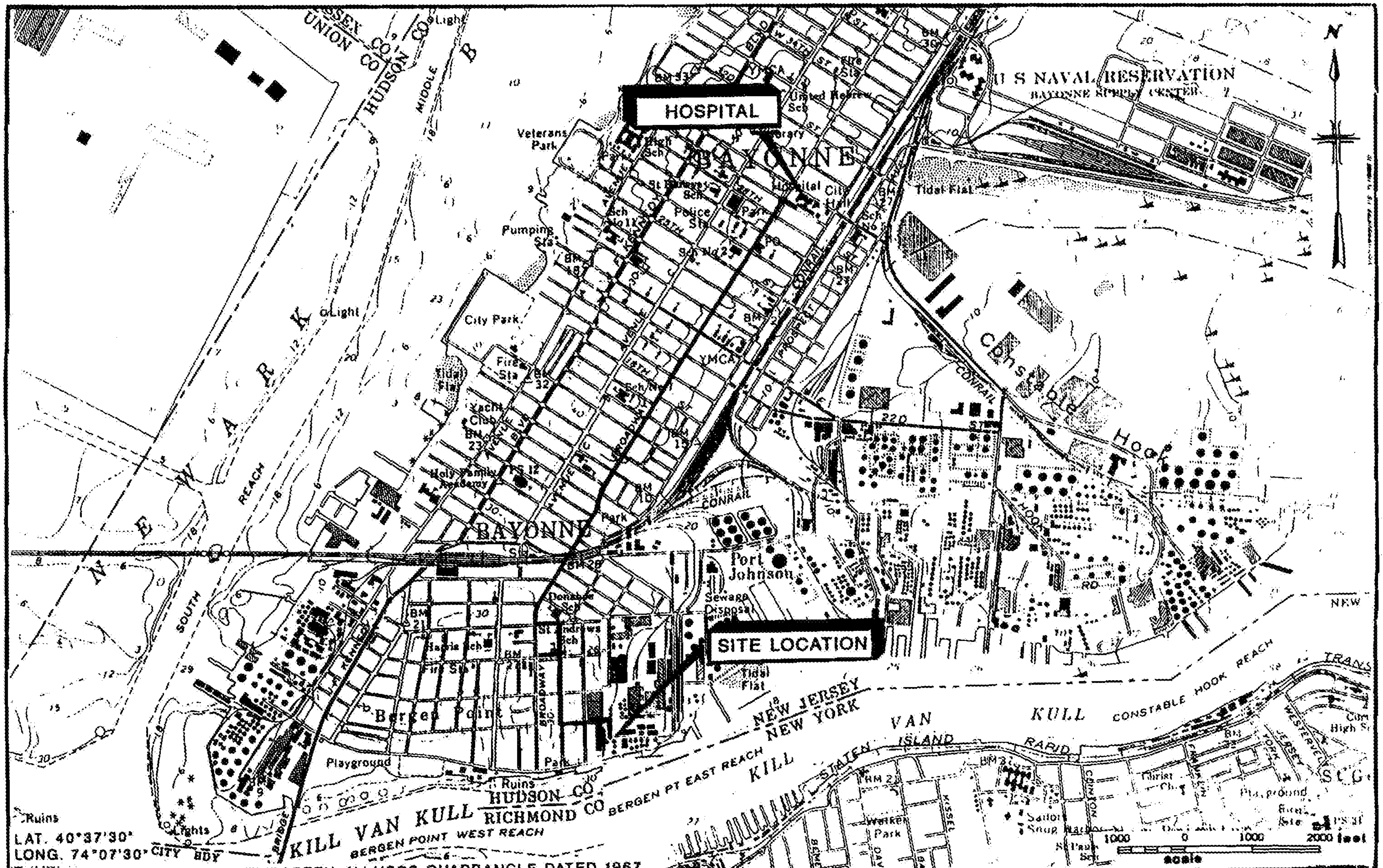
(4) DIRECTIONS TO NEAREST HOSPITAL (attach map): Exit site onto East Second Street. Follow East Second Street north until its end. At the T-intersection make a left turn and proceed one block west to Broadway. Proceed on Broadway north - Hospital is on the right (east) side near the intersection of 29th Street.

(5) WHOM TO NOTIFY IN CASE OF ACCIDENT: John Isbister (201) 529-4700

Also notify: Brenda Verdesi, MPI Benefits Administrator (914) 641-2551

(6) DESIGNATED SITE SAFETY OFFICER DIRECTLY RESPONSIBLE TO THE MANAGER FOR SAFETY RECOMMENDATIONS IS : Kenneth J. Kaiser

074945



SOURCE: JERSEY CITY AND ELIZABETH, NJ USGS QUADRANGLE DATED 1967

MALCOLM PIRNIE

MALCOLM PIRNIE, INC

BAYONNE TERMINAL SITE
BAYONNE, NEW JERSEY

ROUTE TO HOSPITAL

FIGURE 1

SECTION 8: PROTECTIVE EQUIPMENT LIST

NAME	MEDICAL CURRENT (date)	HAZ. MAT. TRAINING (date)	MGR./SUPV. TRAINING (date)	FIT TEST Current (include type & date)
		(refresher)		
Dan Cohen	6/14/93	11/4/92	3/14/89	11/7/92 - HSA APR Hcd
Ken Kaiser	5/22/92	10/19/92	7/27/92	5/20/93 - HSA APR Hcd

TASK	RESPIRATORS & CARTRIDGE*	CLOTHING	GLOVES	BOOTS	OTHER
Site observation	C & GMH-C*				
	Comb. cartridge	T	-	S	Hardhat
Collect samples	C & GMH-C*	T	L	S	Hardhat

*In the event of upgrade.

RESPIRATORS	CARTRIDGE	CLOTHING	GLOVES	BOOTS	OTHER
B = SCBA	O = Organic vapor	T = Tyvek	B = Butyl	F = Firemans	F = Face shield
C = Resp.	G = Organic vapor & acid gas	P = PE Tyvek	L = Latex	L = Latex	G = Goggles
D = N/A	A = Asbestos (HEPA)	S = Saranex	N = Neoprene	N = Neoprene	L = Glasses
E = Escape	P = Particulate	C = Coveralls	T = Nitrile	S = Safety	H = Hardhat
	C = Combination organic vapor & particulate		V = Viton		

* Action levels for upgrade/downgrade Start at Level D. At levels above background upgrade to Level C. When levels exceed 5ppm - back off and allow area to vent. If area levels drop, proceed with the work tasks.

SECTION 9: SAFE WORK PRACTICES

THE FOLLOWING WORK PRACTICES MUST BE FOLLOWED BY PERSONNEL ON-SITE

1. Smoking, eating or drinking are forbidden.
2. Ignition of flammable liquids within or through improvised heating devices (e.g., barrels) is forbidden.
3. Contact with samples, excavated materials, or other contaminated materials must be minimized.
4. Use of contact lenses is prohibited.
5. Do not kneel on the ground when collecting samples.
6. If drilling equipment is involved, know where the 'kill switch' is.
7. All electrical equipment must be plugged into ground fault interrupter (GFI) protected outlets.

SECTION 10: EMPLOYEE ACKNOWLEDGEMENTS:

I acknowledge that I have reviewed the information on this Site Safety Plan Short Form and the attached Material Safety Data Sheets (MSDSs). I understand the site hazards as described and agree to comply with the contents of this Plan.

EMPLOYEE (print)	SIGNATURE	DATE

Not Applicable

ATTACHMENT I
CONFINED SPACE ENTRY PERMIT

CHECK ONE:
____ Permit required, confined space
____ Permit required, low-hazard permit space

Client ____________________ Location ____________________

Confined space description ____________________

Tasks description ____________________

Entry date ____________ Entry time ____________

ISOLATION CHECKLIST

____ Blanking/bleeding ____ Line breaking ____ Purging ____ Electrical(lockout/tag out)

____ Mechanical (secure moving parts)

HAZARDS EXPECTED

____ Corrosive materials
____ Hot equipment
____ Flammable materials
____ Spark producing operations
____ High pressure liquids
____ Decomposition/oxidation
____ Volatile liquids
____ Toxic materials
____ Oxygen deficiency

VESSEL CLEANED

____ Residue removed ____ Interior washed ____ Air purged

ATMOSPHERE TESTING

Oxygen:	Date/Time	____________	Reading	________	Initials	____
Explosivity:	Date/Time	____________	Reading	________	Initials	____
Toxic:	Date/Time	____________	Reading	________	Initials	____
	Date/Time	____________	Reading	________	Initials	____
Other:	Date/Time	____________	Reading	________	Initials	____

PERSONAL SAFETY CHECKLIST

____ Respiratory protection
____ Protective clothing
____ Emerg. egress procedure
____ Head protection
____ Ventilation
____ Lighting
____ Gloves
____ Communications
____ Life lines & harness
____ Buddy system
____ Standby person
____ Sign posted
____ Barricades
____ Other

AUTHORIZATIONS

____________________ Date ____________
____________________ Date ____________
____________________ Date ____________

ALL PROCEDURES UNDERSTOOD

Entry person ____________________ Date ____________
Entry person ____________________ Date ____________
Standby person ____________________ Date ____________
Rescue person ____________________ Date ____________

ATTACHMENT II
RESPIRATORY PROTECTION
Page 1 of 2
RESPIRATOR LOG SHEET

SITE NAME Bayonne Terminal

LOCATION Bayonne, New Jersey

DATE OF ENTRY

RESPIRATOR TYPE Full-face air-purifing

TYPE OF CARTRIDGE GMH-C combination organic vapor and partizulate cartridge.

USER	DATE OF USE	CLEANED AND INSPECTED PRIOR TO USE (INITIALS)	CARTRIDGE CHANGEDS PRIOR TO USE (YES OR NO)	TOTAL HOURS ON CARTRIDGE
----	-----	---------	----------	--------

(Site Manager)

(Date)

RETURN AT COMPLETION OF ACTIVITY

Not Applicable

ATTACHMENT II
RESPIRATORY PROTECTION
Page 2 of 2
SCBA RESPIRATOR LOG

SITE NAME ______________________

LOCATION ______________________

DATE OF ENTRY ______________________

USER	DATE OF USE	SCBA NUMBER	SATISFACTORY CHECK-OUT (YES/NO - INITIALS)	DATE CLEANED
----	-----	--------	---------	--------

SCBA Performance Comments: ______________________

____

(Site Manager) (Date)

RETURN AT COMPLETION OF ACTIVITY

form revised: 12/19/89

6.0 PROJECT CONTACTS

The project manager for this project will be Mr. John Curtis, President of Bayonne Terminals, Inc. Mr. Curtis is responsible for overseeing all aspects of the investigation, including coordinating with subcontractors and overseeing field work, and for assuring that the investigation proceeds in accordance with Department regulations and this work plan. He will be available to answer any questions about its progress. He can be reached during normal business hours at (201) 436-5000.

The contact for Malcolm Pirnie is Mr. Donald Cohen. Mr. Cohen can be reached at (201) 529-4700. An excavation subcontractor has not been selected yet.

7.0 SCHEDULE

Field work for this project can begin within two weeks of receiving final approval of this work plan from the NJDEPE. We estimate that the field work will require one week. Analytical results will be received from the laboratory four weeks after the last field day, assuming a normal turnaround time. A draft report on the investigation will be submitted to the NJDEPE for review six weeks after receipt of the analytical results from the laboratory. The final report will be submitted to the NJDEPE 30 days after receipt of the NJDEPE's comments on the draft report.

09-01-08

SITE INVESTIGATION RESULTS
BAYONNE TERMINALS, INC.

WAREHOUSE PARCEL

BAYONNE, NEW JERSEY

PREPARED FOR:

BAYONNE TERMINALS, INC.
FOOT OF EAST SECOND STREET
BAYONNE, NEW JERSEY

SEPTEMBER 1995

MALCOLM PIRNIE, INC.

One International Boulevard
Mahwah, New Jersey 07495-0018

102 Corporate Park Drive
White Plains, New Yorl 10602

Printed on Recycled Paper

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information, and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Typed/Printed Name John H. Curtis Title President

Signature John H. Curtis Date 10/9/95

Sworn to and Subscribed Before Me

on this 9th

Date of October 1995

Gal M Harding
Notary

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official; or
4. For persons other than 1-3 above, by the person with the legal responsibility for the site.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information, and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute I am personally liable for the penalties.

Typed/Printed Name John H. Curtis Title President

Signature John H. Curtis Date 10/9/95

Sworn to and Subscribed Before Me

on this 9th

Date of October 1995

Gal M Harding
Notary

1.0 INTRODUCTION

The Bayonne Terminals facility is located at the foot of Second Avenue in Bayonne, Hudson County, New Jersey. The property is divided into two parcels (Figure 1), the warehouse parcel and the waterfront parcel. This report deals only with the warehouse parcel (Figure 2). Bayonne Terminals has been the site of industrial activities since the mid-1800's and has been operated by the present owners since 1969. Since 1969, there have been several documented spills of chemicals at the site. In October, 1992, Bayonne Terminals entered into a Memorandum of Agreement with the New Jersey Department of Environmental Protection and Energy (Department) to conduct a remedial investigation to provide information on the nature and extent of contamination at the site, and to report on the results of that investigation.

A work plan was prepared and submitted to the New Jersey Department of Environmental Protection and Energy in May of 1995 for review and approval. Subsequently the work plan was implemented in August of 1995.

2.0 BACKGROUND

2.1 SITE HISTORY

The Bayonne Terminals facility occupies an area of approximately 15 acres in an industrial section of Bayonne. The property is divided into parcels, the warehouse packaging parcel and the waterfront parcel. To the best of our knowledge, the packaging warehouse parcel belonged to Wilcox and Babcock, a manufacturer of boilers, during the period from the mid 1800's to early 1900's. For some uncertain time after this, the packaging warehouse parcel was used as an ammunition factory, but the name of the company is unknown.

During World War II, the entire Bayonne Terminal property and the surrounding properties were used as a prisoner of war camp for Italian prisoners. There is no information on the use of the site from the late 1940's to the early 1950's.

From the mid 1950's to 1960, the packaging warehouse was occupied by a furniture company called EZEDO, which went out of business in 1961. In 1962, they sold the warehouse and surrounding land to Lehigh Tank Farm.

The facility was sold to Bayonne Terminals, Inc. in 1969. The site was operated as a tank farm consisting of 95 aboveground storage tanks. These tanks were rented to various customers who used the tanks for the storage of various virgin materials and who retained ownership of the materials. Bayonne Terminals was responsible for maintaining the products in the tanks. In the mid 1980's, Bayonne Terminals began dismantling the tanks on the site, and there are currently no remaining tanks.

The Bayonne Terminals property is surrounded by other industrial properties. It is bounded to the north by Haddad & Sons, to the east by Bayridge Lumber and Norton Paint, and to the west by the closed Maidenformm plant and housing projects. To the southwest, it is bordered by the GTK video factory. To the south, the Bayonne Terminals property is divided by East Second Street and land owned by Norton Paint Company. To the southeast, the property is bordered by Standard Tanks, a slip and barge cleaning company.

2.2 GEOLOGY

Bayonne is located in the Piedmont physiographic province of New Jersey in the area of the contact between the rocks of the Newark Basin to the west and the Manhattan Prong to the east. The Newark Basin contains the Newark Supergroup which is a stratigraphic series of Triassic to Jurassic age sedimentary rocks containing intrusions of sills and dikes as well as extrusive volcanics. The Supergroup rocks generally dip slightly to the north and form a northward-thickening wedge that may have a composite thickness of greater than 33,000 feet. The Manhattan Prong is a body of Paleozoic to Pre-cambrian age metamorphic rocks, which may also underlie of the Newark Supergroup.

In general, Pleistocene age glacial sediments overlie bedrock in most of the Bayonne area. The sediments may consist of stratified drift, deposited by glacial meltwater in streams or lakes, and till, which is a heterogeneous mix of fine and coarse grained material deposited directly by glacial ice.

Borings drilled in 1992 on the Norton Paint property show fill composed of cinders, slag, bricks, other debris, and some sand to a depth of approximately eight feet below the surface. Below the layer of fill, the borings were drilled into a gray or brown mix of sand, silt, and clay that is presumed to be natural material.

3.0 RESULTS OF SAMPLING AND ANALYSIS

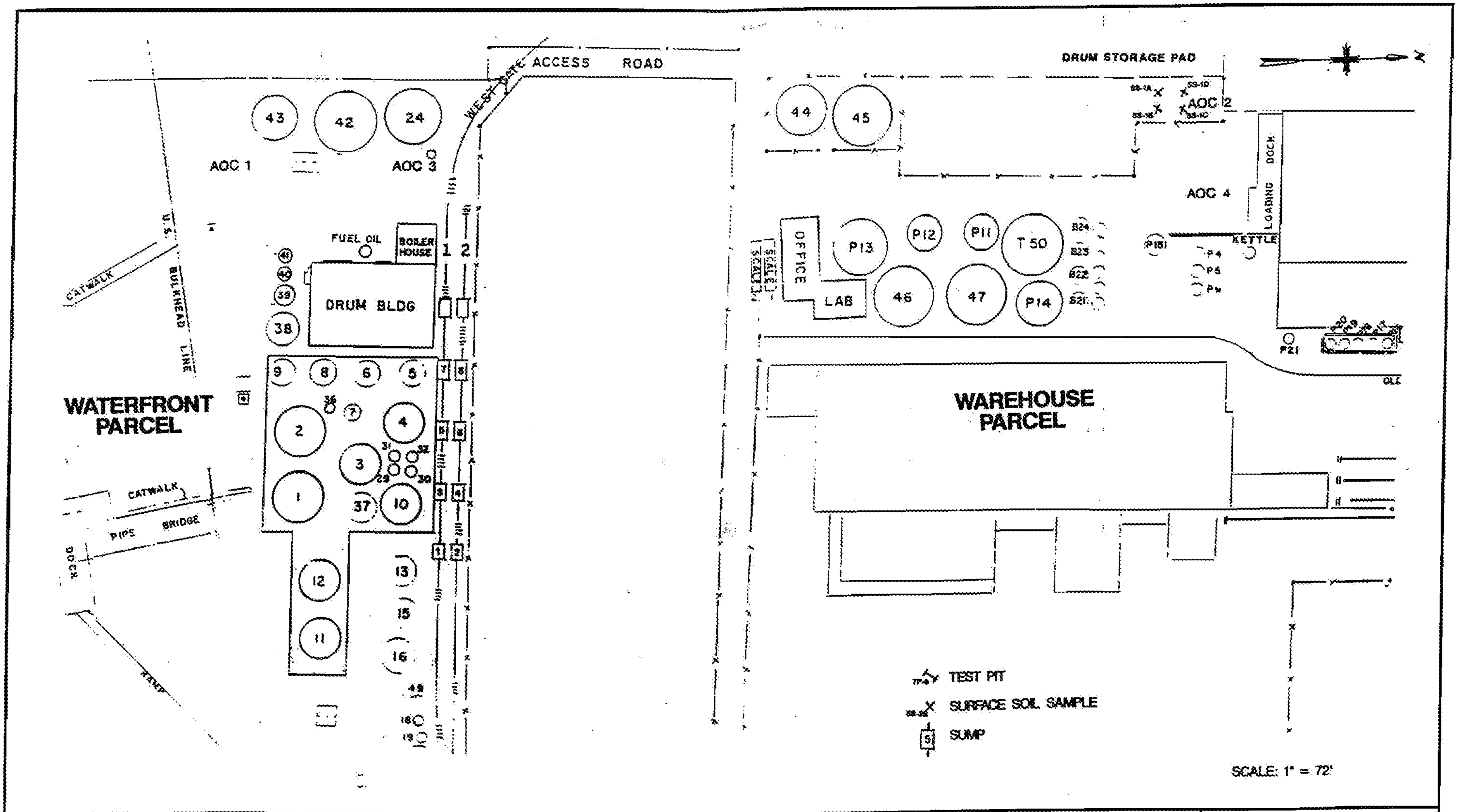
3.1 INTRODUCTION

This investigation was designed to determine if any residual contamination remains in the soils at the location of a muriatic acid spill. The soil sampling plan was developed in accordance with the requirements in N.J.A.C. 7:26E-3.3. The locations of samples and the analytical results for the area of concern is presented below.

3.2 AREA OF MURIATIC ACID SPILL

On May 18, 1982 there was a spill of approximately 15 to 20 gallons of muriatic acid from a 55 gallon drum onto an asphalt drum storage pad (Figure 2). Bayonne Terminals employees flushed the acid with water and built a temporary dike to contain it. Lime was used to further neutralize the acid and the diluted acid was stored in a recovery drum. Inspection of the area of the muriatic acid spill (AOC 2) revealed that the asphalt drum storage pad had been removed. This area is currently used for parking and the ground consists of tightly packed fine gravel and sand. Four soil samples (SS-1A, SS-1B, SS-1C and SS-1D) shown on Figure 1, were collected at ground surface and analyzed for pH using USEPA analytical Method 9045. All four samples had ph values above 7. Results show that any muriatic acid 0 to 6 inches below the grounds surface has been completely neutralized or never contaminated the ground. No further action is recommended for AOC 2 because there is no indication of acidic soil that can be associated with a muriatic acid spill.

	SS-1A	SS-1B	SS-1C	SS-1D
pH soil	8.30	8.45	8.66	8.88



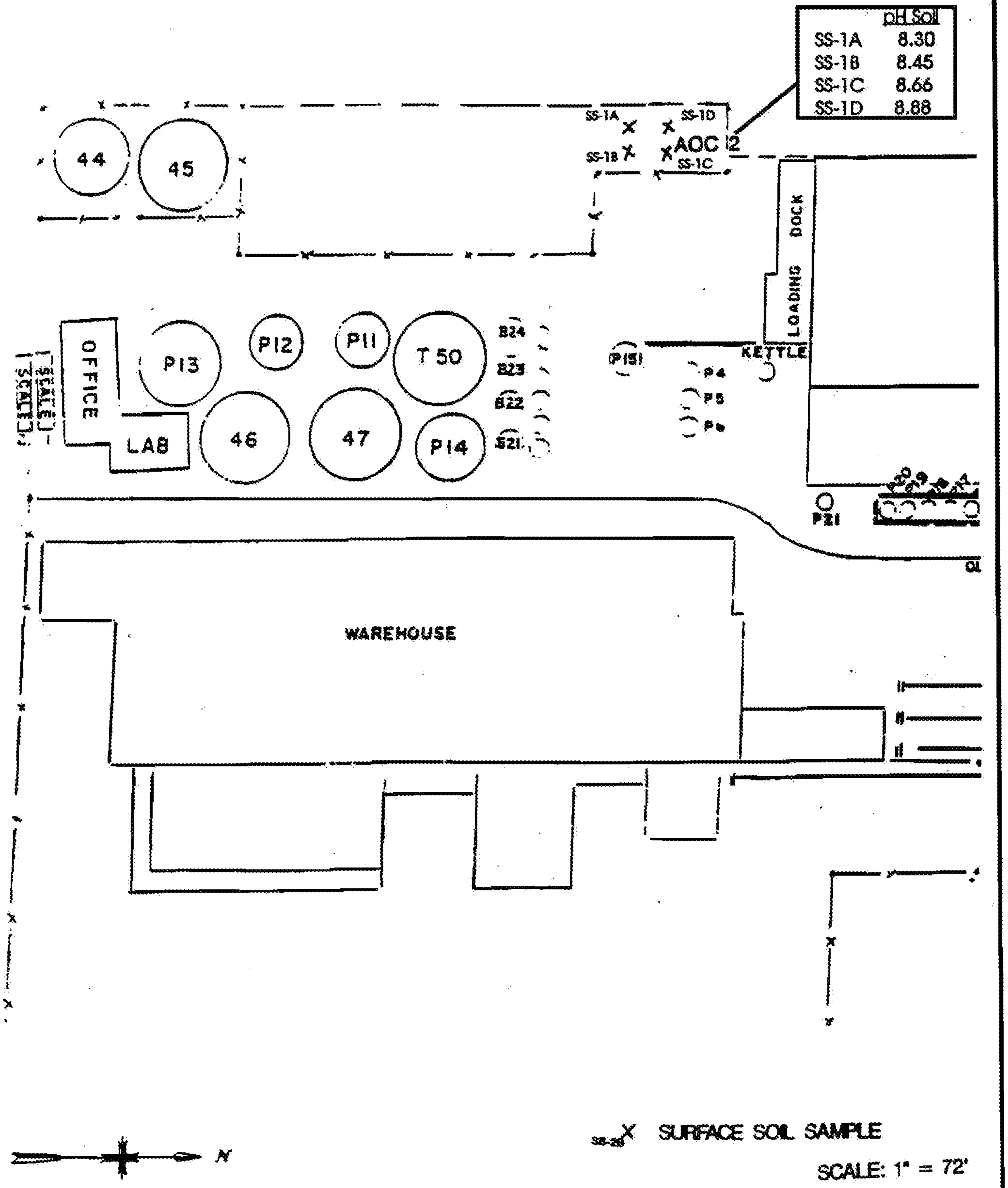
MALCOLM PIRNIE

BAYONNE TERMINALS INC.

BAYONNE TERMINALS
BAYONNE, NEW JERSEY
SITE MAP

MALCOLM PIRNIE INC.

FIGURE 1



	pH Soil
SS-1A	8.30
SS-1B	8.45
SS-1C	8.66
SS-1D	8.88

SS-2B X SURFACE SOIL SAMPLE

SCALE: 1" = 72'

MALCOLM PIRNIE

BAYONNE TERMINALS INC.
WAREHOUSE PARCEL
BAYONNE, NEW JERSEY
SITE MAP

MALCOLM PIRNIE, INC.

FIGURE 2

DWR-047
12/88

DEPARTMENT OF ENVIRONMENTAL PROTECTION

[illegible]

DIRECTOR

NOTICE OF VIOLATION

[illegible] 14 1989

PCWS # [illegible]

NAME OF FACILITY [illegible]

LOCATION OF FACILITY [illegible] COUNTY Hudson

FACILITY REPRESENTATIVE AND TITLE [illegible]

[illegible] following violations were [illegible]

[illegible] SURFACE

[illegible] FATTY ACID

[illegible] recorded as part of the [illegible]

☐ [illegible] Regulations.
☐ [illegible] Regulations.
☐ [illegible] Regulations.
☐ [illegible] Substances Act (N.J.S.A. 58:10-23.11 et seq.) and appropriate Regulations.

Remedial action to correct [illegible] initiated [illegible] within five (5) calendar days of receipt of this Notice of Violation, you [illegible] together with the corrective measures you have initiated [illegible] you that the Department has [illegible] from initiating [illegible] or any of its agencies, or other violations. Violations of these regulations are subject to penalties of up to $25,000 per day. [illegible] penalties, with respect to this [illegible]

Further enforcement action, which will require a written response, may be issued on these violation(s) and any additional violations found during the inspection.

RICHARD WHITE
Investigator, Division of Water Resources, DEP

Violation received by

White - Original Canary - Bureau File Pink - Criminal Justice Goldenrod - Central File

New Jersey Is An Equal Opportunity Employer

BAA000036

36.

STATEN ISLAND ADVANCE, Thursday, June 26, 1980 5

Drums dumped at Howland Hook removed

A collection of illegally dumped containers, which were found Monday on Richmond Terr. in Mariners Harbor, were removed from the site yesterday after environmental officials expressed concern about their contents.

A total of 62 drums were found in an open field when workers began clearing the area, which will be the site of a Howland Hook Container Terminal containerport. There were 30 30-gallon size cans and another 32 five-gallon cans, most of which were empty.

Residual or small puddles in the bottom of some of the cans led workers to express concern over the contents, which environmental officials said did not pose a threat to even the closest residentsof the area. Nevertheless, all work on the field was suspended pending removal of the cannisters.

The containers had held Bromoform, a product of the Dow Chemical Co. That company was contacted and sent workers after being called by James Duggan, safety director of Howland Hook.

"Dow Chemical has been very good," Duggan said. "They have done it at their own expense, they even flew out chemists from Michigan to work on the project."

Yesterday, teams of chemical workers could be seen packing the drums into larger, secure drums and neutralizing any of the residual that some of them contained.

The drums were removed to a Dow Chemical facility in Bayonne, N.J., where they will be held for a few days pending a final move to a permanent storage area.

5-7
10:30

UNITED STATES DISTRICT COURT

DISTRICT OF NEW JERSEY

UNITED STATES OF AMERICA :

-vs- :

Rollins Terminals Inc. :

Cr. No. 263-71

NOTICE OF APPEARANCE

FILED
MAY 7 1971
At 8:30 ___M
ANGELO W. LOCASCIO
Clerk

SIR:

You are hereby notified that I appear for Rollins Terminals Inc. the defendant in the above-entitled matter.

Dated: May 7, 1971

James P. Nolan
Attorney for Defendant

306 Main ST. Woodbridge N.J.
Address

634-8200
Telephone Number

FILED
APR 26 1971
AT 3:30 ______ M
ANGELO W. LOCASCIO
Clerk

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

UNITED STATES OF AMERICA :

-vs- : Cr. 263-71

ROLLINS TERMINALS, INC. : NOTICE OF ALLOCATION

:

:

Pursuant to Rule 11 of the General Rules of this Court, I have allocated the above-entitled matter to

NEWARK, N.J.

Please file pleadings and make all motions returnable there.

Angelo W. Locascio, Clerk
By
Minnie M. Del Polito
Minnie M. Del Polito

Deputy Clerk

Dated, April 26, 1971

GEB:ar
70 1625

FILED
APR 23 1971
At ~~8:30~~ 11 a M
ANGELO W. LOCASCIO
Clerk

UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

UNITED STATES OF AMERICA :
v. :
ROLLINS TERMINALS, INC., :
a corporation

Criminal No. 263 71

Title 33, U.S.C. Section 441

The United States Attorney for the District of New Jersey charges:

COUNT I

That on or about the 13th day of February, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT II

That on or about the 2nd day of March, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT III

That on or about the 13th day of March, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT IV

That on or about the 16th day of March, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT V

That on or about the 18th day of March, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT VI

That on or about the 15th day of April, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of alkaline refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT VII

That on or about the 29th day of April, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT VIII

That on or about the 14th day of May, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of alkaline refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT IX

That on or about the 18th day of May, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT X

That on or about the 20th day of May, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of alkaline refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT XI

That on or about the 21st day of May, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT XII

That on or about the 1st day of June, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT XIII

That on or about the 9th day of September, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C. Section 441.

COUNT XIV

That on or about the 29th day of September, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of acid refuse.

In violation of Title 33, U.S.C Section 441.

COUNT XV

That on or about the 16th day of November, 1970, at Bayonne, in the State and District of New Jersey,

ROLLINS TERMINALS, INC.,
a corporation,

did unlawfully place, discharge and deposit into the adjacent and tributary waters of the Harbor of New York, to wit, into the navigable waters of the Kill Van Kull, in the vicinity of Bayonne, New Jersey, from the shore, wharf and premises owned, operated and maintained by it, a quantity of alkaline refuse.

In violation of Title 33, U.S.C. Section 441.

HERBERT J. STERN
United States Attorney

No. ....

United States District Court

DISTRICT OF NEW JERSEY

THE UNITED STATES OF AMERICA

vs.

ROLLINS TERMINALS, INC.,
a corporation,

CRIMINAL INFORMATION

Title 33, U.S.C. Section 441

Illegal deposit of refuse

HERBERT J. STERN
U. S. Attorney *Newark, New Jersey*

BY: Garrett E. Brown, Jr.
Assistant U.S. Attorney

FPI—SS—9-28-70—8M—8150

Form No. USA-48-CR7
(Ed. 10-18-63)

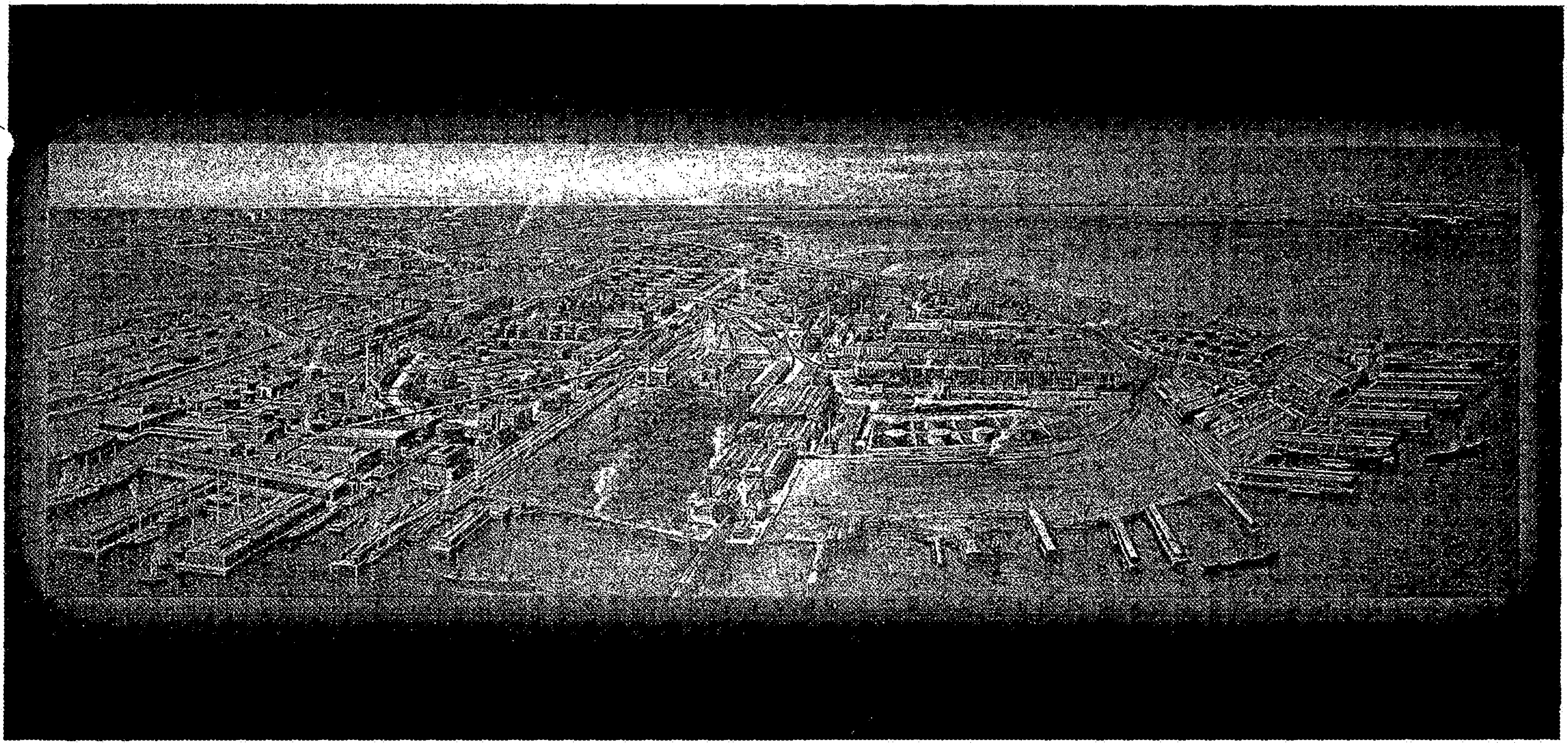
Purpose today

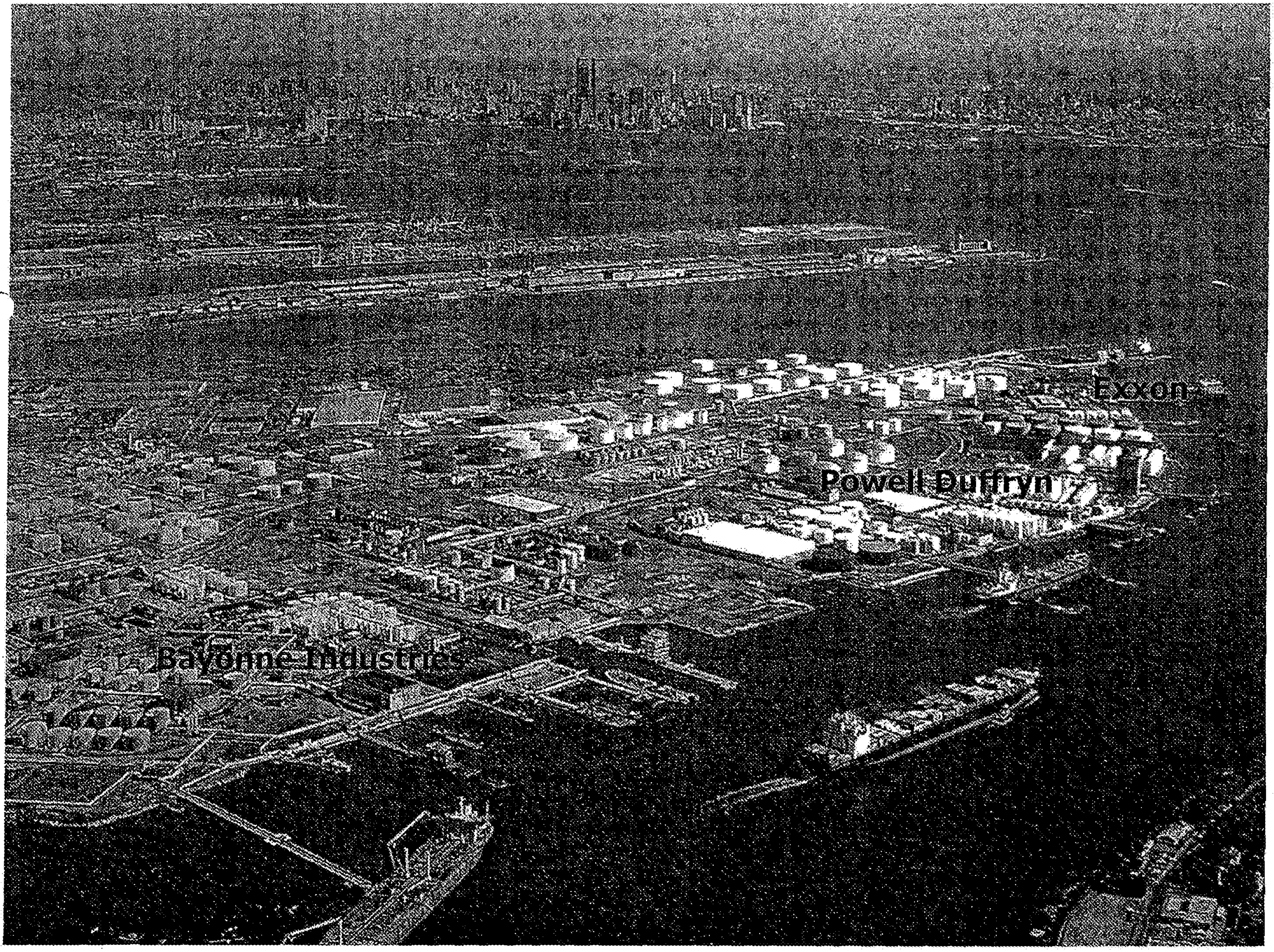
Brief history & current status

Propose, discuss path forward with what we feel is new priority

Need renewed basis to move forward efficiently (soil disturbance, reuse and disposal agreements/permitting, management)

IMTT history




Exxon
Powell Duffryn
Bayonne Industries

History brief – IMTT properties

Bayonne Industries area

- *1870 to 1956 as Tidewater Oil Company*
  - *coal terminal, oil refinery and terminaling*
- *1956 to 1983 as Bayonne Industries*
  - *liquid terminaling*
- *IMTT purchased BI stock*
  - *liquid terminaling*
  - *lease of properties to*
    - *White Chemical*
    - *various warehousing*
    - *Co-Gen Electric and Steam*

History brief – IMTT properties

Exxon area

- *1880's to 1993 Exxon*
  - *oil refining, terminaling*
- *1993 IMTT purchases*
  - *liquid terminaling*

History brief – IMTT properties

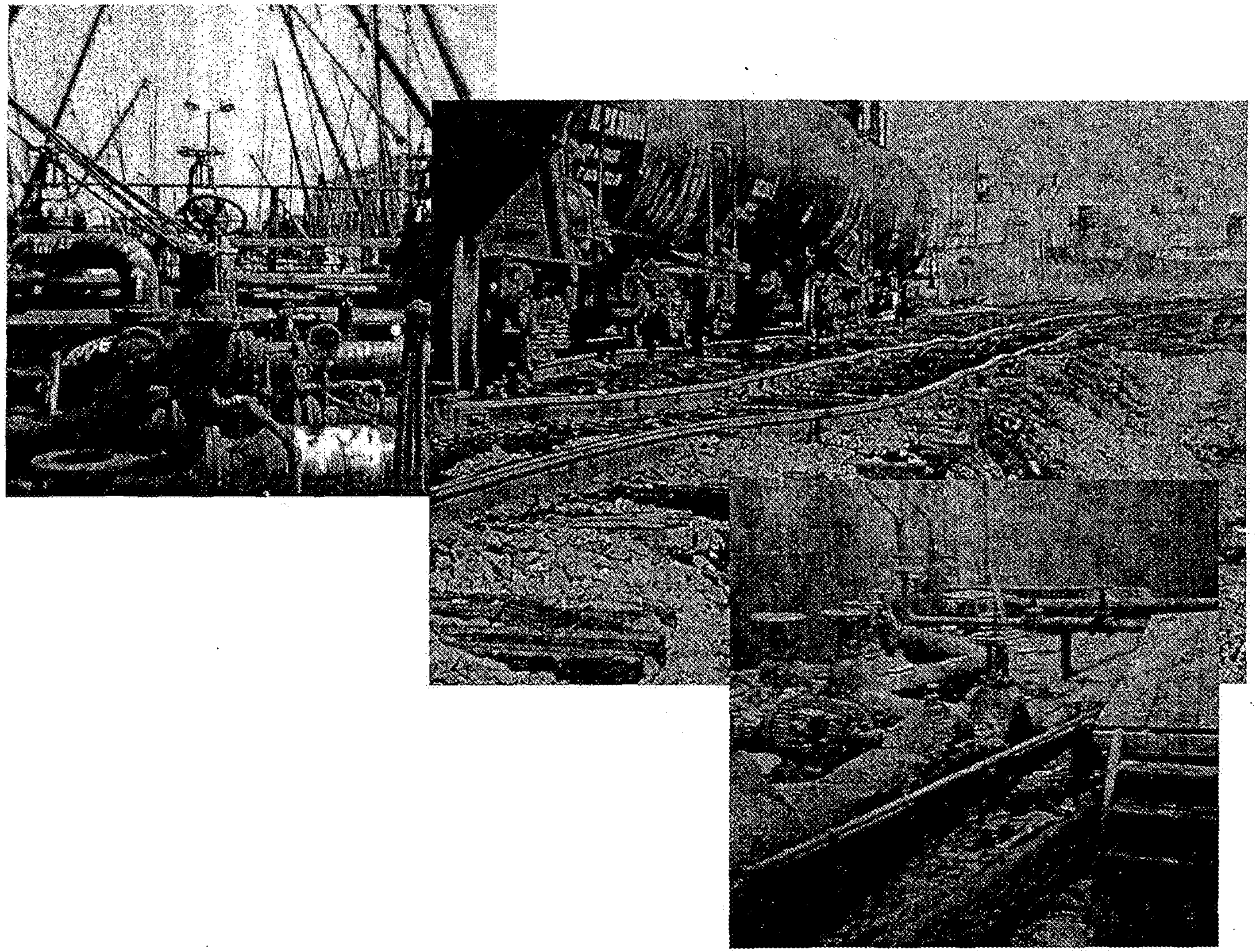
Powell Duffryn area

Several companies terminal chemicals for decades including:

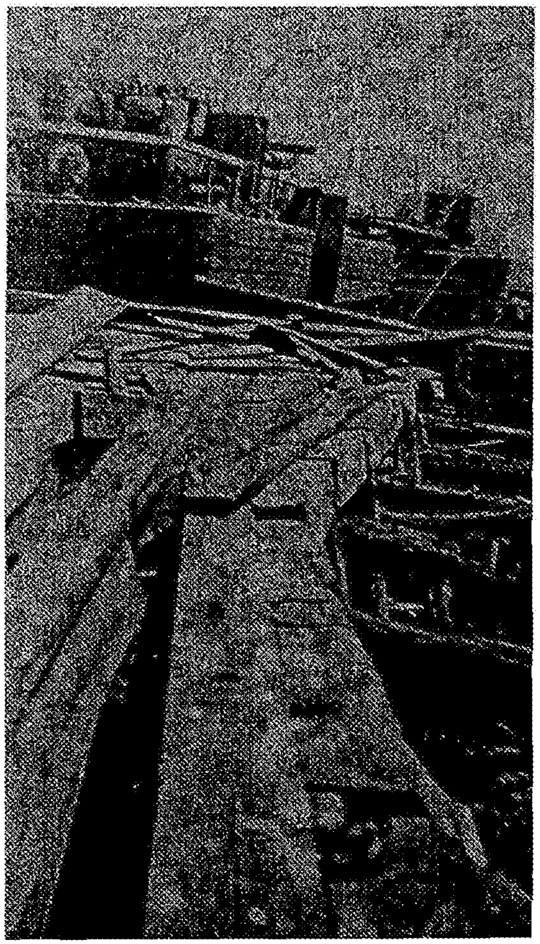
- *Diamond*
- *El Dorado*
- *Dow*
- *Others*

- *1979 to 1997 Powell Duffryn - chemicals*
- *1997 IMTT purchases - chemicals*

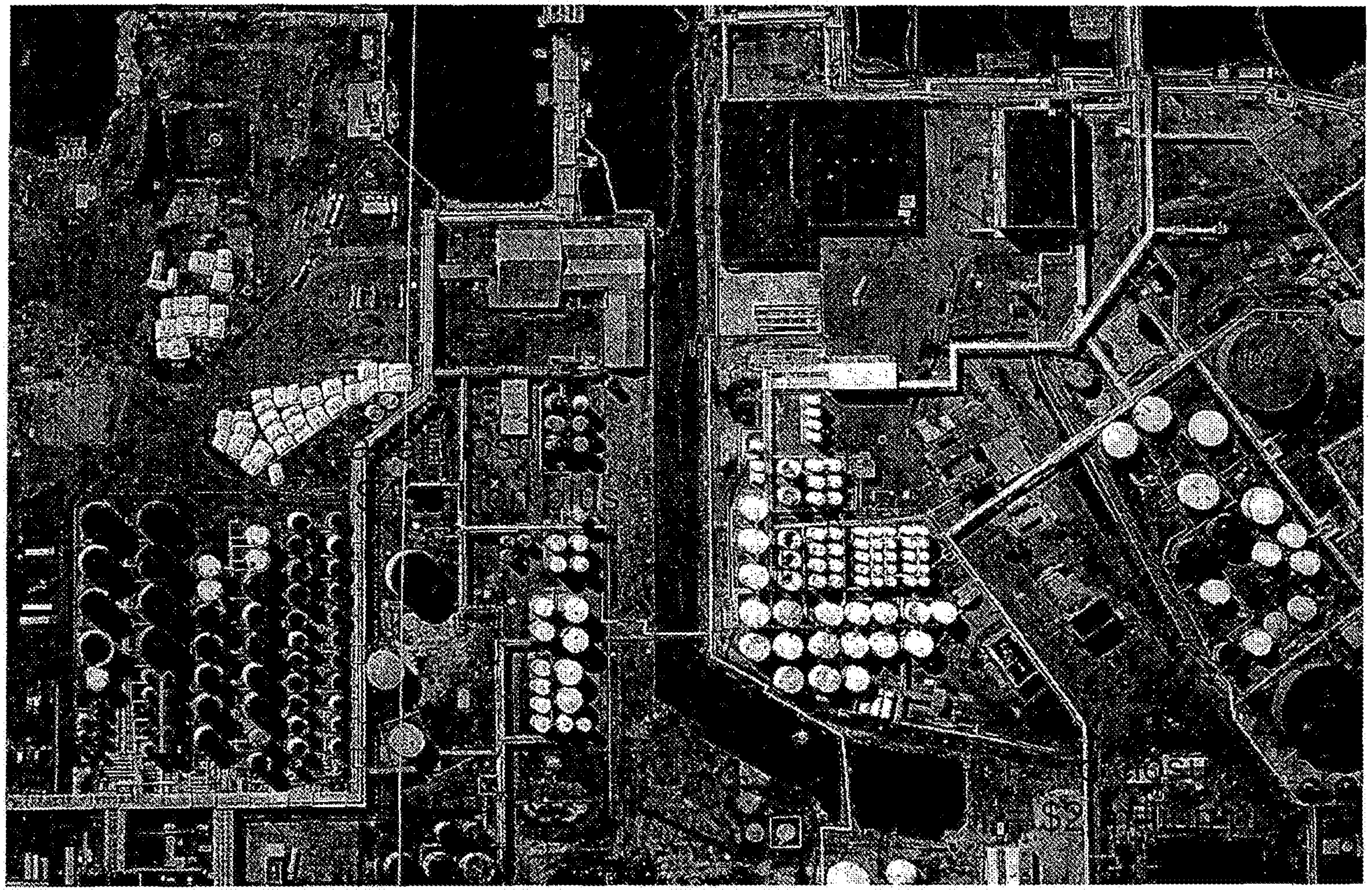
IMTT commitment



IMTT commitment



IMTT Challenges



IMTT commitment

IMTT committed to make Bayonne a world-class terminal

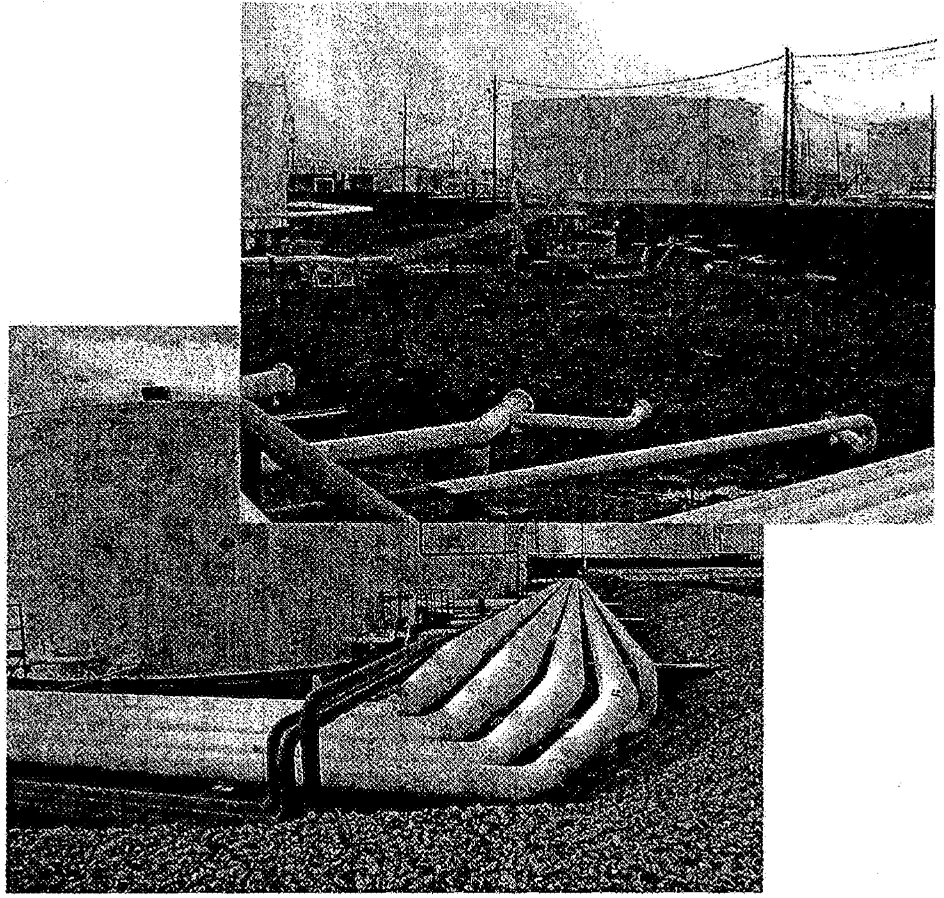
Improvements

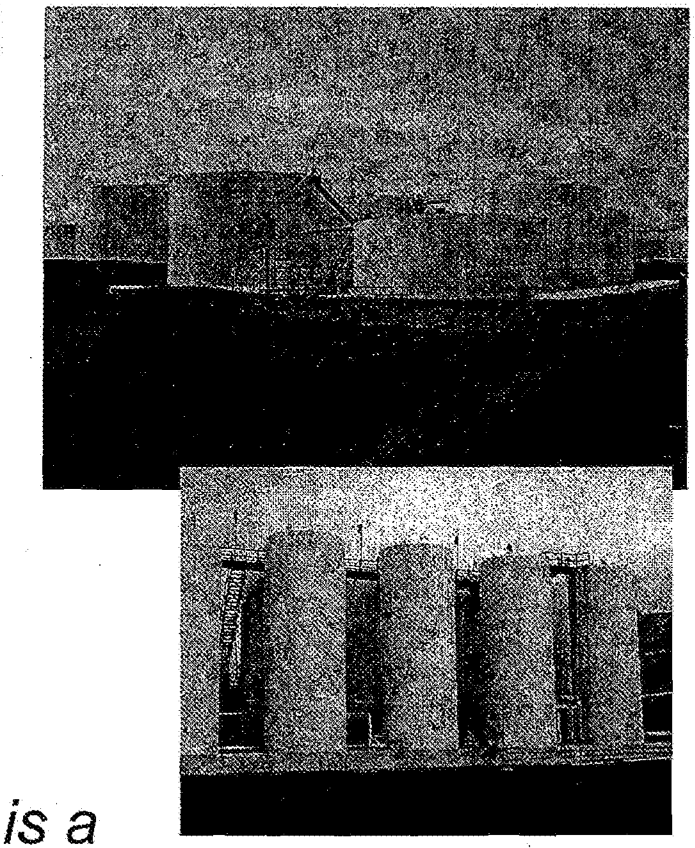
Pipe & Tank Inspection	$4.5 million
Pipe Upgrade	$14 million
Tank Upgrade, Repair, Alarms, New	$35 million
Electric Upgrade	$2.7 million

Improvements

Bulkheads *Maintenance, upgrade*	$2.6 million
Piers	$30 million
Fire Protection	$3.4 million
Other	$12.5 million

Improvements





Been a struggle, but IMTT Bayonne is a world class terminal vital to Northeast

Challenges remain *(involving NJDEP)*

Contamination

Power generation plant *(Cogen)*

Contamination

Tidewater area – Bayonne Industries

- *primarily petroleum with lead and chrome - IMTT accepted responsibility to address – BI a orphan chromium site*

Exxon area

- *primarily petroleum with lead and chrome - Exxon has responsibility petroleum and lead*

Powell Duffryn

- *primarily chemical - IMTT responsible to address*

Contamination – response history

Bayonne Industries

- *Site Assessment & MOA in 1992*
- *Remedial Investigation WP 1994*
- *Westside Waterfront 1995*
- *Remedial Investigation Report 1996*
  - *Established baseline study areas*
  - *Work ongoing & initiated*
  - *Negotiations continued in some areas*
- *Platty Kill Canal*
  - *New bulkheading*
  - *Sheet pile barrier at mouth to prevent free product discharge to KVK; air guard*

Contamination – response history

Bayonne Industries

- *DEP comments on Phase 1 RI in April, 1997; outlines Phase 2 RI needs*
- *IMTT response to comments December , 1997*
- *DEP response October, 1998*
  - *Summarized open issues and DEP position; outlines Phase 2 RI needs*
- *Interim study/work – free product investigation with CPT*

Contamination – response history

Bayonne Industries

- *1999-2000 activities*
  - *Westside Waterfront – CPT locates wells - upgrade*
  - *Yard 4*
  - *Cogen*
  - *Platty Kill Pond/Canal closure study*
- *2001-2002 activities*
  - *Westside Waterfront, Yard 4, Cogen continue*
  - *DEP & IMTT shift focus to Pond/Canal*
  - *Platty Kill Pond closure plan submitted/approved*
  - *Platty Kill Canal study results submitted, closure concept submitted*
  - *Platty Kill Canal additional study proposed – comments received*

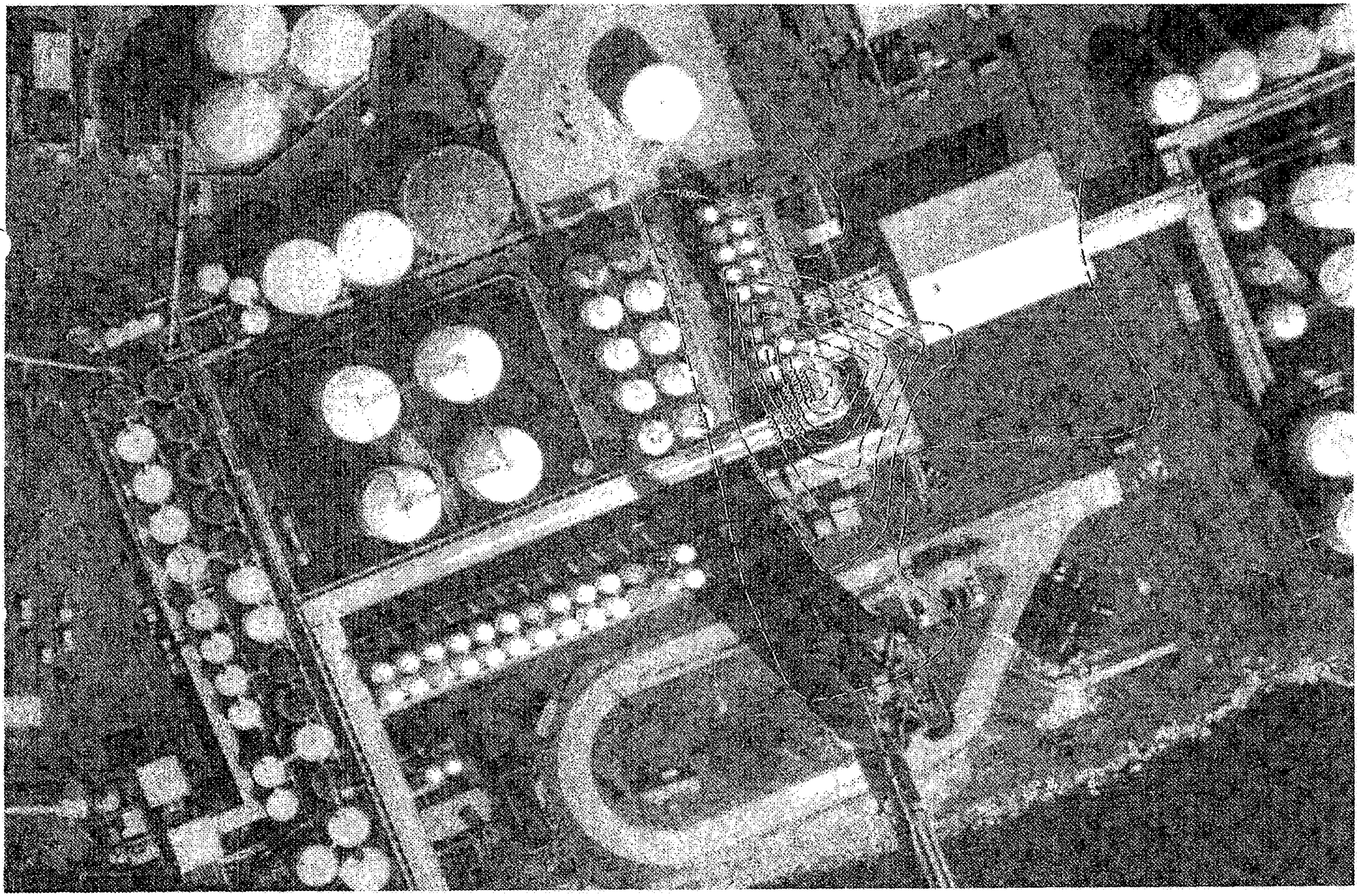
Contamination

Priority shift in 2002 in IMTT's view

Chlorinated Contamination

Chem South

- *IMTT spill and emergency cleanup lead to discovery of significant historic contamination in soil/groundwater - 2001*
- *MOA with DEP regional office*
- *Published Phase 1 & 2 Remedial Investigation Reports; submitted Phase 3 Remedial Investigation Workplan*
- *Attempted initial hydraulic control with well placement*
- *Contracted, completed extensive water treatment study for hot spots*



Chlorinated Contamination

- *DNAPL area is nearly delineated and dissolved phase mapped in four directions to ever reducing ppb*
- *Brought in top chlorinated remediation, modeling and biology experts to participate on our team*

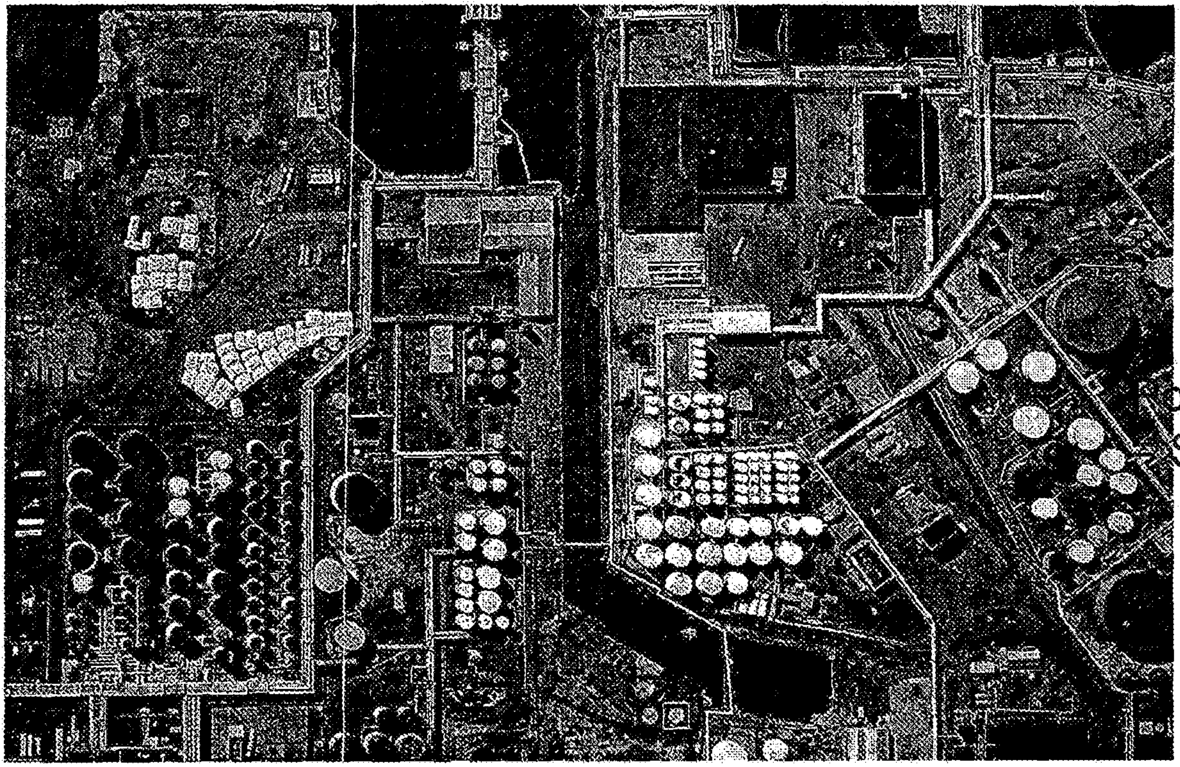
Proposed path forward

Balance required

- *Can't do everything at same time or all things in detail in all three areas*
- *We need to work with DEP on priorities that first protect health and the environment and IMTT's ability to continue operation*

Proposed path forward

While we're closing pond and canal over next two to three years, need to change primary focus, major effort and investment from BI area to Chem South



Canal closu
= $4 million

nd closure
$2 million plus

Proposed path forward

Propose to continue/complete initial & ongoing BI work including:

- *Designated AOC's in Free Product Investigation Work Plan*
  - *Yard 4, West Side Waterfront,Cogen, etc..........*
- *CPT partially successful; three AOC's screened; monitor well installation and trenching next step*
- *CPT not appropriate to other AOC's, BI site-wide*

Contamination

- *Utilize traditional wells to investigate remaining designated AOC's*
- *Set up ARC View grid system to organize and track historic and developing data base*
- *Submit data from ongoing construction and maintenance activities*

Contamination

- *Baseline Ecological Evaluation*
  - *Perform in 2003 per Exxon protocol for IMTT site-wide*
    - *receptors*
    - *contaminants and pathways*
    - *data collection*
    - *comparison of data to habitat benchmark*
    - *conclusions regarding risk and need for action*
    - *habitat maps*

Contamination

- *Reprioritize to drift major effort on*
  - *Site-wide & perimeter delineation*
  - *BI sewers*
  - *Underground pipeline*

Contamination

Shift major new efforts to chlorinated solvents

- *Dropping back to perform baseline RI, etc.*
- *Goal to delineate and contain in next 12 to 24 months; experiment with remediation technologies; propose long term program by Fall 2004*

Contamination

- *Phase III at Chem South*
  - *Deeper wells below clay*
  - *More shallow wells to complete impact delineation*
  - *Sewer as a "short circuit drain" investigation*
  - *Sampling wells and soil*
  - *Reporting*

Contamination

- *Initial modeling results*
  - *Preliminary modeling of chlorinated contamination indicates release to Kill Van Kull of 14 pounds per year*
  - *Preliminary view of impact on aquatic life minimal*
  - *No need for emergency action to remove or contain*

Contamination

- *Further work*
  - *Refinement of model based on more monitoring*
  - *Initial pumping of DNAPL to determine response and long-term remediation options*
  - *Experimentation with in-situ soil treatment technologies*

Chlorinated Contamination

Containment

- *With discovery of contamination, we re-evaluated containment in Chem South and DPCC plan*
- *Engineering study just completed*

Chlorinated Contamination

Containment

- *Loading areas only covered after 5 years operation by PD – likely source significant contamination*

Chlorinated Contamination

Containment

- *Original with PD, site-wide berm with key tank areas inside concrete diking*
- *Combination concrete and asphalt elsewhere including loading*
- *Use of sewers to water treatment as part of DPCC plan by PD, we inherited*

Chlorinated Contamination

Containment

- *Engineering survey resulted in need to upgrade containment in Chem South*

- *Commitment requires major expenditures*
  - *$1 million this year*
  - *$2 million in 2004*
  - *$1 million each in 2005/2006*

Conclusions

IMTT Priorities are...

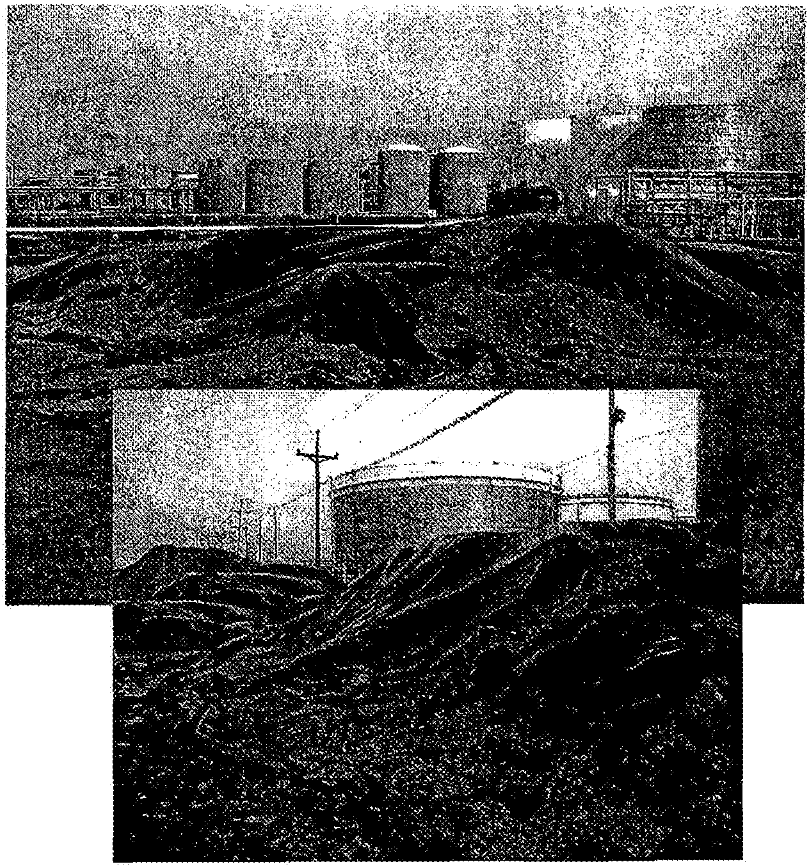
- *Soil reuse for pond first, then on-site treatment*
- *Agreement on priorities*
- *More communication*
- *Work out basis for streamline approval process*

Proposed path forward

Need immediate assistance

Proposed path forward

Need immediate Assistance – *everywhere we dig*



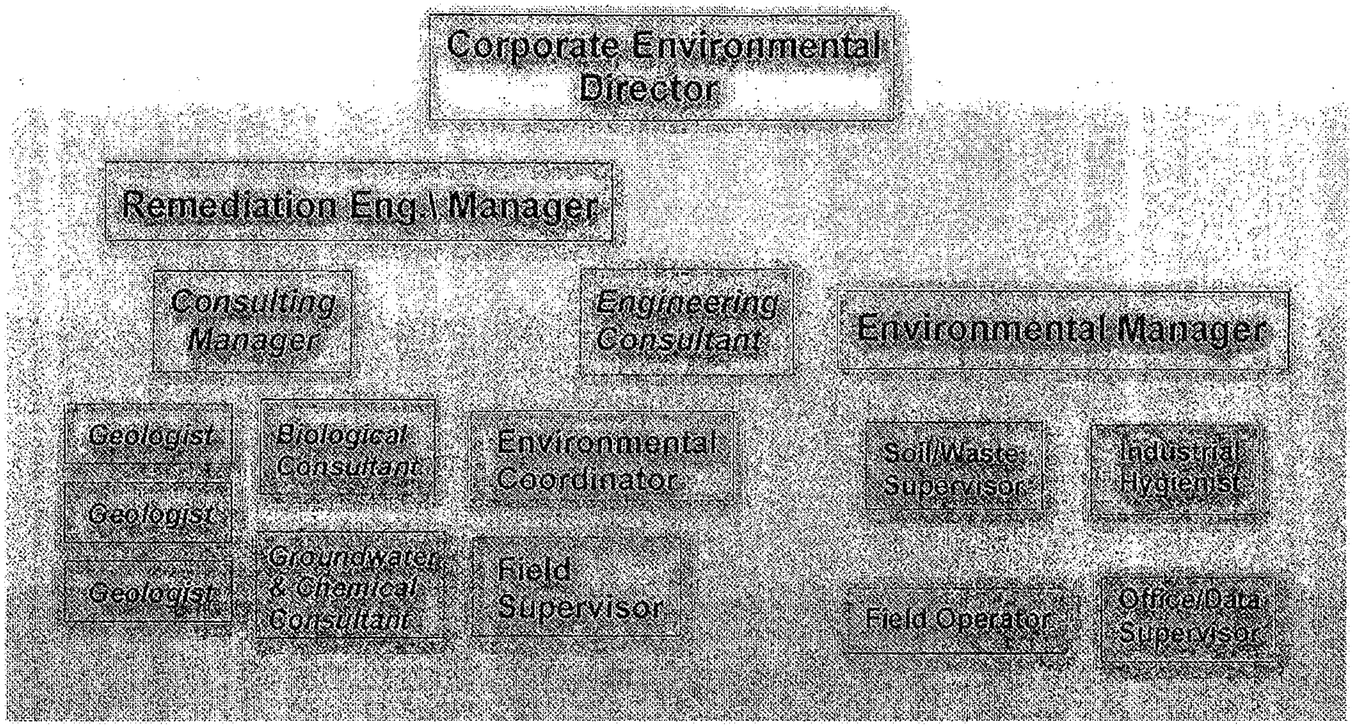
Need immediate Assistance – soil disturbance/reuse plan

- *Yard one soil – to pond?*
- *Yard six piles*
  - *TPH, lead, chrome, arsenic – treat onsite?*
- *Construction over contamination*
  - *Chem South rail containment*
  - *Piling*

Proposed path forward

- *Deal with whole site as a single operable unit for management of excavated soils including soil recycling processes where appropriate ?*

Proposed path forward



Corporate Environmental Director

Remediation Eng.\ Manager

Consulting Manager

Engineering Consultant

Environmental Manager

Geologist

Geologist

Geologist

Biological Consultant

Groundwater & Chemical Consultant

Environmental Coordinator

Field Supervisor

Soil/Waste Supervisor

Industrial Hygienist

Field Operator

Office/Data Supervisor

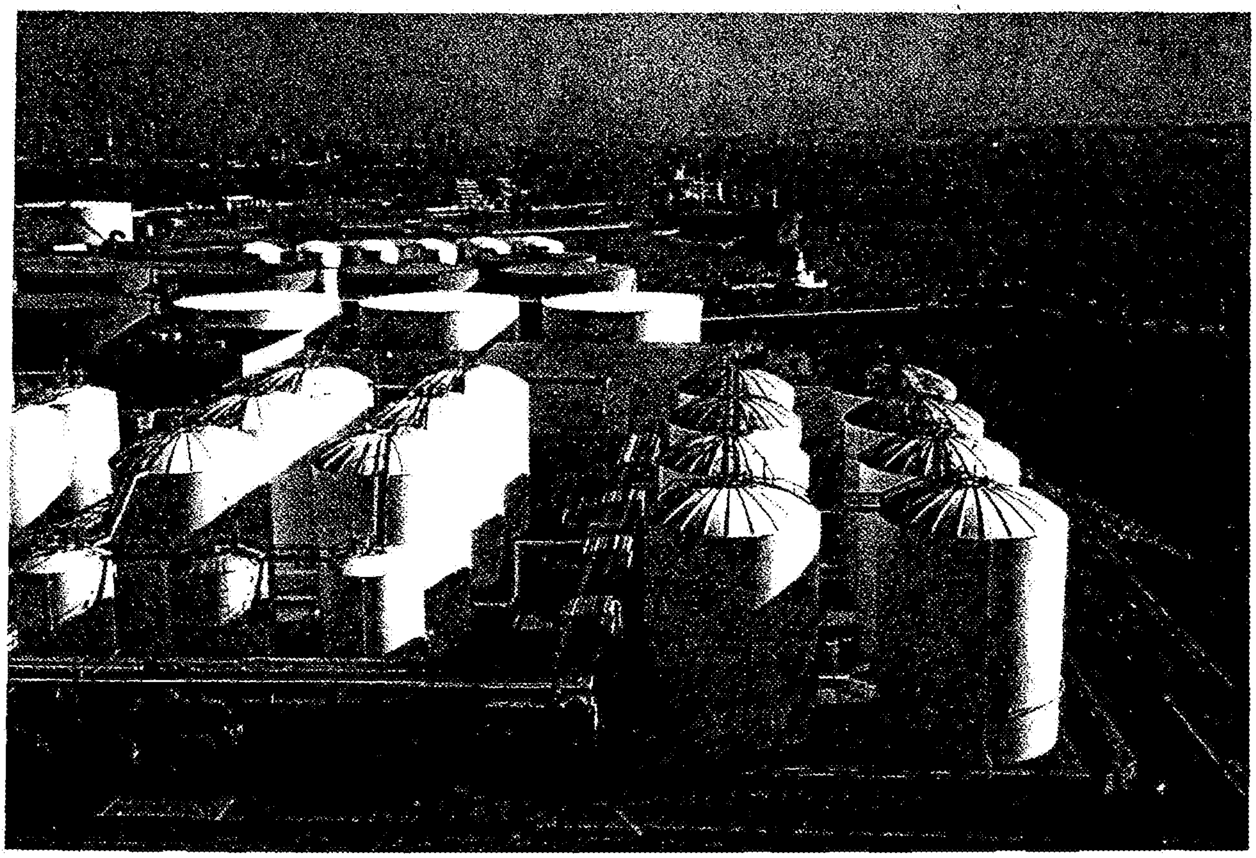
35 to 45% of projected capex budget for next three years is for environmental projects

Proposed path forward

Comprehensive NJDEP oversight

Proposed path forward

Thank you…



Preliminary Assessment
Volume II
IMTT – Bayonne
Chemical South
Bayonne, NJ

Prepared for:

IMTT BAYONNE

BAYONNE NEW JERSEY

CSL Number: NJD064288855

MOA Dated 27 May 1992

July 2005

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VOLUME II
CHEM SOUTH FACILITY

1.0 INTRODUCTION

This is Volume II of a five volume report that has been prepared for the International Matex Tank Terminals (IMTT) bulk storage and distribution facilities located on the east side of Bayonne, Hudson County, New Jersey in an area often referred to as Constable Hook (Figure 1). Volume II presents the findings of a Preliminary Assessment, specifically for the IMTT-Bayonne Chem South operations. This Preliminary Assessment was conducted in accordance with the NJDEP's Technical Requirements for Site Remediation (TRSR; N.J.A.C. 7:26E).

1.1 The Preliminary Assessment

The Preliminary Assessment for the Chem South area as described herein was initiated in March 2004. Pursuant to the requirements of the TRSR, this Preliminary Assessment focused on identifying potential Areas of Concern (AOCs) at the Site, including those previously identified for investigation and remediation. The Preliminary Assessment was based on diligent inquiry, evaluation of information concerning the site history, and on-site inspections. In the course of conducting the Preliminary Assessment, the following tasks were completed:

1. Review of historical aerial photographs, topographic maps, Sanborn maps, and facility plans.
2. Review of facility, NJDEP, and third party documents pertaining to former site operations and environmental activities.
3. Review of reports prepared for the environmental investigations and cleanup activities conducted at the Site.
4. Interviews with terminal environmental and operations personnel.
5. Site inspections to verify the findings of the investigations.

In addition to identifying the history of operations, ownership, and environmental activities at the subject properties, the Preliminary Assessment has identified AOCs at the Chem South facility. The following AOCs were identified:

- One hundred seventy four above ground storage tank (AST) locations.
- One former underground storage tank location.
- One silo used for bulk storage of virgin carbon.
- Nineteen loading and unloading racks (truck and rail).
- An aboveground piping network.
- Sixteen product pump stations.
- Eight dumpster areas.
- Two quality control chemical laboratories.
- A stormwater management system comprising 33 catch basins, a gravity-operated underground piping network, 16 underground sumps, and 18 covered manholes.
- An abutting surface water body (Kill van Kull).
- Approximately 59 documented spills and releases of product.
- Historic fill operations.
- Soil stored adjacent to Tank 12500.
- A New Jersey Pollution Discharge Elimination System (NJPDES) permitted open pipe outfall.
- Three electrical transformer locations.
- Three air compressor vents.
- Twelve existing and former buildings.

1.2 The Chem South Site

The property that is the subject of this Preliminary Assessment is the IMTT Chem South operation that is located at 2 Commerce Street, Bayonne, New Jersey. Chem

South is located within Hudson County in the Municipality of Bayonne. According to Bayonne records, the facility is designated as Block 482 Lots 3, 4, 4.01, 5, and 6, and Block 481 Lots 3, 3.03, 5, 5.01, and 6 (see Figure 2).

1.3 Previous Investigations

Previous investigations have been conducted at the Chem South facility under the Site Remediation Program Case Number 01-03-07-1649-03 and IMTT's Memorandum of Agreement (MOA) executed on June 15, 2001. Prior to 1996, Powell Duffryn owned the Chem South site and various spills had occurred during that time. Investigations completed by Powell Duffryn addressing these spills are included in Section 5.4.1.

On March 7, 2001, a release of 1,444 gallons of liquid methylene chloride to the ground occurred during loading of a railcar at the IMTT-BC facility. In compliance with the NJDEP requirements pertaining to surface releases, IMTT-BC promptly notified the USEPA, NJDEP, and the local Bayonne Fire Department of the incident.

Initial response actions included de-activating the source of the spill (product pipeline), use of sorbent booms and pads, manual excavation of impacted surface soils, and collection of product and product saturated materials and soils. IMTT-BC subsequently removed impacted materials from the spill area and disposed of properly. Post-remedial soil samples were collected to assess the adequacy of that response.

Subsequent response/interim remedial actions were taken to address impacted surface soils and included shallow soils excavation, post excavation sampling and analyses, and a delineation soil-boring program with sampling and analyses. Hydrogeological investigations consisting of the installation of eight monitor wells during Phase I, eight monitoring wells during Phase II, and six monitoring wells during Phase III with appropriate sampling and analyses also being performed.

Phase I

During Phase I of the project, remedial excavation was performed with approximately 20 tons of impacted soil removed and disposed of properly. Fourteen post-excavation samples were collected from excavated grade to a depth of one foot below excavated grade with a split core sampler. Additional delineation was performed in the form of the installation of seventeen soil borings that were advanced using the direct-push method (Geoprobe®) to a maximum depth of 12 feet to gain both vertical and horizontal subsurface information of the extent of soil contamination. At that point in the investigation it became apparent that the extent and type of contaminants found in the soil were not limited to the IMTT event being investigated.

To investigate the impact to groundwater, eight monitoring wells were installed at the site during Phase I RI activities. Wells MW-1 through MW-5 were installed on IMTT-BC property, while MW-6 through MW-8 were installed on the adjacent property occupied by Blue Circle Cement (now LeFarge). Groundwater flow mapping based on these eight wells exhibited a predominantly northwest to southeast flow (toward the Kill Van Kull) with a shallow gradient of approximately 0.008 feet/feet. A synoptic round of groundwater levels were obtained and reported in during Phase III activities. Groundwater samples were collected from these wells during Phase I. Results can be found in the Phase I RI / Phase II RAWP and document that various types and concentrations of contaminants throughout the facility were the result of prior operations of the previous owners and are not related to the IMTT incident.

Phase II

To further investigate groundwater impact and to investigate soil quality, eight additional monitoring wells (MW-9 through MW-16) and recovery well RW-1 were installed during Phase II. Soil samples were obtained from the monitoring well locations either via Geoprobe® direct push methodology or via a spilt-spoon with a hollow stem auger rig.

Groundwater samples were collected from these wells during Phase II. Results can be found in the Phase II RI / Phase III RAWP. Additional soil sampling was also performed for secondary containment construction upgrade activities related to the JV Truck and JV Rail Loading Racks. Geoprobe® direct push methodology was used to install eleven soil borings in these two areas to assess subsurface soil quality prior to initiating construction. The results of this investigation and subsequent construction indicated that prior owners of the loading rack had impacted the soil and ground water at the loading areas from previous use.

Additional activities performed during Phase II were:

- Groundwater Treatability Study – Groundwater was collected from monitoring wells MW-1, 2, 3,and 4 and pilot treatability testing was performed to aid in the design of a groundwater treatment system.
- Indoor Air Sampling – Initial indoor air sampling was performed to assess air quality in buildings on-site and off.

Phase III

Additional monitoring wells MW-17 through 21 were installed. As with previous phases, soil and groundwater samples were collected and submitted for analysis. During Phase III a potential recovery well (RW-1) located along the property line between IMTT-BC and Lefarge North America Cement was installed and aquifer testing was performed.

Additional activities performed during Phase III were with recommendations for work to be completed in Phase IV:

- Interim Remedial Actions for DNAPL found in MW-16. Wells MW-16 and MW-5 were replaced with wells MW-16R and MW-5R due to being damaged during construction activities for the JV Rail Racks. The

DNAPL recovery system has since been moved to MW-4 due to the presence of DNAPL no longer being detected at MW-16R.

- Aquifer testing was performed using potential recovery well (RW-1) located along the property line between IMTT-BC and LeFarge North America Cement to evaluate pump and treat as a groundwater remedial option.
- Alternative remedial actions also were investigated.

Recommendations in the Phase IV Work Plan included installing four deeper monitoring wells and investigating the feasibility of granular iron, hydrogen release compounds and chemical oxidation. An IRA for recovery equivalent DNAPL was proposed and has been ongoing.

1.4 Physical Setting

A Site Location Map (Figure 1) prepared from the U.S. Geological Survey 7.5 minute quadrangle map identifies the site location; local topography, surface drainage, and land use patterns. In reference to the map, the topography in the immediate site area is relatively flat, with a site elevation of approximately eight feet to nine feet above mean sea level. The surface water bodies closest to the site are the Kill Van Kull to the south, and New York Bay to the north and east.

1.5 Site Geology

The Chem South site is geologically located near the boundary between the Triassic Lowland and Manhattan Prong structural regions of the Piedmont Physiographic Province of New Jersey. The site is underlain by a stratigraphic sequence including unconsolidated sands, silts, and clays of Recent and Pleistocene age, and consolidated and weathered bedrock of Triassic and Precambrian age (Eckenfelder, Inc., 1992). Within the general vicinity of the site, two distinct bedrock groups have been recognized: the Newark Supergroup of Triassic/Jurassic age, and the Manhattan Schist of Precambrian to

Cambrian age (Lyttle and Epstein, 1987). The Manhattan Schist is a dark gray, micaceous schist or layered gneiss with subordinate metaquartzite, metagraywacke, and amphibolite (Lyttle and Epstein, 1987; Soren, 1988).

The contact between the Stockton and Lockatong Formations of the Newark Supergroup (Lyttle and Epstein, 1987) within the Newark Basin exists in the area of the Bayonne Industries site. The Stockton Formation generally consists of sandstone, mudstone, and siltstone. Overlying the Stockton Formation is the Lockatong Formation, which consists of finer-grained, more argillaceous mudstone and siltstone. Groundwater measurement within the bedrock likely occurs along faults, fractures, and bedding planes.

Overlying the bedrock in this area are unconsolidated glacial and post-glacial sediments. Glacial sediments likely consist of glacial till made up of varying materials and glacial outwash sediments. Overlying the glacial materials are post-glacial sediments that include recent sand, silt, and clay; some of this clay is commonly termed "meadow mat". The recent silt and clay are reportedly of marine origin deposited during the recessional period of the Wisconsin glaciation (Lueder, Obear, Holman, Rogers, 1952).

Fill materials used to reclaim the area for industrial use now overlie the meadow mat. An upper, often brackish water-bearing zone exists within the fill materials now underlain by the meadow mat.

Site-specific geologic characteristics were developed for the Chem South property from soil boring logs that were taken during the Free Oil Investigation, which was completed by Bluestone personnel in 2004. The soil cores revealed fill material consisting of mainly coarse to fine sands with varying amounts of clay, silt and gravel. Also included in some cores were fragments of rock, wood, brick and asphalt. The deepest core taken in this area reached 20 feet below the surface. Sediments fined with depth and the abundance of silt and clay increased closer to the depth of refusal. A peat layer, along with gray and black clay and silt, were identified in cores close to the refusal depth. The depth to water varied spatially, ranging from approximately 2 to 9 feet below the surface.

2.0 SITE HISTORY

2.1 Site Ownership

The Chem South property consists of two parcels of land that are currently owned by IMTT-BC. A summary of past ownership is provided below.

Name of Property Owner	**From**	**To**
IMTT-BC	August 1996	Present
Powell Duffryn	1992	August 1996
El Dorado Terminal	1930's	1992
Standard Oil	Unknown	1930's

2.2 Site Operations

IMTT-Bayonne is the current operator of the facility. A summary of past operators is provided below.

Name of Property Owner	**From**	**To**
IMTT-Bayonne	August 1996	Present
Powell Duffryn	1992	August 1996
El Dorado	1930's	1992
Standard Oil	Unknown	1930's

IMTT-Bayonne, Powell Duffryn, and El Dorado all operated the site as a bulk storage/transfer and packaging facility. All operators at this facility have entered into a lease agreement with the City of Bayonne for the second parcel of land. The operations at this facility include the City of Bayonne property.

As part of the operations at this facility, a variety of chemicals are stored in aboveground storage tanks surrounded by dikes providing spill containment. Product is loaded/unloaded through a series of racks. The facility receives and distributes its product by truck, rail, pipeline, and marine vessel/barge. IMTT-Bayonne does not own the product stored, but provides warehousing and transfer services.

A packaging operation is operated at the Chem South facility. The Packaging building is located inside of a containment curb at the facility. Ingredients are blended together to form various grades of anti-freeze. The blended final product is placed into 1-gallon, 5-gallon, or 55-gallon containers.

The products used during the blending process at the Packaging building include the following:

- Caustic Pot Ash 45%
- Patcote 415, 492
- Q1-6083
- Polyoxycarboxylic Acid
- Phosphoric Acid 75%
- Pluronic L61
- Various Inhibitor Concentrates
- Caustic Soda 50%
- Tert-Butyl Glycidyl Ether

2.3 Violations

Information pertaining to violations and enforcement actions reported for the IMTT-Bayonne facility were obtained during an online file review on the NJDEP website. All records found on the Department's integrated database were limited to the time each program (i.e. air, hazardous waste, right-to-know, etc.) began using the system. The earliest available records were dated in October 1998. A summary of enforcement actions related to operators within the IMTT-Chem South facility is listed in Table 1.

2.4 Current Surrounding Land Use

On February 23, 2005, a survey of the adjacent property operations was conducted of the area immediately adjacent to the Chem South facility. A summary of current tenants/operators is shown on Figure 3 and a narrative is provided below.

The Site is located within an industrial area comprised of petroleum storage, chemical storage, commercial enterprises, manufacturing enterprises, and storage facilities. Several of the industrial facilities within the vicinity of the Site are identified on the NJDEP's Known Contaminated Site List.

Properties found adjacent to the Chem South facility include G&B Packaging Co., Inc., Interglobal Forwarding Services Inc., Gordon Terminal, Rafaella, and LaFarge Cement Co. Gordon Terminal borders the western boundary of Chem South, and is now located where Bergenport Chemical Works operated in 1912. G&B Packaging Co, Inc. and Interglobal Forwarding Services, Inc. are located on the property neighboring the northwest corner of Chem South. Rafaella is found adjacent to the northeast corner and is located in the area that Oxford Copper Co. occupied in 1912. An unmarked building is located on the land adjacent to the east side of Chem South, near the Packaging Building. LaFarge Cement Co. lies south of the Chem South property, bordered on the north, east and west by Chem South land. The southern border of Lafarge is adjacent to the Kill Van Kull waterway. In 1912, Fenaille & Despeaux operated the area that is now operated by

Lafarge. Hook Road borders Chem South to the north while the Kill Van Kull borders it to the south.

2.5 Sanborn Fire Insurance Maps

A review of available Sanborn Fire Insurance Maps was conducted for the Chem South area. Maps for the following years were reviewed: 1887, 1898, 1912, 1950, 1979, 1988, 1991, January 1994, December 1994, and 1995. A summary of the observations made for each map year is provided below.

2.5.1 1887

The 1887 Sanborn map of the western part of the Chem South region shows that C.T. Reynolds & Co. Color & Varnish Works owned the southeast side of the area. Twenty-five buildings were identified on this property. These buildings were used for storage, colors, varnish, drying furnaces, and offices. There were seven tanks on the property, at least 3 of which were used to store water. North of the C.T. Reynolds property (but still included in the Chem South property) were 31 buildings; there were eight buildings between 18th and 19th streets, thirteen buildings between 19th and 20th streets, and ten buildings between 20th and 21st streets.

Constable Hook Oil Yard was located east of the C.T. Reynolds land and was also part of the region that is Chem South today. Four oil tanks, two water tanks, three buildings and one shed on the pier were identified in this yard. There was one main building that was used for storage for barrels and cooperage.

Three buildings were identified east of the C.T. Reynolds property and the Constable Hook Oil Yard. They were located north of what is presently a solid fill area. One was located to the northeast of Constable Hook Oil Yard between 18th and 19th streets. The other two buildings were located directly east of the oil yard.

2.5.2 1898

In 1898, the C.T. Reynolds land was changed to F.W. Devoe and C.T. Reynolds Co. but was labeled as vacant. All the same buildings, except for two smaller buildings, were identified on the site. One of these buildings that was no longer illustrated on the 1898 map, was originally located to the west of the main site (in a group with three other buildings) on the 1887 map. The other building was located north of the large varnish portion of one of the main buildings. The lot to the north of this property (between 18th and 19th streets) contained seven buildings; one building was knocked down since the 1887 map. Constable Hook Railroad traversed the property north of these buildings. North of the railroad were two larger buildings. These buildings were identified in the 1887 map; however, the surrounding buildings were not depicted on the 1898 map.

Constable Hook Oil Yard was changed to Fenaille and Despeaux Petroleum Storage Yard. The main building was expanded to the south so it connected with the shed on the pier and also expanded to the east. The 1887 map showed a water tank north of the building. This water tank was converted to a shed that was attached to the building. Two buildings and a water tank, that were east of the main building and were identified on the 1887 map, were torn down and replaced by one large tank. In all, there were nine tanks, four settling pans, six buildings, and an agitator.

The two buildings to the east/northeast of the yard remained in the same location. The Hanover Lumber Co. owned the building located to the northeast. Old Hook Road was also identified on the 1898 map on the east and to the north of the Constable Hook Oil Yard. It extended north of the oil yard and crossed over the Constable Hook Railroad.

2.5.3 1912

In the 1912 Sanborn map of the Chem South region, several properties can be identified. Moving from east to west on the site, the area was divided into Columbia Oil

Co., Standard Oil Co., Orford Copper Co., another piece of property owned by Standard Oil Co., Fenaille and Despeaux Oil Yard, and Frederick A. Delano property. All of these properties are included in the area that is presently referred to as Chem South. There was an area of solid filling that was adjacent to the four latter sites. This area of solid filling also bordered the Kill Van Kull waterway.

Piers extended into the Kill Van Kull from the properties of Orford Cooper Co., Fenaille and Despeaux Oil Yard and Frederick A. Delano. The pier extending from the Fenaille and Despeaux Oil Yard was an old and vacant storage shed. The two piers that extended from the Frederick Delano property were labeled as on piles.

Three buildings were identified on the Standard Oil Co. property that was located furthest to the east. Fenaille and Despeaux Oil Yard had four empty iron tanks, seven buildings and a storage shed. Eight buildings and a dilapidated shed were identified on the Frederick A. Delano site. The shed on the Delano site was outlined in a dotted line, possibly inferring that it was not standing at the time the map was created but was present at an earlier time.

2.5.4 1950

The 1950 Sanborn map revealed that the Columbia Oil Co. that was located on the east side of the present Chem South site changed to the Asiatic Petroleum Co. A new building was erected on the west side of this property. The Standard Oil Co. remained on the same properties as the 1912 map. The Standard Oil Co. property that is furthest to the east showed a new road on the east side of the property. Four new buildings and three tanks were also identified on the north and east sides of the site. Orford Copper Co. was not indicated on the 1950 map, nor was any other owner for that piece of property. Fenaille and Despeaux changed to the Vacuum Oil Co. To the north of the Vacuum Oil Co., International Nickel Co. Fuel Yard was also identified. A new building was depicted on the 1950 map of the Frederick A. Delano site in the northwest corner of the property. The area of solid filling remained the same.

2.5.5 1979

The 1979 Sanborn map showed that the Asiatic Petroleum Co. from the 1950 map was converted into Hess Oil Co. property. No additional buildings were identified on the site. The property immediately to the west of the Hess Oil Co. that was labeled as the Standard Oil Co. in the 1950 map was no longer labeled as such. Two buildings located on the west side of this property that were identified on the 1950 map were no longer shown on the 1979 map. The Standard Oil Co. property that was located between what were Orford Copper Co. property on the 1912 map and the Vacuum Oil Co. and the International Nickel Co. properties on the 1950 and 1979 maps remained unchanged. The building on the Frederick A. Delano site expanded to two buildings. A steel tank farm and two other new buildings were also identified to the south and southeast of the expanded building, respectively.

2.5.6 1988

The 1988 Sanborn map of the area remained virtually unchanged from the 1979 map. The property that was labeled as Vacuum Oil Co. in the 1979 map was indicated as an oil tank farm in the 1988 map. International Nickel Co. Fuel Yard that was located north of the Vacuum Oil Co. in the 1979 map was changed to Powell Duffryn Oil and Chemical STRG INC., which was also a fuel yard.

2.5.7 1991, 1994 (January), 1994 (December), & 1995

The Sanborn maps from 1991, 1994 and 1995 remained the same as the 1988 map. No additional structures were depicted on these maps the current Chem South region.

2.6 Historical Aerial Photographs

Aerial photographs were obtained for the Chem South area. Photographs for the following years were reviewed: 1947, 1959, 1961, 1963, 1970, 1977, 1979, and 1990. Copies of the historical aerial photographs are provided as Figures 4, 5 6, 7, 8, 9, 10, and 11, respectively.

2.6.1 1947

The 1947 aerial photograph of Chem South shows an area that was nearly vacant. Seven buildings were identified but there were no tanks on the site at that time. There was a foundation on the shore of the Kill Van Kull that looked as if it enclosed two tanks at one time. A large unknown structure was present in the western portion of Chem South, which looked like some sort of loading rack structure. Also in the western half of the Chem South property were several debris piles.

2.6.2 1959

Only half of the Chem South property (the western half) was included in the 1959 aerial photograph. There were five buildings present on this portion of the site in 1959. One building that was identified on the western boundary of the property in 1947 was taken down by 1959. The unknown structure was still present.

2.6.3 1961

Seventeen aboveground storage tanks were identified in the 1961 aerial of Chem South. There were also three buildings and the unknown structure, all of which were identified in previous aerials. The rest of the site was vacant.

2.6.4 1963

The 1963 aerial of Chem South showed sixteen aboveground storage tanks and six buildings. The unknown structure is still present in this aerial.

2.6.5 1970

Chem South underwent a significant change between 1963 and 1970. Seventy-six ASTs were identified on the 1970 aerial. There were six buildings located within the facility. Six other structures were also identified that could be buildings, but the poor quality of the aerial photograph made it difficult to absolutely distinguish them as buildings. There is more activity in the yard in the 1970 compared to the previous photos, including active rail lines and trucks. The rail lines were located in the northern portion of the west side of Chem South and in the area where the unknown structure was identified in the previous aerial photo descriptions.

2.6.6 1977

Seventy-eight ASTs were present on site in the 1977 aerial photograph. Ten buildings can also be identified within the property boundaries. There is one area on the eastside of Chem South that looks as if there may be buildings and tanks located there, but do to the poor quality of the photograph, it is difficult to decipher anything for certain. The railroad lines that were described in the 1970 description are still active in the 1977 photograph.

2.6.7 1979

Seventy-six ASTs were identified on the 1979 Chem South aerial photograph, along with 14 buildings. New tank foundations are present near the western boundary on the west half of the property. There are three separate foundations in that area; one foundation for four tanks, another for two tanks, and a third foundation for six tanks that are aligned vertically north to south. The area that was described in the 1977 photograph as undecipherable has a couple structures left but most of the structures have been torn down.

2.6.8 1990

The AST configuration in Chem South in the 1990 aerial photograph is very similar to the current layout. There are 173 tanks depicted in 1990. There are two tanks featured in the 1990 aerial photograph that are not currently on the Chem South 2001 site plan, and one tank on the site plan that was not in the 1990 aerial. Other than those two indiscrepancies, the tank configuration was the same in 1990 as it is today. There are fourteen buildings on site in the 1990 aerial. The rail lines are the same and still active as they were in the past aerials. There is a new paved parking lot in the northeast corner of the western half of the property.

2.7 Historic USGS Topographic Maps

Historical topographic maps were obtained of the area for year 1900, 1905, 1947, 1955, 1967, and 1981. Two significant observations can be made from a review of the historical topographic maps. One is the depiction of the creation of Constable Hook as a landmass. The other is the area is shown as an industrialized area since 1900.

A summary of the observations made from the historical topographic maps is summarized below and copies of the maps are provided in Appendix A.

2.7.1 1900

The earliest available topographic maps include the Staten Island Quadrangle with a scale of 1:62,500 and the Passaic Quadrangle with a scale of 1:125,000.

In 1900, the area of Bayonne known as Constable Hook is connected to the main area of Bayonne by narrow strips of land. ASTs are shown on Constable Hook and the area is connected to Bayonne main land through a series of railroads.

The Platty Kill Creek is shown dissecting Constable Hook, connecting the Kill Van Kull with the backwaters of Constable Hook. Some development and aboveground storage tanks are shown east and north of Platty Kill Creek. Piers are shown on the south side of Constable Hook.

2.7.2 1905

The 1905 Passaic Quadrangle with a scale of 1:125,000 shows little difference between 1900 and 1905.

2.7.3 1947

The 1947 Jersey City Quadrangle with a scale of 1:25,000 shows significant filling has occurred on Constable Hook. The backwaters between Constable Hook and Bayonne main land has been filled and developed. Platty Kill Creek is shown as ending on the West Side in Platty Kill Pond.

The development of the West Side, Packards, Curries, Chem South, and Chem North are all shown on the map. Packards is shown having more aboveground storage tanks than is present at the site today.

2.7.4 1955

The 1955 Jersey City Quadrangle with a scale of 1:24,000 shows filling has continued on Constable Hook and surrounding areas. The number of aboveground storage tanks has increased and the expansion of a railroad system has occurred. The New Jersey Turnpike Interchange 14A is shown on the map.

2.7.5 1967

The 1967 Jersey City Quadrangle with a scale of 1:24,000 filling has continued in the northern section of Constable Hook. Some changes have occurred in the number of tanks but the area is still highly industrialized.

2.7.6 1981

The photo revised Jersey City Quadrangle with a scale of 1:24,000 shows the area north of the Conrail Railroad as being developed. Minor changes to the number of tanks and buildings are shown on the West Side, Chem South, and Chem North.

3.0 HAZARDOUS SUBSTANCE/WASTE INVENTORY

Information regarding hazardous substances handled at the IMTT properties was compiled from community right-to-know documents obtained from IMTT personnel and from interviews conducted with site personnel. The hazardous substance inventory listed in Tables 2 and 3 was created from 2003 and 2004 right-to-know documents with the assumption that similar products and quantities are currently stored within the Terminal boundaries.

3.1 Hazardous Substances

A list of the known chemicals that have been associated with the IMTT operations is provided in Tables 2 and 3. Given the lengthy operating history and variety of operators prior to IMTT, it is not possible to accurately report all the materials ever stored/handled at the Site. Based on the site operations history, however, the primary products previously stored at the facility are expected to be similar to those most recently handled, which are listed in Tables 2 and 3.

Bulk quantities of hazardous substances are stored in aboveground storage tanks. Product distribution to and from the Site occurs at a series of loading and unloading areas (pipeline, marine docks, rail racks, and truck racks). Various pump stations and an aboveground piping network facilitate product movement throughout the Site. Subsurface investigation that was initiated near one of these areas has been expanded to a site-wide investigation that indicates several historic spills have caused widespread impacts to soil and groundwater.

The facility maintains storage of up to and greater than 10 million pounds of hazardous product within the Terminal. There are approximately 230 variations of liquid hazardous products currently stored on site.

Hazardous material storage areas are discussed in Section 5.2.1 Storage Pads and Section 5.2.4 Chemical Storage Cabinets/Closets. Satellite accumulation areas are discussed in Section 5.1.5 Loading and Unloading Areas.

3.2 Hazardous Waste

Based on available information, a list potentially hazardous waste streams were generated for the Site. The listing is based on recent information but is believed to be representative of older periods of operation given that similar operations were being conducted at the Site.

Potentially hazardous wastes generated at the Site include the following:

- Tank bottoms
- Laboratory samples
- Off-specification product
- Recovered product
- Impacted soil and sediment
- Used oil, lubricants, rags, absorbents, etc.

Non-hazardous waste generated at the Site includes:

- Dry refuse

Hazardous waste storage locations are discussed in Section 5.5.2. Currently, the primary wastes on-site are derived from environmental remediation activities. According to facility personnel, all wastes are properly disposed of at off-site facilities. No records of any on-site disposal activity were found during this Preliminary Assessment.

4.0 WASTEWATER DISCHARGES

The Chem South facility sanitary waste has discharge via pipeline to the Bayonne Municipal Utility Authority since at least 1983. On April 14, 2005, Bluestone contacted the Bayonne MUA regarding the sewer system for the IMTT-Chem South facility. The personnel at the MUA (specifically John Herbert) suggested we contact the Passaic Valley Sewerage Commissioners (PVSC) office, since the MUA only had records dating back to 1997. On April 14, 2005, Bluestone called and faxed a request to Andy Caltagirone, the manager of Industrial and Pollution Control at PVSC. There was no response and two more calls have been made since the original request was sent to Mr. Caltagirone. We are still awaiting a response from the PVSC and more information will be provided as we acquire it.

Storm water generated at the Chem South facility is routed to a treatment plant through a series of catch basins and gravity-operated underground piping. The treatment plant operates under NJPDES permit number 3361. The stormwater is treated at the IMTT East Side Wastewater Treatment Plant located adjacent to the Kill Van Kull.

The treated water is discharged through a permitted open pipe discharge point into the Kill van Kull shown on Figure 12.

The only process that has occurred at this facility is the packaging operation. A waste stream is generated that includes unusable product from anti-freeze packaging.

5.0 POTENTIAL AREAS OF CONCERN

A review of current and historic operations was conducted to determine potential areas of concern. For convenience, the potential areas of concern (AOC) are presented following the NJDEP Preliminary Assessment Report format.

5.1 Bulk Storage Tanks and Appurtenances (PA Form Question A)

5.1.1 Aboveground Storage Tanks and Associated Piping (PA Form Question A1)

All of the aboveground storage tanks at the IMTT facility discussed below are constructed of steel. The historical tank contents information reported is based on available data from 1995 to the present.

5.1.1.1 AOC-CS-001: Tank 11000

5.1.1.1.1 General Information

Tank 11000 was placed in service in 1988 and has a capacity of approximately 9,400 gallons. The tank currently is used as a blend tank. The tank location, southeast of the Yard 11 tank farm, adjacent to the packaging plant warehouse, is shown on **Figure 13**.

5.1.1.1.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on March 2, 1999 following the principles of API 653. The last internal tank inspection was March 2, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.2 AOC-CS-002: Tank 11667

5.1.1.2.1 General Information

Tank 11667 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. 3400. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, in the northwest corner of Yard 11, is shown on **Figure 13**.

5.1.1.2.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 5, 2002. The last ultrasonic tank shell thickness measurement was taken on April 5, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 5, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.3 AOC-CS-003: Tank 11668

5.1.1.3.1 General Information

Tank 11668 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Propylene Glycol. The tank currently contains Product No. N-217. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, on the northwestern edge of Yard 11, is shown on **Figure 13**.

5.1.1.3.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 11, 2003. The last ultrasonic tank shell thickness measurement was taken on April 11, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 11, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.4 AOC-CS-004: Tank 11669

5.1.1.4.1 General Information

Tank 11669 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Glycerine. The tank currently contains Optim Glycerine 99.7%. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, on the northwestern edge of Yard 11, is shown on **Figure 13**.

5.1.1.4.2 Maintenance and Integrity History

The last external visual inspection of the tank was on December 9, 2002. The last ultrasonic tank shell thickness measurement was taken on December 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 9, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.5 AOC-CS-005: Tank 11670

5.1.1.5.1 General Information

Tank 11670 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Dipropylene Glycol. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, on the northern edge of Yard 11, is shown on **Figure 13**.

5.1.1.5.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on June 12, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 12, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.6 AOC-CS-006: Tank 11671

5.1.1.6.1 General Information

Tank 11671 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Propylene Glycol. The tank currently contains Propylene Glycol-USP. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, on the northern edge of Yard 11, is shown on **Figure 13**.

5.1.1.6.2 Maintenance and Integrity History

The last external visual inspection of the tank was on July 25, 2001. The last ultrasonic tank shell thickness measurement was taken on July 25, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 25, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.7 AOC-CS-007: Tank 11672

5.1.1.7.1 General Information

Tank 11672 was placed in service in 1983 and has a capacity of approximately 360,000 gallons. Historically the tank reportedly contained Neu-Tri. The tank currently contains Dowper. Secondary containment for this tank is Dike 7 of Yard 11, constructed of concrete. The available capacity of Dike 7 is 88,000 cubic feet or 658,300 gallons. The tank location, on the northern edge of Yard 11, is shown on **Figure 13**.

5.1.1.7.2 Maintenance and Integrity History

The last external visual inspection of the tank was on June 20, 2003. The last ultrasonic tank shell thickness measurement was taken on June 20, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 20, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.8 AOC-CS-008: Tank 11673

5.1.1.8.1 General Information

Tank 11673 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained OrthoToluidine. The tank currently contains OrthoToluidine. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, on the western edge of Yard 11, is shown on **Figure 13**.

5.1.1.8.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on August 19, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 19, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.9 AOC-CS-009: Tank 11674

5.1.1.9.1 General Information

Tank 11674 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Antifreeze. The tank currently contains Product No. ETX-628OD3. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, on the western edge of Yard 11, is shown on **Figure 13**.

5.1.1.9.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 24, 2002. The last ultrasonic tank shell thickness measurement was taken on April 24, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 24, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.10 AOC-CS-010: Tank 11675

5.1.1.10.1 General Information

Tank 11675 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Methylene Chloride. The tank currently contains Neu-Tri. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, on the western edge of Yard 11, is shown on **Figure 13**.

5.1.1.10.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 31, 2001. The last ultrasonic tank shell thickness measurement was taken on January 31, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 31, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.11 AOC-CS-011: Tank 11676

5.1.1.11.1 General Information

Tank 11676 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, in the central portion of Yard 11, is shown on **Figure 13**.

5.1.1.11.2 Maintenance and Integrity History

The last external visual inspection of the tank was on July 28, 2003. The last ultrasonic tank shell thickness measurement was taken on July 28, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 22, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.12 AOC-CS-012: Tank 11677

5.1.1.12.1 General Information

Tank 11677 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, in the central portion of Yard 11, is shown on **Figure 13**.

5.1.1.12.2 Maintenance and Integrity History

The last external visual inspection of the tank was on June 20, 2002. The last ultrasonic tank shell thickness measurement was taken on June 20, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 20, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.13 AOC-CS-013: Tank 11678

5.1.1.13.1 General Information

Tank 11678 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, in the central portion of Yard 11, is shown on **Figure 13**.

5.1.1.13.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 24, 2002. The last ultrasonic tank shell thickness measurement was taken on April 24, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 24, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.14 AOC-CS-014: Tank 11679

5.1.1.14.1 General Information

Tank 11679 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. MEG. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, in the central portion of Yard 11, is shown on **Figure 13.**

5.1.1.14.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 6, 1996 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 27, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.15 AOC-CS-015: Tank 11680

5.1.1.15.1 General Information

Tank 11680 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained 1,1,1-Trichloroethane. The tank currently contains Methanol. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or

1,040,000 gallons. The tank location, on the western edge of Yard 11, is shown on **Figure 13**.

5.1.1.15.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on December 28, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 28, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.16 AOC-CS-016: Tank 11681

5.1.1.16.1 General Information

Tank 11681 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained 1,1,1-Trichloroethane. The tank currently contains Methanol. Secondary containment for this tank is Dike 8 of Yard 11, constructed of concrete. The available capacity of Dike 8 is 139,000 cubic feet or 1,040,000 gallons. The tank location, on the western edge of Yard 11, is shown on **Figure 13**.

5.1.1.16.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 12, 2003. The last ultrasonic tank shell thickness measurement was taken on January 12, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 12, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.17 AOC-CS-017: Tank 11682

5.1.1.17.1 General Information

Tank 11682 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Dowper. The tank currently contains Methanol. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, on the southwestern edge of Yard 11, is shown on **Figure 13**.

5.1.1.17.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on April 11, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 11, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.18 AOC-CS-018: Tank 11683

5.1.1.18.1 General Information

Tank 11683 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Trichloroethylene. The tank currently contains Methanol. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, on the southwestern corner of Yard 11, is shown on **Figure 13**.

5.1.1.18.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 11, 2002. The last ultrasonic tank shell thickness measurement was taken on February 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 11, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.19 AOC-CS-019: Tank 11684

5.1.1.19.1 General Information

Tank 11684 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, in the southern portion of Yard 11, is shown on **Figure 13**.

5.1.1.19.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on September 2, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 2, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.20 AOC-CS-020: Tank 11685

5.1.1.20.1 General Information

Tank 11685 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Methylene Chloride. The tank currently contains Methylene Chloride. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, on the southern edge of Yard 11, is shown on **Figure 13**.

5.1.1.20.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 25, 2001. The last ultrasonic tank shell thickness measurement was taken on September 25, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 25, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.21 AOC-CS-021: Tank 11687

5.1.1.21.1 General Information

Tank 11687 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains 50% Caustic Soda. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, on the southern edge of Yard 11, is shown on **Figure 13.**

5.1.1.21.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 30, 2002. The last ultrasonic tank shell thickness measurement was taken on September 30, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 10, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.22 AOC-CS-022: Tank 11689

5.1.1.22.1 General Information

Tank 11689 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Caustic Soda. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, on the southeastern corner of Yard 11, is shown on **Figure 13.**

5.1.1.22.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on April 6, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 6, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.23 AOC-CS-023: Tank 12000

5.1.1.23.1 General Information

Tank 12000 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. The tank currently contains Neutralization Tank Water for the adjacent water treatment facility. The tank location, on the southern tip of Yard 12, is shown on **Figure 13**.

5.1.1.23.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on April 11, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 11, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.24 AOC-CS-024: Tank 12001

5.1.1.24.1 General Information

Tank 12001 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. The tank currently contains Neutralization Tank Water for the adjacent water treatment facility. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, on the southern tip of Yard 12, is shown on **Figure 13**.

5.1.1.24.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 9, 2001. The last ultrasonic tank shell thickness measurement was taken on August 9, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 9, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.25 AOC-CS-025: Tank 12250

5.1.1.25.1 General Information

Tank 12250 was placed in service in 1983 and has a capacity of approximately 63,500 gallons. Historically the tank reportedly contained Hydrogen Peroxide. The tank is currently out of service. Secondary containment for this tank is Dike 250 of Yard 12. Spills in Dike 250 are contained via the plant-wide containment curb and diversion system. The available capacity of Dike 250 is 5,600 cubic feet or 41,900 gallons. The tank location, in the northwestern edge of Yard 12, is shown on **Figure 13**.

5.1.1.25.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 23, 2001. The last ultrasonic tank shell thickness measurement was taken on October 23, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 23, 2001. No high level alarms are installed on this tank. The AST is currently not in use due to corrosion.

5.1.1.26 AOC-CS-026: Tank 12251

5.1.1.26.1 General Information

Historically the tank reportedly contained Hydrogen Peroxide. Solvex Interox, te customer that stored product in the tank, owned the AST. The AST was used for preparing 35% hydrogen peroxide solution. The AST was constructed of aluminum and was 10.5 feet in diameter and 16 feet in height. Upon termination of the rental agreement, the customer removed the AST from the IMTT facility.

5.1.1.26.2 Maintenance and Integrity History

This tank has been removed from the facility.

5.1.1.27 AOC-CS-027: Tank 12300

5.1.1.27.1 General Information

Tank 12300 was placed in service in 1970 and has a capacity of approximately 640,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Caustic Soda. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central portion of Yard 12, is shown on **Figure 13**.

5.1.1.27.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on June 5, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 5, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported and the pad shows no signs of staining.

5.1.1.28 AOC-CS-028: Tank 12301

5.1.1.28.1 General Information

Tank 12301 was placed in service in 1978 and has a capacity of approximately 640,000 gallons. Historically the tank reportedly contained VOC<0.13 Pounds Per Square Inch-Atmosphere (PSIA). The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central portion of Yard 12, is shown on **Figure 13**.

5.1.1.28.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 11, 2002. The last ultrasonic tank shell thickness measurement was taken on April 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 11, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported and the pad shows no signs of staining.

5.1.1.29 AOC-CS-029: Tank 12400

5.1.1.29.1 General Information

Tank 12400 was placed in service in 1970 and has a capacity of approximately 1,144,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Caustic Soda 50%. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central portion of Yard 12, is shown on **Figure 13**.

5.1.1.29.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 30, 2002. The last ultrasonic tank shell thickness measurement was taken on June 16, 1997 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 16, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.30 AOC-CS-030: Tank 12401

5.1.1.30.1 General Information

Tank 12401 was placed in service in 1974 and has a capacity of approximately 1,100,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains Caustic Soda 50%. Secondary containment for this tank is Dike 400 of Yard 12, constructed of concrete. The available capacity of Dike 400 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the northern portion of Yard 12, is shown on **Figure 13**.

5.1.1.30.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on November 14, 1994 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 14, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.31 AOC-CS-031: Tank 12402

5.1.1.31.1 General Information

Tank 12402 was placed in service in 1974 and has a capacity of approximately 1,100,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains Caustic Soda 50%. Secondary containment for this tank is Dike 400 of Yard 12, constructed of concrete. The available capacity of Dike 400 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the northern portion of Yard 12, is shown on **Figure 13**.

5.1.1.31.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on August 11, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 11, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.32 AOC-CS-032: Tank 12403

5.1.1.32.1 General Information

Tank 12403 was placed in service in 1974 and has a capacity of approximately 1,100,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains Caustic Soda 50%. Secondary containment for this tank is Dike 400 of Yard 12, constructed of concrete. The available capacity of Dike 400 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the northern portion of Yard 12, is shown on **Figure 13**.

5.1.1.32.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on September 24, 1990 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 24, 1990. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.33 AOC-CS-033: Tank 12410

5.1.1.33.1 General Information

Tank 12410 was placed in service in 1970 and has a capacity of approximately 49,000 gallons. Historically the tank reportedly contained Palatinol. The tank currently contains Waste Water. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central/western portion of Yard 12, is shown on **Figure 13**.

5.1.1.33.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on November 11, 1988 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 11, 1988. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.34 AOC-CS-034: Tank 12411

5.1.1.34.1 General Information

Tank 12411 was placed in service in 1970 and has a capacity of approximately 49,000 gallons. Historically the tank reportedly contained Palatinol. The tank currently contains Waste Water. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central/western portion of Yard 12, is shown on **Figure 13**.

5.1.1.34.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 20, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 11, 1988. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.35 AOC-CS-035: Tank 12500

5.1.1.35.1 General Information

Tank 12500 was placed in service in 1970 and has a capacity of approximately 640,000 gallons. The tank currently contains Ethylene Glycol. The AST is equipped with a concrete wall secondary containment. The tank location, on the northeastern edge of Yard 12, is shown on **Figure 13**.

5.1.1.35.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on August 27, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 23, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.36 AOC-CS-036: Tank 12601

5.1.1.36.1 General Information

Tank 12601 was placed in service in 1983 and has a capacity of approximately 1,105,000 gallons. Historically the tank reportedly contained Methanol. The tank currently contains Methanol. Secondary containment for this tank is Dike 3 of Yard 12, constructed of concrete. The available capacity of Dike 3 is 155,500 cubic feet or 1,163,000 gallons. The tank location, in the center of Yard 12, is shown on **Figure 13**.

5.1.1.36.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on August 9, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 11, 1989. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.37 AOC-CS-037: Tank 12602

5.1.1.37.1 General Information

Tank 12602 was placed in service in 1983 and has a capacity of approximately 1,105,000 gallons. Historically the tank reportedly contained Methanol. The tank currently contains Methanol. Secondary containment for this tank is Dike 3 of Yard 12, constructed of concrete. The available capacity of Dike 3 is 155,500 cubic feet or 1,163,000 gallons. The tank location, in the center of Yard 12, is shown on **Figure 13.**

5.1.1.37.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 30, 1990 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 30, 1990. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.38 AOC-CS-038: Tank 12603

5.1.1.38.1 General Information

Tank 12603 was placed in service in 1983 and has a capacity of approximately 1,105,000 gallons. Historically the tank reportedly contained Palatinol. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 3 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 155,500 cubic feet or 1,163,000 gallons. The tank location, in the center of Yard 12, is shown on **Figure 13.**

5.1.1.38.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on August 9, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 11, 1989. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.39 AOC-CS-039: Tank 12604

5.1.1.39.1 General Information

Tank 12604 was placed in service in 1983 and has a capacity of approximately 1,105,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank is currently empty and out of service. Secondary containment for this tank is Dike 3 of Yard 12, constructed of concrete. The available capacity of Dike 3 is 155,500 cubic feet or 1,163,000 gallons. The tank location, in the center of Yard 12, is shown on **Figure 13.**

5.1.1.39.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on August 1, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 1, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.40 AOC-CS-040: Tank 12605

5.1.1.40.1 General Information

Tank 12605 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Polyether Polyol. The tank is currently empty and out of service. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.40.2 Maintenance and Integrity History

The last external visual inspection of the tank was on July 11, 2003. The last ultrasonic tank shell thickness measurement was taken on July 11, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal

tank inspection was July 11, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.41 AOC-CS-041: Tank 12606

5.1.1.41.1 General Information

Tank 12606 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Polyether Polyol. The tank currently contains Voronal 3136. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.41.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on January 27, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 27, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.42 AOC-CS-042: Tank 12607

5.1.1.42.1 General Information

Tank 12607 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Aerothene TT. The tank is currently empty and out of service. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.42.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 17, 1999. The last ultrasonic tank shell thickness measurement was taken on August 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.43 AOC-CS-043: Tank 12609

5.1.1.43.1 General Information

Tank 12609 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained LMC-3. The tank is currently empty and out of service. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.43.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 8, 1996 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 8, 1996. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.44 AOC-CS-044: Tank 12610

5.1.1.44.1 General Information

Tank 12610 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank is currently empty and out of service. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.44.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on September 18, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 18, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.45 AOC-CS-045: Tank 12611

5.1.1.45.1 General Information

Tank 12611 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Dowanol Eb. The tank is currently empty and out of service. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.45.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 4, 2002. The last ultrasonic tank shell thickness measurement was taken on February 4, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 4, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.46 AOC-CS-046: Tank 12612

5.1.1.46.1 General Information

Tank 12612 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Dipropylene Glycol. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.46.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on August 9, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 1, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.47 AOC-CS-047: Tank 12613

5.1.1.47.1 General Information

Tank 12613 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained 1,6-Hexanediol. The tank currently contains MEA. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.47.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on October 21, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 21, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.48 AOC-CS-048: Tank 12614

5.1.1.48.1 General Information

Tank 12614 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains PG USP. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.48.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 10, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 8, 1996. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.49 AOC-CS-049: Tank 12615

5.1.1.49.1 General Information

Tank 12615 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Dowfrost Hd. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.49.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 9, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 9, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.50 AOC-CS-050: Tank 12616

5.1.1.50.1 General Information

Tank 12616 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Cobratec TT. The tank currently contains Cobratec TT 50s. Secondary containment for this tank is Dike 5 of

Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.50.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on June 9, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 9, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.51 AOC-CS-051: Tank 12617

5.1.1.51.1 General Information

Tank 12617 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Dipotassium Phosphate. The tank currently contains Dipotassium Phosphate. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.51.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on April 12, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 12, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.52 AOC-CS-052: Tank 12618

5.1.1.52.1 General Information

Tank 12618 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. ETX-628OD3. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.52.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 23, 2004. The last ultrasonic tank shell thickness measurement was taken on February 23, 2004 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 23, 2004. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.53 AOC-CS-053: Tank 12619

5.1.1.53.1 General Information

Tank 12619 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. TX-12712. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.53.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 25, 2004. The last ultrasonic tank shell thickness measurement was taken on December 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.54 AOC-CS-054: Tank 12620

5.1.1.54.1 General Information

Tank 12620 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Palatinol. The tank currently contains Product No. 3524. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.54.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 25, 2004. The last ultrasonic tank shell thickness measurement was taken on March 16, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 16, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.55 AOC-CS-055: Tank 12621

5.1.1.55.1 General Information

Tank 12621 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained N-Methyl Pyrrolidone. The tank currently contains N-Methyl Pyrrolidone. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.55.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 9, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 9, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.56 AOC-CS-056: Tank 12622

5.1.1.56.1 General Information

Tank 12622 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained MP Diol-Glycol. The tank currently contains Glycol Ether DB. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.56.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 27, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 27, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.57 AOC-CS-057: Tank 12623

5.1.1.57.1 General Information

Tank 12623 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Antifreeze JC. The tank currently contains Antifreeze 27/90. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.57.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 29, 1995 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 29, 1995. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.58 AOC-CS-058: Tank 12624

5.1.1.58.1 General Information

Tank 12624 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Propylene Glycol. The tank currently contains Dowfrost. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.58.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2003. The last ultrasonic tank shell thickness measurement was taken on March 25, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 25, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.59 AOC-CS-059: Tank 12625

5.1.1.59.1 General Information

Tank 12625 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Epoxy Resin. The tank currently contains Tetraethylene Glycol. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.59.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 27, 2001. The last ultrasonic tank shell thickness measurement was taken on September 27, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 27, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.60 AOC-CS-060: Tank 12626

5.1.1.60.1 General Information

Tank 12626 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Aminobenzoic Acid Ester. The tank currently contains S-Quatta 88. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.60.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 25, 2001. The last ultrasonic tank shell thickness measurement was taken on January 25, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 25, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.61 AOC-CS-061: Tank 12627

5.1.1.61.1 General Information

Tank 12627 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Alkanolamine. The tank currently contains Product No. AMP-95. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.61.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on July 25, 1994 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal

tank inspection was July 25, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.62 AOC-CS-062: Tank 12628

5.1.1.62.1 General Information

Tank 12628 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Voranol. The tank currently contains Dipropylene Glycol. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.62.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on December 1, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 1, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.63 AOC-CS-063: Tank 12629

5.1.1.63.1 General Information

Tank 12629 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank is currently empty and out of service. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13.**

5.1.1.63.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on July 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal

tank inspection was July 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.64 AOC-CS-064: Tank 12630

5.1.1.64.1 General Information

Tank 12630 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Methylene Chloride. The tank is currently empty and out of service. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.64.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 1, 2002. The last ultrasonic tank shell thickness measurement was taken on October 1, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 23, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.65 AOC-CS-065: Tank 12631

5.1.1.65.1 General Information

Tank 12631 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank currently contains Aerothane MM. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.65.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on March 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.66 AOC-CS-066: Tank 12632

5.1.1.66.1 General Information

Tank 12632 was placed in service in 1983 and has a capacity of approximately 30,000 gallons. Historically the tank reportedly contained Methylene Chloride. The tank is currently empty and out of service. Secondary containment for this tank is Dike 5 of Yard 12, constructed of concrete. The available capacity of Dike 5 is 10,100 cubic feet or 75,500 gallons. The tank location, in the eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.66.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.67 AOC-CS-067: Tank 12633

5.1.1.67.1 General Information

Tank 12633 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Glycol. The tank currently contains Versene 100EP. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.67.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on December 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.68 AOC-CS-068: Tank 12634

5.1.1.68.1 General Information

Tank 12634 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Aerothene MM. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.68.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 16, 1999. The last ultrasonic tank shell thickness measurement was taken on August 16, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 16, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.69 AOC-CS-069: Tank 12635

5.1.1.69.1 General Information

Tank 12635 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank currently contains THF. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.69.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 12, 2002. The last ultrasonic tank shell thickness measurement was taken on February 12, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 12, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.70 AOC-CS-070: Tank 12636

5.1.1.70.1 General Information

Tank 12636 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Gylcol. The tank currently contains Tripropylene Glycol. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.70.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 27, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 27, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.71 AOC-CS-071: Tank 12637

5.1.1.71.1 General Information

Tank 12637 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained N-Butanol. The tank currently contains PM Solvent. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.71.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on September 18, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 18, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.72 AOC-CS-072: Tank 12638

5.1.1.72.1 General Information

Tank 12638 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Methylene Chloride. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.72.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 12, 2002. The last ultrasonic tank shell thickness measurement was taken on February 12, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 12, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.73 AOC-CS-073: Tank 12639

5.1.1.73.1 General Information

Tank 12639 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Versene LS. The tank currently contains Versene 100xl. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.73.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on July 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.74 AOC-CS-074: Tank 12640

5.1.1.74.1 General Information

Tank 12640 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Versenol 120. The tank currently contains Versenex 80. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.74.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 3, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 1, 1995. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.75 AOC-CS-075: Tank 12641

5.1.1.75.1 General Information

Tank 12641 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Versenex 80. The tank currently contains Versenex 80. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.75.2 Maintenance and Integrity History

The last external visual inspection of the tank was on December 9, 2002. The last ultrasonic tank shell thickness measurement was taken on December 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 9, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.76 AOC-CS-076: Tank 12642

5.1.1.76.1 General Information

Tank 12642 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Antifreeze. The tank currently contains Product No. U900. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.76.2 Maintenance and Integrity History

The last external visual inspection of the tank was on July 2, 2003. The last ultrasonic tank shell thickness measurement was taken on July 2, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 2, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.77 AOC-CS-077: Tank 12643

5.1.1.77.1 General Information

Tank 12643 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Antifreeze. The tank currently contains MacGuard-2792. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.77.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 21, 2003. The last ultrasonic tank shell thickness measurement was taken on April 21, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 21, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.78 AOC-CS-078: Tank 12644

5.1.1.78.1 General Information

Tank 12644 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Cyclohexanone. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.78.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 10, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 10, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.79 AOC-CS-079: Tank 12645

5.1.1.79.1 General Information

Tank 12645 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Dowanol PM. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.79.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 5, 2001. The last ultrasonic tank shell thickness measurement was taken on April 5, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 5, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.80 AOC-CS-080: Tank 12646

5.1.1.80.1 General Information

Tank 12646 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Phenol. The tank currently contains TEBOL-99. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.80.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on July 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.81 AOC-CS-081: Tank 12647

5.1.1.81.1 General Information

Tank 12647 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Dowanol DPM. The tank currently contains off-specification Antifreeze. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.81.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 8, 2001. The last ultrasonic tank shell thickness measurement was taken on March 8, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 8, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.82 AOC-CS-082: Tank 12648

5.1.1.82.1 General Information

Tank 12648 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Dowanol PMA. The tank currently contains PM Acetate. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.82.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 5, 2001. The last ultrasonic tank shell thickness measurement was taken on February 5, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 5, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.83 AOC-CS-083: Tank 12649

5.1.1.83.1 General Information

Tank 12649 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Antifreeze. The tank currently contains Product No. Nj-217. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.83.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on June 3, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.84 AOC-CS-084: Tank 12650

5.1.1.84.1 General Information

Tank 12650 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. N-217. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.84.2 Maintenance and Integrity History

The last external visual inspection of the tank was on May 7, 2002. The last ultrasonic tank shell thickness measurement was taken on May 7, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 7, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.85 AOC-CS-085: Tank 12651

5.1.1.85.1 General Information

Tank 12651 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Dowanol DB. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or

63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.85.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on December 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.86 AOC-CS-086: Tank 12652

5.1.1.86.1 General Information

Tank 12652 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained DEG Methyl Ether. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.86.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on December 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.87 AOC-CS-087: Tank 12653

5.1.1.87.1 General Information

Tank 12653 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Epoxy Resin. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of

Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.87.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 11, 2002. The last ultrasonic tank shell thickness measurement was taken on March 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 11, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.88 AOC-CS-088: Tank 12654

5.1.1.88.1 General Information

Tank 12654 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Epoxy Resin. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.88.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on March 22, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 22, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.89 AOC-CS-089: Tank 12655

5.1.1.89.1 General Information

Tank 12655 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Glycerine. The tank currently contains Glycerine, USP 96%. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.89.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 21, 1996 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 21, 1996. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.90 AOC-CS-090: Tank 12656

5.1.1.90.1 General Information

Tank 12656 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Epoxy Resin. The tank currently contains Der 331 Epoxy Resin. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.90.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 1, 2003. The last ultrasonic tank shell thickness measurement was taken on August 1, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 1, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.91 AOC-CS-091: Tank 12657

5.1.1.91.1 General Information

Tank 12657 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Dipropylene Glycol. The tank currently contains MP IV 2001 Aircraft. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.91.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on May 21, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 21, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.92 AOC-CS-092: Tank 12658

5.1.1.92.1 General Information

Tank 12658 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Triethylene Glycol. The tank currently contains MP IV 2001 Aircraft. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.92.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 25, 2004. The last ultrasonic tank shell thickness measurement was taken on May 20, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 20, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.93 AOC-CS-093: Tank 12659

5.1.1.93.1 General Information

Tank 12659 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Aminoethanolamine. The tank currently contains Aminoethanolamine. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.93.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 26, 2002. The last ultrasonic tank shell thickness measurement was taken on September 26, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 26, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.94 AOC-CS-094: Tank 12660

5.1.1.94.1 General Information

Tank 12660 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Copolmer Polyol. The tank currently contains Product No. V-3943A. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.94.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 11, 2002. The last ultrasonic tank shell thickness measurement was taken on April 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 24, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.95 AOC-CS-095: Tank 12661

5.1.1.95.1 General Information

Tank 12661 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Monoethanolamine. The tank currently contains Monoethanolamine. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.95.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on May 7, 1990 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 7, 1990. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.96 AOC-CS-096: Tank 12662

5.1.1.96.1 General Information

Tank 12662 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Diethanolamine. The tank currently contains Diethanolamine. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.96.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 18, 2003. The last ultrasonic tank shell thickness measurement was taken on March 18, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 18, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.97 AOC-CS-097: Tank 12663

5.1.1.97.1 General Information

Tank 12663 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Triethanolamine. The tank currently contains Triethanolamine 99. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.97.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 17, 2003. The last ultrasonic tank shell thickness measurement was taken on March 17, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 17, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.98 AOC-CS-098: Tank 12664

5.1.1.98.1 General Information

Tank 12664 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Monoethanolamine. The tank currently contains Monoethanolamine 99. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13.**

5.1.1.98.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 1, 2002. The last ultrasonic tank shell thickness measurement was taken on October 1, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 10, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.99 AOC-CS-099: Tank 12665

5.1.1.99.1 General Information

Tank 12665 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Ethylenediamine. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.99.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 11, 2002. The last ultrasonic tank shell thickness measurement was taken on April 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 17, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.100 AOC-CS-100: Tank 12666

5.1.1.100.1 General Information

Tank 12666 was placed in service in 1983 and has a capacity of approximately 60,000 gallons. Historically the tank reportedly contained Ethyleneamine. The tank is currently empty and out of service. Secondary containment for this tank is Dike 6 of Yard 12, constructed of concrete. The available capacity of Dike 6 is 8,500 cubic feet or 63,600 gallons. The tank location, in the southern portion of Yard 12, is shown on **Figure 13**.

5.1.1.100.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 11, 2002. The last ultrasonic tank shell thickness measurement was taken on April 11, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 31, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.101 AOC-CS-101: Tank 14001

5.1.1.101.1 General Information

Tank 14001 was placed in service in 1964 and has a capacity of approximately 178,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Infineum C9394. Secondary containment for this tank is Dike 123 of Yard 14. Spills in Dike 123 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.101.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 1, 2002. The last ultrasonic tank shell thickness measurement was taken on October 1, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 14, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.102 AOC-CS-102: Tank 14002

5.1.1.102.1 General Information

Tank 14002 was placed in service in 1964 and has a capacity of approximately 230,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Infineum C9330. Secondary containment for this tank is Dike 123 of Yard 14. Spills in Dike 123 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.102.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on November 7, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 9, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.103 AOC-CS-103: Tank 14003

5.1.1.103.1 General Information

Tank 14003 was placed in service in 1964 and has a capacity of approximately 178,000 gallons. Historically the tank reportedly contained Palatinol 11PE. The tank currently contains Palatinol 711P. Secondary containment for this tank is Dike 123 of Yard 14. Spills in Dike 123 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.103.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on December 27, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 27, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.104 AOC-CS-104: Tank 14004

5.1.1.104.1 General Information

Tank 14004 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. The tank currently contains Surface Water. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.104.2 Maintenance and Integrity History

The last external visual inspection of the tank was on May 19, 1999. The last ultrasonic tank shell thickness measurement was taken on May 19, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 19, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.105 AOC-CS-105: Tank 14005

5.1.1.105.1 General Information

Tank 14005 was placed in service in 1964 and has a capacity of approximately 102,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank is currently empty. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.105.2 Maintenance and Integrity History

Tank 14005 is currently out of service and requires an internal inspection and/or repairs prior to activation. The last external visual inspection of the tank was on July 14, 1997. The last ultrasonic tank shell thickness measurement was taken on July 14, 1997 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 14, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.106 AOC-CS-106: Tank 14006

5.1.1.106.1 General Information

Tank 14006 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Gylcol. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.106.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 4, 2003. The last ultrasonic tank shell thickness measurement was taken on April 4, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 4, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.107 AOC-CS-107: Tank 14007

5.1.1.107.1 General Information

Tank 14007 was placed in service in 1964 and has a capacity of approximately 102,000 gallons. Historically, the tank reportedly contained VOC<0.02 PSIA. The tank is currently empty. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the southeastern portion of Yard 14, is shown on **Figure 13.**

5.1.1.107.2 Maintenance and Integrity History

Tank 14007 is currently out of service and requires an internal inspection and/or repairs prior to activation. The last external visual inspection of the tank was on April 13, 1999. The last ultrasonic tank shell thickness measurement was taken on April 13, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 13, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.108 AOC-CS-108: Tank 14008

5.1.1.108.1 General Information

Tank 14008 was placed in service in 1964 and has a capacity of approximately 102,000 gallons. Historically the tank reportedly contained VOC<0.02 PSIA. The tank currently contains Product No. OLOA 219M. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.108.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on November 7, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 25, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.109 AOC-CS-109: Tank 14009

5.1.1.109.1 General Information

Tank 14009 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Diethylene Glycol. The tank also currently contains Diethylene Glycol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.109.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 3, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.110 AOC-CS-110: Tank 14010

5.1.1.110.1 General Information

Tank 14010 was placed in service in 1964 and has a capacity of approximately 102,000 gallons. Historically the tank reportedly contained VOC<0.213 PSIA. The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of

Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.110.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 9, 1999. The last ultrasonic tank shell thickness measurement was taken on December 10, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 10, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.111 AOC-CS-111: Tank 14011

5.1.1.111.1 General Information

Tank 14011 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Viscoplex. The tank currently contains Furfuryl Alcohol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13.**

5.1.1.111.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on September 7, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.112 AOC-CS-112: Tank 14012

5.1.1.112.1 General Information

Tank 14012 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Product No. ECA 11190.

The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.112.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 20, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 9, 1984. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.113 AOC-CS-113: Tank 14013

5.1.1.113.1 General Information

Tank 14013 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Mix Amines. The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.113.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on June 9, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 14, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.114 AOC-CS-114: Tank 14014

5.1.1.114.1 General Information

Tank 14014 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Glycol. The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.114.2 Maintenance and Integrity History

The last external visual inspection of the tank was on December 5, 2003. The last ultrasonic tank shell thickness measurement was taken on December 5, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 5, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.115 AOC-CS-115: Tank 14015

5.1.1.115.1 General Information

Tank 14015 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Neu-Tri. The tank currently contains Surface Water. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.115.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on September 14, 1995 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 14, 1995. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.116 AOC-CS-116: Tank 14016

5.1.1.116.1 General Information

Tank 14016 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Neu-Tri. The tank currently contains Surface Water. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13.**

5.1.1.116.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on September 14, 1995 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 14, 1995. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.117 AOC-CS-117: Tank 14017

5.1.1.117.1 General Information

Tank 14017 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13.**

5.1.1.117.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on October 20, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 20, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.118 AOC-CS-118: Tank 14018

5.1.1.118.1 General Information

Tank 14018 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Surface Water. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the eastern side of Yard 14, is shown on **Figure 13**.

5.1.1.118.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on September 6, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 18, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.119 AOC-CS-119: Tank 14019

5.1.1.119.1 General Information

Tank 14019 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Infineum C9380. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the northeastern side of Yard 14, is shown on **Figure 13.**

5.1.1.119.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2001. The last ultrasonic tank shell thickness measurement was taken on October 1, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 1, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.120 AOC-CS-120: Tank 14020

5.1.1.120.1 General Information

Tank 14020 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Furfuryl Alcohol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the northeastern side of Yard 14, is shown on **Figure 13**.

5.1.1.120.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 21, 2002. The last ultrasonic tank shell thickness measurement was taken on October 21, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 23, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.121 AOC-CS-121: Tank 14021

5.1.1.121.1 General Information

Tank 14021 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, on the northeastern side of Yard 14, is shown on **Figure 13**.

5.1.1.121.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 9, 2002. The last ultrasonic tank shell thickness measurement was taken on April 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 22, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.122 AOC-CS-122: Tank 14022

5.1.1.124.1 General Information

Tank 14022 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Infineum C9417. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the northeastern portion of Yard 14, is shown on **Figure 13.**

5.1.1.122.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 21, 2002. The last ultrasonic tank shell thickness measurement was taken on October 21, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 22, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.123 AOC-CS-123: Tank 14023

5.1.1.123.1 General Information

Tank 14023 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the northeastern portion of Yard 14, is shown on **Figure 13.**

5.1.1.123.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 9, 2002. The last ultrasonic tank shell thickness measurement was taken on April 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 21, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.124 AOC-CS-124: Tank 14024

5.1.1.124.1 General Information

Tank 14024 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Product No. LIAL 125. The tank is currently empty and out of service. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the northeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.124.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 9, 2002. The last ultrasonic tank shell thickness measurement was taken on April 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 21, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.125 AOC-CS-125: Tank 14025

5.1.1.125.1 General Information

Tank 14025 was placed in service in 1964 and has a capacity of approximately 154,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Ethylene Glycol. Secondary containment for this tank is Dike 125 of Yard 14. Spills in Dike 125 are contained via the plant-wide containment curb and diversion system. The tank location, in the northeastern portion of Yard 14, is shown on **Figure 13**.

5.1.1.125.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 9, 2002. The last ultrasonic tank shell thickness measurement was taken on April 9, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 21, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.126 AOC-CS-126: Tank 14050

5.1.1.126.1 General Information

Tank 14050 was placed in service in 1964 and has a capacity of approximately 217,000 gallons. Historically the tank reportedly contained Iso Nonanoic Acid. The tank currently contains Product No. DPG-Frag. Secondary containment for this tank is Dike 50 of Yard 14. Spills in Dike 50 are contained via the plant-wide containment curb and diversion system. The available capacity of Dike 50 is 26,000 cubic feet or 194,500 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13**.

5.1.1.126.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 9, 2002. The last ultrasonic tank shell thickness measurement was taken on March 8, 1996 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 4, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.127 AOC-CS-127: Tank 14051

5.1.1.127.1 General Information

Tank 14051 was placed in service in 1964 and has a capacity of approximately 217,000 gallons. Historically the tank reportedly contained Iso Nonanoic Acid. The tank is currently empty and out of service. Secondary containment for this tank is Dike 50 of Yard 14. Spills in Dike 50 are contained via the plant-wide containment curb and diversion system. The available capacity of Dike 50 is 26,000 cubic feet or 194,500 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13**.

5.1.1.127.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 6, 2001. The last ultrasonic tank shell thickness measurement was taken on March 20, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 1, 1988. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.128 AOC-CS-128: Tank 14052

5.1.1.128.1 General Information

Tank 14052 was placed in service in 1986 and has a capacity of approximately 217,000 gallons. Historically the tank reportedly contained Organic Acid<0.03. The tank is currently empty and out of service. Secondary containment for this tank is Dike 50 of Yard 14. Spills in Dike 50 are contained via the plant-wide containment curb and diversion system. The available capacity of Dike 50 is 26,000 cubic feet or 194,500 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13**.

5.1.1.128.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 18, 2002. The last ultrasonic tank shell thickness measurement was taken on October 18, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 26, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.129 AOC-CS-129: Tank 14073

5.1.1.129.1 General Information

Tank 14073 was placed in service in 1965 and has a capacity of approximately 127,000 gallons. Historically the tank reportedly contained Antifreeze JC. The tank currently contains Type IV wing deicer. The tank location, in the northern portion of Yard 14, is shown on **Figure 13**.

5.1.1.129.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 22, 2003. The last ultrasonic tank shell thickness measurement was taken on August 22, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 22, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.130 AOC-CS-130: Tank 14074

5.1.1.130.1 General Information

Tank 14074 was placed in service in 1965 and has a capacity of approximately 127,000 gallons. Historically the tank reportedly contained Potassium Hydroxide. The tank currently contains Ethylene Glycol. The tank location, in the northern portion of Yard 14, is shown on **Figure 13**.

5.1.1.130.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on June 30, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 30, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.131 AOC-CS-131: Tank 14075

5.1.1.131.1 General Information

Tank 14075 was placed in service in 1965 and has a capacity of approximately 127,000 gallons. Historically the tank reportedly contained Aminoethylethanolamine. The tank is currently empty. The tank location, in the northern portion of Yard 14, is shown on **Figure 13**.

5.1.1.131.2 Maintenance and Integrity History

Tank 14075 is currently out of service and requires an internal inspection and/or repairs prior to activation. The last external visual inspection of the tank was on April 6,

1996. The last ultrasonic tank shell thickness measurement was taken on August 20, 1990 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 20, 1990. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.132 AOC-CS-132: Tank 14100

5.1.1.132.1 General Information

Tank 14100 was placed in service in 1966 and has a capacity of approximately 428,000 gallons. Historically the tank reportedly contained VOC<0.02 PSIA. The tank currently contains Propylene Glycol. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.132.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 16, 2002. The last ultrasonic tank shell thickness measurement was taken on August 16, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 4, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.133 AOC-CS-133: Tank 14101

5.1.1.133.1 General Information

Tank 14101 was placed in service in 1966 and has a capacity of approximately 217,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains Dipropylene Glycol. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.133.2 Maintenance and Integrity History

The last external visual inspection of the tank was on May 5, 2003. The last ultrasonic tank shell thickness measurement was taken on May 5, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.134 AOC-CS-134: Tank 14102

5.1.1.134.1 General Information

Tank 14102 was placed in service in 1966 and has a capacity of approximately 217,000 gallons. Historically the tank reportedly contained Lube Oil Additive. The tank currently contains P.G. Industrial. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.134.2 Maintenance and Integrity History

The last external visual inspection of the tank was on May 5, 2003. The last ultrasonic tank shell thickness measurement was taken on May 5, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.135 AOC-CS-135: Tank 14103

5.1.1.135.1 General Information

Tank 14103 was placed in service in 1965 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank currently contains Wintrex. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.135.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on March 17, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 17, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.136 AOC-CS-136: Tank 14104

5.1.1.136.1 General Information

Tank 14104 was placed in service in 1965 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained Organic Liquid<10.5 PSIA. The tank currently contains Wintrex. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.136.2 Maintenance and Integrity History

The last external visual inspection of the tank was on May 5, 2003. The last ultrasonic tank shell thickness measurement was taken on May 5, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 21, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.137 AOC-CS-137: Tank 14105

5.1.1.137.1 General Information

Tank 14105 was placed in service in 1965 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained Organic Liquid<10.5 PSIA. The tank is currently empty and out of service. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.137.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 1, 2003. The last ultrasonic tank shell thickness measurement was taken on August 1, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 21, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.138 AOC-CS-138: Tank 14106

5.1.1.138.1 General Information

Tank 14106 was placed in service in 1966 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained 1,4 Butanediol. The tank currently contains 1,4 Butanediol. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.138.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 6, 2001. The last ultrasonic tank shell thickness measurement was taken on January 6, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 6, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.139 AOC-CS-139: Tank 14107

5.1.1.139.1 General Information

Tank 14107 was placed in service in 1966 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained 111 Trichloroethane. The tank is currently empty. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.139.2 Maintenance and Integrity History

This tank is out of service and requires an API-653 inspection and/or repairs prior to activation. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.140 AOC-CS-140: Tank 14108

5.1.1.140.1 General Information

Tank 14108 was placed in service in 1966 and has a capacity of approximately 18,200 gallons. Historically the tank reportedly contained 111 Trichloroethane. The tank currently contains Penrav 2797. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.140.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on March 23, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 21, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.141 AOC-CS-141: Tank 14110

5.1.1.141.1 General Information

Tank 14110 was placed in service in 1967 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained 111 Trichloroethane. The tank currently contains Glycol Ether. The tank location, in the northeastern corner of Yard 14, is shown on **Figure 13**.

5.1.1.141.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 30, 2003. The last ultrasonic tank shell thickness measurement was taken on January 30, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 30, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.142 AOC-CS-142: Tank 14111

5.1.1.142.1 General Information

Tank 14111 was placed in service in 1967 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained Glycol Ether EM. The tank currently contains Glycol Ether DM. The tank location, in the northeastern corner of Yard 14, is shown on **Figure 13**.

5.1.1.142.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on July 11, 1994 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 11, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.143 AOC-CS-143: Tank 14112

5.1.1.143.1 General Information

Tank 14112 was placed in service in 1967 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained 111 Trichloroethane. The tank is currently empty and out of service. The tank location, in the northeastern corner of Yard 14, is shown on **Figure 13**.

5.1.1.143.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on December 8, 1998 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was December 8, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.144 AOC-CS-144: Tank 14200

5.1.1.144.1 General Information

Tank 14200 was placed in service in 1968 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained 1,4 Butanediol. The tank currently contains 1,4 Butanediol. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13.**

5.1.1.144.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on October 18, 1994 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 18, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.145 AOC-CS-145: Tank 14201

5.1.1.145.1 General Information

Tank 14201 was placed in service in 1968 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained 1,4 Butanediol. The tank currently contains 1,4 Butanediol. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13.**

5.1.1.145.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 23, 2001. The last ultrasonic tank shell thickness measurement was taken on August 23, 2001 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 23, 2001. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.146 AOC-CS-146: Tank 14202

5.1.1.146.1 General Information

Tank 14202 was placed in service in 1968 and has a capacity of approximately 30,500 gallons. Historically the tank reportedly contained M-pyrol. The tank currently contains Product No. NMP. Secondary containment for this tank is Dike 100 of Yard 14. Spills in Dike 100 are contained via the plant-wide containment curb and diversion system. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.146.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on March 20, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 10, 1988. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.147 AOC-CS-147: Tank 14350

5.1.1.147.1 General Information

Tank 14350 was placed in service in 1971 and has a capacity of approximately 1,015,000 gallons. Historically the tank reportedly contained VOC<10.5 PSIA. The tank currently contains Cashew Nutshell Liquid. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the northwestern corner of Yard 14, is shown on **Figure 13**.

5.1.1.147.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on November 20, 2000 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 20, 2000. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.148 AOC-CS-148: Tank 14351

5.1.1.148.1 General Information

Tank 14351 was placed in service in 1980 and has a capacity of approximately 812,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank is currently empty and out of service. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, on the northwestern edge of Yard 14, is shown on **Figure 13**.

5.1.1.148.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 10, 2002. The last ultrasonic tank shell thickness measurement was taken on October 10, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was September 27, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.149 AOC-CS-149: Tank 14352

5.1.1.149.1 General Information

Tank 14352 was placed in service in 1980 and has a capacity of approximately 564,000 gallons. Historically the tank reportedly contained Butyl Acrylate. The tank currently contains Piba03-65%. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, on the western edge of Yard 14, is shown on **Figure 13**.

5.1.1.149.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 14, 2004. The last ultrasonic tank shell thickness measurement was taken on October 14, 2004 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 14, 2004. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.150 AOC-CS-150: Tank 14353

5.1.1.150.1 General Information

Tank 14353 was placed in service in 1980 and has a capacity of approximately 317,000 gallons. Historically the tank reportedly contained Terathane. The tank currently contains Product No. DEG. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, on the western edge of Yard 14, is shown on **Figure 13**.

5.1.1.150.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on April 16, 1993 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 16, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.151 AOC-CS-151: Tank 14354

5.1.1.151.1 General Information

Tank 14354 was placed in service in 1980 and has a capacity of approximately 317,000 gallons. Historically the tank reportedly contained Diethylene Glycol. The tank currently contains Diethylene Glycol. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, on the southwestern edge of Yard 14, is shown on **Figure 13**.

5.1.1.151.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on May 26, 1994 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 26, 1994. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.152 AOC-CS-152: Tank 14355

5.1.1.152.1 General Information

Tank 14355 was placed in service in 1980 and has a capacity of approximately 317,000 gallons. Historically the tank reportedly contained Diethylene Glycol. The tank currently contains Product No. MEG. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the southwestern corner of Yard 14, is shown on **Figure 13.**

5.1.1.152.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on July 23, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 23, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.153 AOC-CS-153: Tank 14356

5.1.1.153.1 General Information

Tank 14356 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Monomer. The tank currently contains Methyl Acrylate. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the northwestern portion of Yard 14, is shown on **Figure 13.**

5.1.1.153.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 16, 2002. The last ultrasonic tank shell thickness measurement was taken on August 16, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 6, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.154 AOC-CS-154: Tank 14358

5.1.1.154.1 General Information

Tank 14358 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Polyisobutyleneamine. The tank currently contains Perchloroethylene. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the northwestern portion of Yard 14, is shown on **Figure 13**.

5.1.1.154.2 Maintenance and Integrity History

The last external visual inspection of the tank was on July 29, 2003. The last ultrasonic tank shell thickness measurement was taken on July 29, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was August 11, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.155 AOC-CS-155: Tank 14359

5.1.1.155.1 General Information

Tank 14359 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained VOC<6.7 PSIA. The tank currently contains Iso butyl Methacrylate. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the western portion of Yard 14, is shown on **Figure 13**.

5.1.1.155.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 16, 2002. The last ultrasonic tank shell thickness measurement was taken on August 16, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.156 AOC-CS-156: Tank 14360

5.1.1.156.1 General Information

Tank 14360 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained VOC<0.02 PSIA. The tank currently contains PALATINOL 79P. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the western portion of Yard 14, is shown on **Figure 13**.

5.1.1.156.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on July 1, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was July 1, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.157 AOC-CS-157: Tank 14361

5.1.1.157.1 General Information

Tank 14361 was placed in service in 1980 and has a capacity of approximately 432,000 gallons. Historically the tank reportedly contained Polyisobutyleneamine. The tank currently contains PIBA 03. Secondary containment for this tank is Dike 1 of Yard

14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the western portion of Yard 14, is shown on **Figure 13**.

5.1.1.157.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on October 15, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 15, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.158 AOC-CS-158: Tank 14362

5.1.1.158.1 General Information

Tank 14362 was placed in service in 1980 and has a capacity of approximately 432,000 gallons. Historically the tank reportedly contained Tetrachloroethylene. The tank currently contains Infineum C9417. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the western portion of Yard 14, is shown on **Figure 13.**

5.1.1.158.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on October 26, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 26, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.159 AOC-CS-159: Tank 14363

5.1.1.159.1 General Information

Tank 14363 was placed in service in 1980 and has a capacity of approximately 432,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains 2-Ethyl Hexyl Acrylate. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the southwestern portion of Yard 14, is shown on **Figure 13.**

5.1.1.159.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 28, 2002. The last ultrasonic tank shell thickness measurement was taken on October 28, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 16, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.160 AOC-CS-160: Tank 14364

5.1.1.160.1 General Information

Tank 14364 was placed in service in 1980 and has a capacity of approximately 432,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains Methyl Methacrylate. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the southwestern portion of Yard 14, is shown on **Figure 13.**

5.1.1.160.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 28, 2002. The last ultrasonic tank shell thickness measurement was taken on October 28, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 7, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.161 AOC-CS-161: Tank 14365

5.1.1.161.1 General Information

Tank 14365 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Dimethyl Formamide. The tank currently contains Exxate 600 Solvent. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.161.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on January 18, 1991 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 18, 1991. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.162 AOC-CS-162: Tank 14366

5.1.1.162.1 General Information

Tank 14366 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Trichloroethylene. The tank currently contains Trichloroethylene. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the central portion of Yard 14, is shown on **Figure 13**.

5.1.1.162.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on June 21, 1991 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 21, 1991. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.163 AOC-CS-163: Tank 14367

5.1.1.163.1 General Information

Tank 14367 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Ethylene Glycol Butyl Ether. The tank currently contains Glycol Ether Eb. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the central portion of Yard 14, is shown on **Figure 13.**

5.1.1.163.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on January 2, 1992 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 2, 1992. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.164 AOC-CS-164: Tank 14368

5.1.1.164.1 General Information

Tank 14368 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained VOC<0.02 PSIA. The tank is currently empty and out of service. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13**.

5.1.1.164.2 Maintenance and Integrity History

The last external visual inspection of the tank was on February 5, 2003. The last ultrasonic tank shell thickness measurement was taken on February 5, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was February 25, 1998. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.165 AOC-CS-165: Tank 14369

5.1.1.165.1 General Information

Tank 14369 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Diethylene Glycol. The tank currently contains Diethylene Glycol. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13.**

5.1.1.165.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on January 26, 1995 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was April 8, 1988. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.166 AOC-CS-166: Tank 14370

5.1.1.166.1 General Information

Tank 14370 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained Ethylene Diamine. The tank currently contains Ethylene Diamine. Secondary containment for this tank is Dike 2 of Yard 14, constructed of concrete. The available capacity of Dike 2 is 31,500 cubic feet or 235,600 gallons. The tank location, in the southern portion of Yard 14, is shown on **Figure 13.**

5.1.1.166.2 Maintenance and Integrity History

The last external visual inspection of the tank was on September 7, 2001. The last ultrasonic tank shell thickness measurement was taken on June 10, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was June 10, 1993. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.167 AOC-CS-167: Tank 14371

5.1.1.167.1 General Information

Tank 14371 was placed in service in 1964 and has a capacity of approximately 6,800 gallons. The tank currently contains Norsocryl 200 Inhibitor. The AST is equipped with concrete secondary containment that has a capacity of 1,166,467 gallons. The tank location is shown on **Figure 13**.

5.1.1.167.2 Maintenance and Integrity History

The last external visual inspection of the tank was on October 21, 2002. The last ultrasonic tank shell thickness measurement was taken on October 21, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was October 7, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.168 AOC-CS-168: Tank 14357

5.1.1.168.1 General Information

Tank 14357 was placed in service in 1980 and has a capacity of approximately 220,000 gallons. Historically the tank reportedly contained VOC<7.0 PSIA. The tank currently contains Butyl Acrylate. Secondary containment for this tank is Dike 1 of Yard 14, constructed of concrete. The available capacity of Dike 1 is 170,250 cubic feet or 1,273,500 gallons. The tank location, in the northwestern portion of Yard 14, is shown on **Figure 13**.

5.1.1.168.2 Maintenance and Integrity History

The last external visual inspection of the tank was on August 16, 2002. The last ultrasonic tank shell thickness measurement was taken on August 16, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was May 29, 1997. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.169 AOC-CS-169: Tank 12412

5.1.1.169.1 General Information

Tank 12412 was placed in service in 1970 and has a capacity of approximately 49,000 gallons. Historically the tank reportedly contained Glycol Ether DB. The tank currently contains Waste Water. Secondary containment for this tank is Dike 300 of Yard 12, constructed of concrete. The available capacity of Dike 300 is 201,000 cubic feet or 1,503,000 gallons. The tank location, in the central/western portion of Yard 12, is shown on **Figure 13**.

5.1.1.169.2 Maintenance and Integrity History

The last external visual inspection of the tank was on March 28, 2002. The last ultrasonic tank shell thickness measurement was taken on March 28, 2002 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 28, 2002. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.170 AOC-CS-170: Tank 12608

5.1.1.170.1 General Information

Tank 12608 was placed in service in 1983 and has a capacity of approximately 165,000 gallons. Historically the tank reportedly contained Versene 100. The tank currently contains Versene 100. Secondary containment for this tank is Dike 4 of Yard 12, constructed of concrete. The available capacity of Dike 4 is 24,300 cubic feet or 182,000 gallons. The tank location, in the central/eastern portion of Yard 12, is shown on **Figure 13**.

5.1.1.170.2 Maintenance and Integrity History

The last external visual inspection of the tank was on January 29, 2003. The last ultrasonic tank shell thickness measurement was taken on January 29, 2003 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was January 29, 2003. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.171 AOC-CS-171: Tank 11686

5.1.1.171.1 General Information

Tank 11686 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Caustic Soda. The tank currently contains Propylene Glycol-USP. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 143,100 cubic feet or 1,070,000 gallons. The tank location, in the southern portion of Yard 11, is shown on **Figure 13**.

5.1.1.171.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on March 1, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was March 1, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.1.172 AOC-CS-172: Tank 11688

5.1.1.172.1 General Information

Tank 11688 was placed in service in 1983 and has a capacity of approximately 800,000 gallons. Historically the tank reportedly contained Ethylene Glycol. The tank currently contains Product No. TX-12712. Secondary containment for this tank is Dike 9 of Yard 11, constructed of concrete. The available capacity of Dike 9 is 149,000 cubic feet or 1,114,520 gallons. The tank location, in the southeastern portion of Yard 11, is shown on **Figure 13**.

5.1.1.172.2 Maintenance and Integrity History

The last external visual inspection of the tank was on April 1, 2004. The last ultrasonic tank shell thickness measurement was taken on November 16, 1999 in a manner consistent with the American Petroleum Institute (API) 653 guidelines. The last internal tank inspection was November 16, 1999. Both audible and visual high level alarms are installed on this tank. No tank integrity issues have been reported.

5.1.2 AOC-CS-173 Aboveground Piping Network

The ASTs located at the Chem South facility are connected to wharf receiving facilities, rail and truck loading racks through a series of aboveground pipelines. There are no underground pipelines associated with the transfer of product at the Chem South facility. The aboveground product lines are associated with a number of valves, manifolds, and pump stations. The piping network and pump stations are used to convey product to on-site storage locations as well as various distribution points.

The estimated total length of the aboveground piping is approximately 13,900 feet. The aboveground piping layout is shown on Figure 14. The product lines are of steel construction. A majority of the lines follow shared piping traces. Typically, the lines are supported above ground by metal framework. In some cases, the pipelines are in contact with the ground surface or pass through tank berm walls. As shown on Figure 14, the lines are primarily located within other AOCs identified elsewhere in this report. The aboveground lines are used to convey a wide array of chemical products stored at the facility. Some records are available that distinguish between the different products conveyed in the different lines; this information will be used as applicable during the planned Site Investigation.

No records of releases from aboveground piping were found. In addition, no records of soil or groundwater investigations that targeted the aboveground piping network were found. However, many monitoring wells and Geoprobe points were performed close to aboveground pipelines.

5.1.3 Underground Storage Tanks and Associated Piping (PA Form Question A2)

One former underground storage tank (UST) is located at the Chem South facility and is shown on Figure 12. In September 2003, a Site Investigation Report (SIR) entitled IMTT Packaging Warehouse Fuel Oil UST was submitted to the NJDEP. This SIR summarized the activities associated with the removal of a 2,000-gallon UST. The UST had previously stored No. 2 fuel oil that had been used for heating purposes prior to 1997.

During its removal by EQ Northeast, the UST was rusted and corrosion holes on the sides and bottom of the UST were noted. Due to the presence of holes in the UST and petroleum product on groundwater encountered in the UST excavation, the NJDEP Hot Line was called and Case No. 03-08-25-1147-48 was assigned to the investigation.

Bluestone was retained to perform post excavation soil sampling. Soil samples from the four sides of the excavation and from beneath the fuel lines were collected and submitted for TPH analysis. The results of the analysis showed that the highest concentration of TPH was 237 mg/kg and consequently the soil around the UST is below the NJDEP Soil Cleanup Criteria.

To investigate possible impact to groundwater, a monitoring well was installed in the area of the UST excavation and a groundwater sample was obtained for VOC and SVOC analysis.

The groundwater sampling results were compared to the NJDEP Class II-A Groundwater Quality Criteria, last update November 18, 1996. Analysis of the groundwater sample collected resulted in one constituent of concern. Trichloroethene was detected at a concentration of two micrograms per liter, which exceeds the criteria concentration of one microgram per liter.

Trichloroethene is generally not associated with No. 2 fuel oil and consequently, the impact to groundwater does not appear to be related to the 2,000-gallon UST. The post-excavation soil sampling results show that potential petroleum constituents of concern are not present above NJDEP Soil Cleanup Criteria. Therefore, a "no further action" recommendation for soils at the site was submitted to the NJDEP.

It was also recommended that the groundwater be addressed as part of the on-going site-wide groundwater investigation.

5.1.4 Silos (PA Form Question A3)

There is one silo located at the Chem South facility. The silo was installed in 1986-1987. Since installation, the silo has been used to store unused (clean) powdered activated carbon that is used in the Zimpro Wastewater Treatment Plant. The silo is constructed of steel and has a maximum capacity of approximately 65,000 pounds of carbon. Carbon stored in the silo is pumped to the water treatment plant carbon contact tank where it is used in the treatment of impacted water collected by the sites storm water system. The location of the silo is shown on Figure 12.

5.1.5 Rail Cars (PA Form Question A4)

Rail cars are used for the transportation of product stored at the Chem South facility. Rail car operations are addressed under Section 5.1.6 Loading and Unloading Areas. Currently, East Jersey Rail Road operates at the Chem South facility. Rail cars are occasionally staged at the facility. The layout of the rail tracks located on the Chem South property and adjacent property is shown on Figure 15.

No records of releases or sampling conducted relative to the railroad were found. Furthermore, no evidence of releases in the form of stained surficial soil or stressed vegetation was observed during an inspection of the rail line conducted in March 2005. However, during investigations and secondary containment upgrades of the JV rail loading area, historic impacts to soil and groundwater were encountered. Findings of these impacts are summarized in Section 1.3 of this report.

5.1.6 Loading and Unloading Areas (PA Form Question A5)

Loading and unloading areas are shown on Figure 16. Each tank truck and tank car loading/unloading area is provided with secondary containment or a diversion system of sufficient capacity to contain the liquid from the largest single compartment of any tank truck or tank car handled at the transfer area. Rail cars having a maximum capacity of 30,000 gallons and tank trucks having a maximum capacity of 9,000 gallons may be handled at all locations of the facility. Based on the included review of historic spills, loading areas should be considered a primary source of site wide soil and groundwater impacts identified at the site.

Within each loading/unloading rack is a satellite accumulation area. The management and operation of the satellite accumulation areas is performed by Specialty Disposal Services of Mt. Lakes, New Jersey. After the completion of the loading/unloading process, the hose used during the event is placed inside a bucket for collection of any residual product that may drip from the hose. The accumulated product is transferred into a drum that is clearly labeled with its contents. The drum is then either transferred to the Hazardous Waste Storage Area (see Section 5.5.2) or transferred directly back into the product tank.

Prior to and during the transfer of product involving tank trucks or tank cars, operating personnel are required to perform a comprehensive examination of all outlets to ensure no leakage. Rail cars are attended to at all times during the unloading or loading operation in accordance with Department of Transportation Regulations. Upon completion of the transfer operation, all vehicles are checked to assure all outlet valves are securely closed, and that all outlets are capped or flanged.

Under normal operating conditions, the loading of product is performed at the truck racks. However, occasionally a product line that requires heating becomes clogged. As a backup, ASTs within Dike Area 5 and Dike Area 6, and AST 11667 and AST 11688 are also equipped with truck unloading connections. The loading of the trucks is conducted within an area with secondary containment.

5.1.6.1 AOC-CS-174 CS-LR-W1

5.1.6.1.1 General Information

AOC-CS-174 CS-LR-W1 is a chemical services loading rack located east of ASTs 14358 and 14357. IMTT currently uses the rack for acrylate (Accuload II) products.

5.1.6.1.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-174 CS-LR-W1 was conducted. The loading rack appeared to be in good condition with no obvious staining.

5.1.6.2 AOC-CS-175 CS-LR-R1

5.1.6.2.1 General Information

AOC-CS-175 CS-LR-R1 is a chemical services loading rack located west of ASTs 14024 and 14110. It is currently used for unloading and loading various chemicals from rail cars.

5.1.6.2.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-175 CS-LR-R1 was conducted. The loading rack is located on concrete pavement with minor staining observed during the inspection.

5.1.6.3 AOC-CS-176 CS-LR-R2

5.1.6.3.1 General Information

AOC-CS-176 CS-LR-R2 is a chemical rail loading rack that is located north of AST 14052.

5.1.6.3.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-176 CS-LR-R2 was conducted. The loading rack is located on concrete with no obvious staining observed during the inspection.

5.1.6.4 AOC-CS-177 CS-LR-W9

5.1.6.4.1 General Information

AOC-CS-177 CS-LR-W9 is a chemical truck loading/unloading rack located east of AST 14052.

5.1.6.4.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-177 CS-LR-W9 was conducted. The loading rack is located on concrete with no obvious staining observed during the inspection.

5.1.6.5 AOC-CS-178 CS-LR-W10

5.1.6.5.1 General Information

AOC-CS-178 CS-LR-W10 is a truck loading rack that is located between Loading Rack W9 and Loading Rack W11. The loading rack is currently used for the transfer of miscellaneous chemical products.

5.1.6.5.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-178 CS-LR-W10 was conducted. The loading rack is located on concrete with some staining observed during the inspection.

5.1.6.6 AOC-CS-179 CS-LR-W11

5.1.6.6.1 General Information

AOC-CS-179 CS-LR-W11 is a chemical truck loading/unloading rack that is located west of AST 14001 and AST 14005. The loading rack is currently used for loading and unloading of miscellaneous chemical products.

5.1.6.6.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-179 CS-LR-W11 was conducted. The loading rack is located on concrete with some minor staining observed during the inspection.

5.1.6.7 AOC-CS-180 CS-LR-24

5.1.6.7.1 General Information

AOC-CS-180 CS-LR-24 is a truck rack that is located west of AST 14007. The loading rack is currently used as for loading and unloading methanol.

5.1.6.7.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-180 CS-LR-24 was conducted. The loading rack is located on a concrete with no staining observed during the inspection.

5.1.6.8 AOC-CS-181 CS-LR-E1

5.1.6.8.1 General Information

AOC-CS-181 CS-LR-E1 is a truck loading rack located north of AST 14111 and AST 14112. The loading rack is currently used as chemical loading rack.

5.1.6.8.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-181 CS-LR-E1 was conducted. The loading rack is located on concrete with some staining observed during the inspection.

5.1.6.9 AOC-CS-182 CS-LR-E2

5.1.6.9.1 General Information

AOC-CS-182 CS-LR-E2 is an inactive truck loading rack that is located east of AST 12250. It was used for the loading of miscellaneous chemical products.

5.1.6.9.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-182 CS-LR-E2 was conducted. The loading rack is located on concrete with some staining observed during the inspection.

5.1.6.10 AOC-CS-183 CS-LR-E4

5.1.6.10.1 General Information

AOC-CS-183 CS-LR-E4 is a truck loading rack that is located east of AST 12403. It is currently used as a loading rack for miscellaneous chemicals, caustics, glycols, and ether.

5.1.6.10.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-183 CS-LR-E4 was conducted. The loading rack is located on concrete with some staining observed during the inspection.

5.1.6.11 AOC-CS-184 CS-LR-E10

5.1.6.11.1 General Information

AOC-CS-184 CS-LR-E10 is a truck loading rack that is located north of AST 12400 and AST 12500. This loading rack is currently used to transfer miscellaneous chemical products.

5.1.6.11.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-184 CS-LR-E10 was conducted. The loading rack is located on concrete with no obvious staining observed during the inspection.

5.1.6.12 AOC-CS-185 CS-LR-R3

5.1.6.12.1 General Information

AOC-CS-185 CS-LR-R3 is a rail loading rack that is located east of AST 12632. This loading rack is currently used to transfer miscellaneous chemical products.

5.1.6.12.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-185 CS-LR-R3 was conducted. The loading rack is located on asphalt with some staining observed during the inspection.

5.1.6.13 AOC-CS-186 CS-LR-R4

5.1.6.13.1 General Information

AOC-CS-186 CS-LR-R4 is a loading and unloading area for rail cars that is located south of Loading Rack R3. This loading rack is currently used to transfer miscellaneous chemical products.

5.1.6.13.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-186 CS-LR-R4 was conducted. The loading rack is located on asphalt with some staining observed during the inspection.

5.1.6.14 AOC-CS-187 CS-LR-JV

5.1.6.14.1 General Information

AOC-CS-187 CS-LR-JV is a truck loading rack that is located east of AST 12624. This loading rack is currently used to transfer miscellaneous chemical products.

5.1.6.14.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-187 CS-LR-JV was conducted. The loading rack is located on asphalt with some staining observed during the inspection.

5.1.6.15 AOC-CS-188 CS-LR-25

5.1.6.15.1 General Information

AOC-CS-188 CS-LR-25 is a truck loading rack that is located east of AST 11680 and AST 11682. The loading rack is currently used to transfer antifreeze.

5.1.6.15.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-188 CS-LR-25 was conducted. The loading rack is located on asphalt with no staining observed during the inspection.

5.1.6.16 AOC-CS-189 CS-LR-11

5.1.6.16.1 General Information

AOC-CS-189 CS-LR-1 is a loading rack that is located east of AST 14073. The loading rack is used for the loading and unloading of miscellaneous chemical products.

5.1.6.16.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-189 CS-LR-1 was conducted. The loading rack is located on asphalt with no staining observed during the inspection.

5.1.6.17 AOC-CS-190 CS-LR-2

5.1.6.17.1 General Information

AOC-CS-190 CS-LR-2 is a rack that is located west of AST 14008. The loading rack is used for the loading and unloading of miscellaneous chemical products.

5.1.6.17.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-190 CS-LR-2 was conducted. The loading rack is located on asphalt with no staining observed during the inspection.

5.1.6.18 AOC-CS-191 CS-LR-3

5.1.6.18.1 General Information

AOC-CS-191 CS-LR-F3 is a loading rack that is located west of AST 14010. The loading rack is used for the loading and unloading of miscellaneous chemical products.

5.1.6.18.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-191 CS-LR-3 was conducted. The loading rack is located on asphalt with no staining observed during the inspection.

5.1.6.19 AOC-CS-192 CS-LR-Packaging

5.1.6.19.1 General Information

AOC-CS-192 CS-LR-Packaging are unloading connections that are located along the west side of the Packaging Building. The unloading connections are used for the unloading of miscellaneous chemical products that are used during the blending processes. A list of these products is provided in Section 2.2 Site Operations.

5.1.6.19.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-192 CS-LR-Packaging was conducted. The unloading connections are located inside the Packaging Building on concrete with no staining observed during the inspection.

5.1.7 Piping, Pumping Stations, Sumps, and Pits (PA Form Question A6)

All pump pads located at the Chem South facility are located in areas with secondary containment. The pump pad locations are shown on Figure 17.

5.1.7.1 AOC-CS-193 PU-61

5.1.7.1.1 General Information

AOC-CS-193 PU-61 consists of concrete pads with secondary containment systems around the pumps. Each pump has an individual concrete pad. The pads are located east of, and parallel to ASTs 14356 to 143364 on the west side of Chem South.

5.1.7.1.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-193 PU-61 was conducted and staining was observed on the pump pads upon inspection.

5.1.7.2 AOC-CS-194 PU-62

5.1.7.2.1 General Information

AOC-CS-194 PU-62 consists of concrete pads that are surrounded by concrete on all sides. The pads are located north of AST 14365 on the west side of Chem South.

5.1.7.2.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-194 PU-62 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.3 AOC-CS-195 PU-63

5.1.7.3.1 General Information

AOC-CS-195 PU-63 consists of concrete pads that are surrounded by concrete on all sides. The pads are located east of ASTs 14073 and 14074 on the west side of Chem South.

5.1.7.3.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-195 PU-63 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.4 AOC-CS-196 PU-64

5.1.7.4.1 General Information

AOC-CS-196 PU-64 consists of concrete pads that are surrounded by concrete on all sides. The secondary containment system around the pumps consists of drains that are built into the surrounding concrete. The pads are located east of the warehouse and ASTs 14200, 14201, 14202, and 14101 in the west side of Chem South.

5.1.7.4.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-196 PU-64 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.5 AOC-CS-197 PU-65

5.1.7.5.1 General Information

AOC-CS-197 PU-65 consists of concrete pads with secondary containment around the pumps. The pads are located on the east side of ASTs 14051 and 14052 on the west side of Chem South.

5.1.7.5.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-197 PU-65 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.6 AOC-CS-198 PU-66

5.1.7.6.1 General Information

AOC-CS-198 PU-66 consists of concrete pads with secondary containment around the pumps. The secondary containment system around the pumps consists of drains that are built into the surrounding concrete. The pads are located on west of the ASTs 1400 to 14025. The pads lie parallel to the two tank rows.

5.1.7.6.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-198 PU-66 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.7 AOC-CS-199 PU-67

5.1.7.7.1 General Information

AOC-CS-199 PU-67 consists of concrete pads with a secondary containment system around the pumps. The pads are located north of ASTs 14110, 14111, and 14112 on the west side of Chem South.

5.1.7.7.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-199 PU-67 was conducted and minor staining was observed on the pump pads upon inspection.

5.1.7.8 AOC-CS-200 PU-68

5.1.7.8.1 General Information

AOC-CS-200 PU-68 consists of concrete pads with a secondary containment system around the pumps. The pads are located east of ASTs 14005 and 14007 on the west side of Chem South.

5.1.7.8.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-200 PU-68 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.9 AOC-CS-201 PU-69

5.1.7.9.1 General Information

AOC-CS-201 PU-69 consists of concrete pads with a secondary containment system around the pumps. The pads are located north of ASTs 12000 and 12001 on the west side of Chem South.

5.1.7.9.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-201 PU-69 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.10 AOC-CS-202 PU-70

5.1.7.10.1 General Information

AOC-CS-202 PU-70 consists of concrete pads with a secondary containment system around the pumps. The pads are located north of the two tank rows containing ASTs 12633 to 12666 on the west side of Chem South.

5.1.7.10.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-202 PU-70 was conducted and staining was observed on the pump pads upon observation. Staining was more visible around the pumps closer to AST 12660.

5.1.7.11 AOC-CS-203 PU-71

5.1.7.11.1 General Information

AOC-CS-203 PU-71 consists of concrete pads with a secondary containment system around the pumps. The pads are located south of ASTs 12603 and 12604 on the west side of Chem South.

5.1.7.11.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-203 PU-71 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.12 AOC-CS-204 PU-72

5.1.7.12.1 General Information

AOC-CS-204 PU-72 consists of concrete pads with a secondary containment system around the pumps. The pads are located on the east side of the two rows containing ASTs 12605 to 12614, on the west side of Chem South.

5.1.7.12.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-204 PU-72 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.13 AOC-CS-205 PU-73

5.1.7.13.1 General Information

AOC-CS-205 PU-73 consists of concrete pads with a secondary containment system around the pumps. Asphalt surrounds the pad on all sides. The pads are located east of the two tank rows containing ASTs 12615 to 12632, on the west side of Chem South.

5.1.7.13.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-205 PU-73 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.14 AOC-CS-206 PU-74

5.1.7.14.1 General Information

AOC-CS-206 PU-74 consists concrete pads with a secondary containment system around the pumps. The pads are located south of the tank row containing ASTs 11667 to 11672, on the east side of Chem South.

5.1.7.14.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-206 PU-74 was conducted and no obvious staining was observed on the pump pad upon inspection.

5.1.7.15 AOC-CS-207 PU-75

5.1.7.15.1 General Information

AOC-CS-207 PU-75 does not have concrete pads underneath the pumps. There is a concrete secondary containment system around the pumps. The pads are located west of ASTs 11673, 11674, and 11675 on the east side of Chem South.

5.1.7.15.2 Environmental History & Site Inspection

In April 2005, a visual inspection of AOC-CS-207 PU-75 was conducted and no obvious staining was observed around the pump pad upon inspection.

5.1.7.16 AOC-CS-208 PU-76

5.1.7.16.1 General Information

AOC-CS-208 PU-76 consists of concrete pads with a secondary containment system around the pumps. The pads are located north of ASTs 11682, 11684, 11686, and 11688 on the east side of Chem South.

5.1.7.16.2 Environmental History & Site Inspection

In October 2004, a visual inspection of AOC-CS-208 PU-76 was conducted and corrosion and staining was observed on the pump pads upon inspection. Staining was more evident on the pumps closer to AST 11688.

5.1.7.17 AOC-CS-209 PU-Pump House

5.1.7.17.1 General Information

AOC-CS-209 PU-Pump House consists of a concrete floor around the pumps. The pads are located near ASTs 12401, 12402, and 12403.

5.1.7.17.2 Environmental History & Site Inspection

In May 2005, a visual inspection of AOC-CS-209 PU-Pump House was conducted and no staining was observed on the pump pads upon inspection.

5.1.7.18 AOC-CS-210 PU-12300

5.1.7.18.1 General Information

AOC-CS-210 PU-12300 consists of a concrete pad with a secondary containment system around the pump. The pad is located southwest of AST 12300.

5.1.7.18.2 Environmental History & Site Inspection

In May 2005, a visual inspection of AOC-CS-210 PU-12300 was conducted and no staining was observed on the pump pad upon inspection.

5.1.7.19 AOC-CS-211 PU-12301

5.1.7.19.1 General Information

AOC-CS-211 PU-12301 consists of a concrete pad with a secondary containment system around the pump. The pad is located southwest of AST 12301.

5.1.7.19.2 Environmental History & Site Inspection

In May 2005, a visual inspection of AOC-CS-211 PU-12301 was conducted and no staining was observed on the pump pad upon inspection.

5.1.7.20 AOC-CS-212 PU-12400

5.1.7.20.1 General Information

AOC-CS-212 PU-12400 consists of a concrete pad with a secondary containment system around the pump. The pad is located southwest of AST 12400.

5.1.7.20.2 Environmental History & Site Inspection

In May 2005, a visual inspection of AOC-CS-212 PU-12400 was conducted and no staining was observed on the pump pad upon inspection.

5.2 Storage and Staging Areas (PA Form Question B)

5.2.1 Storage Pads (PA Form Question B1)

The Packaging building has an area where it stores the final blended product before it is shipped. The area of the Packing Building used for storage is shown on Figure 12. Drums and containers filled and stored at the Packaging building include the following:

- Various grades of Antifreeze
- Neu-tri
- Propylene Glycol
- Sodium Chlorite 25%
- De-Foamers
- Glycerin
- Perchloroethylene
- Methylene Chloride
- Ethylene Glycol
- AF Inhibitor

Supratech 1% and 10% (5 gallon pails only)

Approximately 1,500 55-gallon drums and 225,000 1-gallon containers are stored in the Packaging building.

The following materials are stored in totes at the Packaging building:

Phosphoric Acid	Pot Ash
Dyes	U9WA&B Concentrate
2792 and 2797 Concentrate	EHA Acid

The Packaging building is located within the facility perimeter secondary containment curb. The location of the Packaging building and storage area is shown on Figure 12.

5.2.2 Surface Impoundments, Lagoons (PA Form Question B2)

There are no surface impoundments or lagoons located at the Chem South facility. No evidence of prior surface impoundments or lagoons was detected during the file review process.

5.2.3 Dumpsters (PA Form Question B3)

Solid waste disposal is managed on-site by dumpster containers. Some of the dumpster areas are relatively permanent (i.e. containers associated with office buildings), others are staged as a matter of convenience and efficiency (i.e. construction debris). In all cases, dumpster are handled by licensed haulers and disposal facilities. The locations of the Waste Collection areas is shown on Figure 18.

5.2.3.1 AOC-CS-213 CS-CA-A

5.2.3.1.1 General Information

AOC-CS-213 CS-CA-A is a fenced in area used for the storage of hazardous waste. The area is constructed and operated within compliance of 40CFR 262.34. Hazardous waste is stored in this area for less than 90-days. This area is discussed further in Section 5.5.2 Hazardous Material Storage and Handling Areas.

5.2.3.2 AOC-CS-214 CS-CA-B

5.2.3.2.1 General Information

AOC-CS-214 is a fenced in area used for the storage of hazardous waste. The area is constructed and operated within compliance of 40CFR 262.34. This area is discussed further in Section 5.5.2 Hazardous Material Storage and Handling Areas.

5.2.3.3 AOC-CS-215 CS-D-C

5.2.3.3.1 General Information

AOC-CS-215 is a 6 cubic yard dumpster that is located near the Scale Building in Chem South. The dumpster is used for the storage of general trash.

5.2.3.3.2 Environmental History and Site Inspection

In April 2005, a site inspection was conducted of AOC-CS-215 CS-D-C. The area is paved with no staining or evidence of a discharge associated with the use of this area.

5.2.3.4 AOC-CS-216 CS-CA-D

5.2.3.4.1 General Information

AOC-CS-216 is a universal waste collection area that is located near the warehouse in Chem South. Universal waste includes spent light bulbs/lamps, batteries, computers, electronics, etc. This area is discussed further in Section 5.5.2 Hazardous Material Storage and Handling Areas.

5.2.3.5 AOC-CS-217 CS-CA-E

5.2.3.5.1 General Information

AOC-CS-217 is a universal waste collection area that is located in the office area of Plant 2 in Chem South. Universal waste includes spent light bulbs/lamps, batteries, computers, electronics, etc.

5.2.3.5.2 Environmental History and Site Inspection

In April 2005, a site inspection was conducted of AOC-CS-217 CS-A-E. The area is paved with no staining or evidence of a discharge associated with the use of this area.

5.2.3.6 AOC-CS-218 CS-CA-F

5.2.3.6.1 General Information

AOC-CS-218 CS-CA-F is a universal waste collection area that is located in the office area of Plant 1 in Chem South. Universal waste includes spent light bulbs/lamps, batteries, computers, electronics, etc.

5.2.3.6.2 Environmental History and Site Inspection

In April 2005, a site inspection was conducted of AOC-CS-218 CS-CA-F. The area is paved with no staining or evidence of a discharge associated with the use of this area.

5.2.3.7 AOC-CS-219 CS-D-G

5.2.3.7.1 General Information

AOC-CS-219 is a 6 cubic yard dumpster that is located north of the JV loading rack in Chem South. It is exclusively used to store glass, plastic and aluminum products.

5.2.3.7.2 Environmental History and Site Inspection

On October 4, 2004, a site inspection was conducted of the AOC-CS-219. The area is paved with no staining or evidence of a discharge associated with the use of the dumpsters. The dumpster was covered with a hard plastic hinged lid.

5.2.3.8 AOC-CS-220 CS-D-H

5.2.3.8.1 General Information

AOC-CS-220 is a 6 cubic yard dumpster that is located north of the JV loading rack in Chem South. It is exclusively used to store mixed paper.

5.2.3.8.2 Environmental History and Site Inspection

On October 4, 2004, a site inspection was conducted of the AOC-CS-220. The area is paved with no staining or evidence of a discharge associated with the use of the dumpsters. The dumpster was covered with a hard plastic hinged lid.

5.2.4 Chemical Storage Cabinets/Closets (PA Form Question B4)

There are five chemical storage areas located at the Chem South facility. These areas are described below and are shown on Figure 19.

5.2.4.1 AOC-CS-221 CS-ST-A

AOC-CS-221 CS-ST-A is located inside of the Zimpro Wastewater Treatment Building. The following chemicals are used during the treatment process and are stored inside of the Zimpro Wastewater Treatment Building:

CHEMICAL	TYPE	EST. VOLUME
20% NaOH	Liquid	750 gals
98% H2SO4	Liquid	750 gals
Cat polymer	Liquid	55 gals
NH4C1	Powder	55 gal drum
An polymer	Powder	55-gal drum
Cat polymer	Powder	55-gal drum
Methanol	Liquid	55 gals

The polymers stored in powder form are dissolved in a 100-gallon mixing tank prior to addition to the treatment system. Ammonium chloride is dissolved in a 200-gallon mixing tank prior to addition to the treatment system. These mixing tanks are process tanks with spill containment provided via diversion to the plant sewer system.

5.2.4.2 AOC-CS-222 CS-ST-B

AOC-CS-222 CS-ST-B is associated with the IMTT laboratory located near the inspection rack. The laboratory is used to QA/QC product samples as product leaves the facility. The laboratory stores small amounts of laboratory reagents including:

Methanol – less than 1 quart
Acetone – less than 1 quart
Karl Ficher reagent – less than 1 quart
pH standards – less than 1 pint

5.2.4.3 AOC-CS-223 CS-ST-C

AOC-CS-223 CS-ST-C is located outside of the Chem Traffic office. Daily samples of the product are collected and stored in this area. The samples are placed inside of a wall-mounted storage cabinet that measures approximately 4 feet wide by 3 feet tall and 10 inches deep. The cabinet is used for the temporary storage of product collected from tank trucks as they leave the facility. The samples are collected for quality assurance purposes and brought to an on-site laboratory for analyses. Samples are collected in a various types of sample containers (ie. plastic or glass) in approximately one-liter containers. At any point during the day, there can be a number of sample jars ranging from 0 to 20 containers.

5.2.4.4 AOC-CS-224 CS-ST-D

AOC-CS-224 CS-ST-D is a chemical storage area for laboratory reagents used by an on-site laboratory contractor Laboratory Services, Inc. of Cartaret, New Jersey. The laboratory operates out of a trailer/office. A small reagent cabinet approximately 2 feet by 4 feet by 2 feet is located within the trailer. Small quantities of laboratory reagent used during the analyses of product samples are stored inside the cabinet. Reagents stored include:

Methanol – less than 1 quart

Acetone – less than 1 quart

Karl Ficher reagent – less than 1 quart

pH standards – less than 1 pint

5.2.4.5 AOC-CS-225 CS-ST-E

AOC-CS-225 CS-ST-E is a storage area inside the Air Compressor building where compressor oil is stored. On average, approximately 2 to 4 drums of compressor oil is stored in this area.

5.2.4.6 AOC-CS-226 CS-ST-F

AOC-CS-226 CS-ST-F is a storage area inside the Boiler House where water additives and water conditioners are stored.

5.3 Drainage Systems and Areas (PA Form Question C)

5.3.1 Floor Drains, Trenches, Piping, Sumps (PA Form Question C1)

Floor drains are located inside the Packaging Building at Chem South. There are two existing floor drains inside the Packaging building that drain into a sump. The collected fluid is then pumped into a tote, analyzed, and sold.

In April 2005, an inspection of the Packaging Building concrete floor was conducted. The floor appeared in good shape with minimal cracking. The Packaging building is located inside of a containment curb and storm sewer collection network.

5.3.2 Process Area Sinks And Piping Which Receive Process Waste (PA Form Question C2)

There are no process area sinks or piping which receive process waste at the Chem South facility. There are no liquid waste streams generated at the facility. There was no evidence of prior process sinks or piping revealed during the historic file review. Due to the fact that prior operators had performed a similar process, there is no reason to believe process sinks or piping existed at the site.

5.3.3 Roof Leaders When Process Operations Vent To Roof (PA Form Question C3)

There is one former vent to the Packaging Building roof. The vent was used for Crandall drum lines. The roof vent was removed from service when the packaging plant stopped using chlorinated solvents. The location of the former roof vent is shown on Figure 12.

5.3.4 Drainage Swales and Culverts (PA Form Question C4)

There are no drainage swales or culverts draining to natural waterways at the Site. Stormwater generated at the Site is contained and directed to the on-site stormwater treatment plant through a series of storm drains and gravity-operated underground piping. A map depicting the stormwater system is provided as Figure 20.

5.3.5 Storm Sewer Collection System (PA Form Question C5)

This Site is operating under an approved Discharge Prevention, Containment and Countermeasures Plan for the management of stormwater generated at the Site. Stormwater generated at the Site is contained and directed to the on-site East Side Wastewater Treatment plant through a series of storm drains and gravity-operated underground piping. A map depicting the stormwater system is provided as Figure 20.

As shown on Figure 20, the storm sewer collection system consists of approximately 33 catch basins, 18 covered manholes, and 16 underground sump locations. The underground sumps range is size from 2,000 gallons to 20,000 gallons; each sump capacity is provided below.

SUMP NUMBER	CAPACITY (gallons)
UG-1	5,000
UG-2	7,500
UG-3	8,000
UG-4	7,500
UG-5	1,500
UG-6	1,600
UG-7	2,200
UG-8	8,840
UG-9	8,000
UG-10	2,700
UG-11	20,000
UG-12	9,500
UG-13	2,000
UG-14	5,000
UG-15	5,000
UG-16	11,500

The storm sewer collection system diverts the collected water to the on-site East Side Wastewater Treatment plant. Prior to this, the Zimpro system was used to treat stormwater. The Zimpro Powdered Activated Carbon Treatment (PACT) system combines biological treatment and carbon absorption. In the PACT system, powered activated carbon is added to an aerobic or anaerobic biological treatment process.

IMTT is currently evaluating the Zimpro system and its potential future use.

5.3.6 Storm Water Detention Ponds And Fire Ponds (PA Form Question C6)

There are no storm water detention ponds or fire ponds at the Chem South site.

5.3.7 Surface Water Bodies (PA Form Question C7)

The closest surface water body to the Chem South site is the Kill Van Kull, which borders the Site to the south. The locations of the Kill van Kull is shown on Figure 1.

5.3.8 Septic Systems Leachfields or Seepage Pits (PA Form Question C8)

There are no septic system leachfields or seepage pits at the Chem South site.

5.3.9 Drywells and Sumps (PA Form Question C9)

There are no drywells or sumps at the Chem South site.

5.4 Discharge and Disposal Areas (PA Form Question D)

5.4.1 Areas of Discharge (PA Form Question D1)

IMTT maintains a data base of recorded spills at the Chem South facility. These spills include NJDEP Hotline calls and DPCC recorded spills. These spills are addressed in accordance with N.J.A.C. 7:1E5.3(e)1iii. Tables 4 and 5 provide a comprehensive list of these releases. The known location of releases is shown on Figure 21.

The following is a summary of select releases in chronological order. The selected releases were based upon the released amount and area covered. Details for all known releases are provided in Tables 4 and 5. Based on the included review of historic spills, loading areas should be considered a primary source of the site wide soil and groundwater impacts identified at the site.

Case #: 04-02-11-0804-28

IMTT initiated a project to install a storm sewer line to interconnect two dikes at Chem South in accordance with IMTT's Discharge Prevention and Countermeasure Plan (DPCC). At approximately 0800 hours the installation contractor notified the IMTT project manager that visually contaminated groundwater was seeping into the excavation. IMTT immediately stopped the project and initiated removal of the contaminated groundwater from the excavation and documented and sampled the sidewalls of the excavation following NJDEP Technical Regulations. The excavation was dewatered and the contractor completed installation of the sewer line. Water pumped by the contractor was sent to the on site wastewater treatment plant.

Post excavation soil samples, borings and a well installation were conducted at this location. An area specific Site Investigation Report will be submitted under the Chem South MOA. It is expected that this investigation will become part of the broader Chem South investigation.

Case #: 01-03-07-1649-03

At the Chem South facility methylene chloride rail loading rack at approximately 0215 hours a Field Operator had begun to load a railcar. The Field Operator discovered methylene chloride discharging from the vapor phase activated carbon unit associated with the rack. The vapor and product lines were incorrectly connected to the rail car. The Field Operator shut down the transfer. Visible product was cleaned up. Stained asphalt was removed. Soil samples were taken. The estimated discharge was 1440 gallons of methylene chloride. An ongoing investigation and IRM are underway.

Case #: 97-10-08-0949-15 – Diethylene Glycol spill of 75 gallons

The location was in dike #125 for Tank 14009. During a marine receipt, a 3-inch connection was improperly secured by a contractor. Free liquids were removed by vacuum truck.

Case #: 91-11-07-0148-41 – Di-Propylene Glycol

Di-propylene glycol leaked from the bottom outlet valve of a rail car while the rail car was being prepared to be unloaded into Tank 614. An estimated 10,789 gallons of product was released into the containment area before the leak could be stopped. All of the material was picked up with vacuum trucks the same day and disposed.

Case #: 91-10-17-0214 – Sodium Hydroxide (50%)

Based on available records, approximately 13,000 gallons of 50% sodium hydroxide leaked from a heat exchanger adjacent to Tank 686 due to the failure of a gasket at the base of the exchanger. The heat exchanger circulates the sodium hydroxide to maintain the temperature at 60 degrees Farenheit. The pump for the exchanger was shut off as soon as workers became aware of the spill. The spill was contained within containment area #9. Cleanup operations were completed the same day.

Case #: 91-06-17-2314-46 – Acetone

After being struck by a barge, the vessel Seabulk Magnachem released an estimated 21,000 gallons of acetone into the Kill Van Kull. The vessel was docked at the Powell Duffryn terminal discharging another parcel of product at the time. All associated valves were shut and transfer operations discontinued when the incident occurred.

Case #: 90-01-27-xxxx –Exxon Lube Oil Additive (Paranox-52)

The bleeder valve on E-6 was left open during start up of Tank 2 to the hose exchange to E-6. This caused approximately 1,443 gallons of Paranox-52 to be released out of the bleeder valve.

Case #: 89-08-25-xxxx – Old World Antifreeze

Tank 618 overflowed, spilling an estimated 3,100 gallons of Old World Antifreeze into dike #5. The overflow was caused by transfer valves being left open.

Case #: 89-04-02-0759 – Exxon Lube Oil Additive (Paramin Oil/ECA-9605/PX-24)

During a transfer of Paramin Oil from Tank 5 to Tank 9, approximately 2,500 gallons was released from the gauging hatch of Tank 5 onto the Exxon pad containment area. When discovered, all associated valving was shut, transfers discontinued, and the area secured. The cause of the release was from a miscalculation of the available volume in Tank 5. Ken's Marine Service commenced cleanup of the oil and water in the Exxon pad containment area immediately. Cleanup operations involved the use of sorbent material and vacuum trucks. The oil/water mixture recovered was disposed at B&L Corporation in Newark, New Jersey. Cleanup operations were complete on April 24, 1989.

Case #: 88-09-14-xxxx – Sodium Hydroxide (50%)

An in-line site glass ruptured on line #351 during a marine transfer. All marine transfers were discontinued and associated valving shut upon discovery. The rupture caused an estimated 6,000 gallons of 50% sodium hydroxide solution to be released into dike containment area #1. The entire contents of dike #1, which included rainwater, was promptly pumped to the wastewater equalization tank where immediate pH neutralization commenced.

Case #: 87-06-10-xxxx – Methylene Chloride

A three-inch valve was left open at Tank 368 on the pig chamber of the pier line during methylene chloride transfer from Tank 356 to Tank 368. The valve was promptly closed upon discovery. Approximately 39,000 gallons of methylene chloride entered dike containment area #2. The product was reportedly isolated to the dike #2 area with minor seepage through the dike concrete expansion joints. The presence of a substantial amount of residual rainwater in dike containment area #2 created a blanket over the product, reducing the potential for evaporation. Within two hours, the methylene chloride and water were pumped from the dike #2 area by Ken's Marine Service and transferred to Tank 15. In addition, the dike was then washed with water and all resulting wash water was pumped and transferred to Tank 15.

Case #: 86-04-21-xxxx - Morpholine

At the Olin loading rack, approximately 4,000 gallons of morpholine and 1,000 gallons of water were loaded into the same truck compartment of a tractor trailer. The driver then pulled the vehicle away from the loading rack. The morpholine/water mixture was circulated within the trailer tank. It is believed that the driver was securing his hoses after the circulation when an explosion occurred, and there was a rupture to the tractor trailer tank. The fire was put out within 45 minutes by the Bayonne Fire Department and did not spread beyond the immediate vicinity of the truck.

Case #s: 91-05-09-0329-41, 91-05-09-0401-14 – Styrene Spill Summary

On May 9, 1991, an estimated 11,769 gallons of Styrene Monomer were released from the pressure-vacuum relief valve and the fire foam injection system located at the top of Tank No. 354. The release was caused by a tank overfill prior to a rail car transfer operation from both a miscalculation of the safe tank fill amount and the power source being off to the high-level alarm system. The Styrene Monomer spilled into concrete dike #1, which had walls 6 feet high. The dike floor was drained to an 11,500-gallon underground tank by a perimeter collection trench inside the dike wall. The tank contents were periodically pumped to the on-site wastewater treatment plant. Ken's Marine Service, Inc. began clean-up operations immediately after the spill. Approximately 16,000 gallons of product and storm water were recovered from dike #1 on May 9, 1991. Of the amount recovered, an estimated 5,348 gallons were Styrene Monomer.

On May 10, 1991, an odor complaint investigation revealed a sheen on the Kill Van Kull adjacent to the tank farm's southern boundary. Further investigation by terminal personnel and several agencies, including the use of lab analysis, confirmed Styrene Monomer was discharging from the bulkhead at the foot of the roadway on the west side of Powell Duffryn Terminals into the Kill Van Kull. Booms were placed in the Kill Van Kull and a recovery trench was dug between the dike wall and the western property line, adjacent to the bulkhead. The trench was 10 feet long and 7 feet deep. Product was observed in the trench and collected by absorbent padding. Four days later, the trench was lengthened to approximately 125 feet long by 8 feet deep. Powell Duffryn estimates that 1,836 gallons of styrene were recovered directly from the trench and an additional 3,898 gallons were removed in the soil from the trench.

On May 13, 1991, the 11,500-gallon perimeter dike collection tank passed an integrity test.

Thirteen soil borings were installed within dike #1 on May 14 and 15, 1991. Groundwater level was measured in each boring before and after pumping with a vacuum truck. Nine water samples were collected from the borings (one boring was dry) and analyzed for styrene.

On May 22, 1991, four additional soil borings were installed outside the dike #1 area, and water samples were collected from each boring. Styrene was detected in two of the four samples.

Upon authorization from the NJDEPE on July 16, 1991, the sorbent booms were removed from the Kill Van Kull. It is estimated that 192 gallons of styrene product were recovered through the use of booms on the Kill Van Kull.

Eight soil borings were drilled in the area of dike #1 between Tank 354 and the Kill Van Kull on July 23 and 24, 1991. Four borings were drilled inside dike #1, and four borings were drilled outside dike #1. The borings were drilled to depths ranging from 8 to 10 feet below grade. One soil sample was collected from each boring, biased toward the highest field screening results, and submitted for styrene analysis. Styrene was detected in six of the eight samples.

INTEX (International Exploration), an environmental consulting firm, was contracted in August 1991 to oversee the installation of groundwater monitoring wells and prepare a report on the spill investigation results. To determine groundwater flow in the area, six monitoring wells were installed from August 2 through August 16, 1991 to depths ranging from 5 to 18 feet below grade. Three monitoring wells were installed outside the south wall of dike #1 and three wells inside the dike area. No free styrene product was detected in the wells. Dissolved styrene was detected in the subsurface soil and groundwater, and the highest styrene concentrations were detected in MW-3 (outside dike) and MW-4 (inside dike).

In May 1992, Clayton Environmental Consultants oversaw the installation of a 10-foot by 10-foot, "L"-shaped pilot recovery trench system located at the southwestern corner outside dike #1. Groundwater was encountered in the trench at a depth of approximately 8 feet below grade. Results of the trench pilot tests conducted were not favorable for a recovery trench as a practical alternative for groundwater remediation of styrene.

In accordance with an NJDEP-approved workplan, an upgradient, background monitoring well was installed on August 8, 1992. No styrene was detected in this well. Based on lower concentrations of styrene in the most recent sampling and a study of styrene degradation, natural attenuation as a remediation alternative was recommended.

On July 1, 1993, water samples were collected from the seven monitoring wells and from the Kill Van Kull. Styrene was detected in all samples, ranging from 55 micrograms per liter (µg/L) to 10,000 µg/L in MW-6.

MW-2 was sampled on March 16, 2004 during a site-wide LNAPL program and analyzed for VOCs. Styrene was detected at 860 µ/L.

5.4.2 Waste Piles (PA Form Question D2)

According to site personnel, in 1992 the installation of Dike 300 was conducted. Soils excavated during the construction activities were impacted and potentially hazardous. As recalled by a former employee of Powell Duffryn at the time, under a NJDEP approved soil reuse proposal, the soil was placed on a liner and covered with a liner that was located within the diked area of AST 12500. A review of available files was conducted in an attempt to find any documentation regarding this activity; no further information or records were found.

5.4.3 Waste Water Collection Systems Including Septic Systems, Seepage Pits, And Dry Wells (PA Form Question D3)

Wastewater generated at the Chem South facility is captured and sent off site for proper disposal. Wastewater is generated as part of the packaging operation.

5.4.4 Landfills or Landfarms (PA Form Question D4)

There are no landfills or landfarms at the Chem South site.

5.4.5 Spray fields (PA Form Question D5)

There are no spray fields at the Chem South site.

5.4.6 Incinerators (PA Form Question D6)

There are no incinerators at the Chem South site.

5.4.7 Historic Fill or Fill Material (PA Form Question D7)

A review of historic topographic maps shows the historic filling that has occurred on Constable Hook. Historical topographic maps were obtained of the area for years 1900, 1905, 1947, 1955, 1967, and 1981. A significant observation can be made from a review of the historical topographic maps, which is the depiction of the creation of Constable Hook as a landmass.

A summary of the observations made from the historical topographic maps is provided in Section 2.7 Historic USGS Topographic Maps, a summary of fill observations is discussed below; copies of the maps are provided in Appendix A.

The earliest available topographic maps include the 1900 Staten Island Quadrangle and the 1900 Passaic Quadrangle. In 1900, the area of Bayonne known as Constable Hook is connected to the main land of Bayonne by narrow strips of land. The area of Chem South partially exists. Much of the area is shown as swamp and open water.

The Platty Kill Creek is shown dissecting Constable Hook, connecting the Kill Van Kull with the backwaters of Constable Hook. Some development and aboveground storage tanks are shown east and north of Platty Kill Creek. Piers are shown on the south side of Constable Hook.

The 1905 Passaic Quadrangle shows little difference between 1900 and 1905.

The 1947 Jersey City Quadrangle shows significant filling has occurred on Constable Hook. The backwaters between Constable Hook and Bayonne main land has been filled and developed. The development of the Chem South is shown on the map.

The 1955 Jersey City Quadrangle shows filling has continued on Constable Hook and surrounding areas.

The 1967 Jersey City Quadrangle shows filling has continued in the northern section of Constable Hook.

The 1981 photo revised Jersey City Quadrangle shows the area north of the Conrail Railroad as being developed. Minor changes to the number of tanks and buildings are shown at Chem South.

5.4.8 Open Pipe Discharges (PA Form Question D8)

The Zimpro Wastewater Treatments Plant operated under NJPDES Permit 3361, which included an open pipe discharge to the Kill Van Kull. This open pipe discharge was operated under an approved and monitored NJPDES permit; it is not operational at this time. The Zimpro Wastewater Treatment Plant and open pipe discharge locations are shown on Figure 12.

5.5 Other Areas of Concern (PA Form Question E)

5.5.1 Electrical Transformers And Capacitors (PA Form Question E1)

IMTT maintains a transformer oil sampling and retrofit program to document transformers that contained PCB transformer oil. All transformers currently on site have been sampled and classified. Based on oil sample results, each transformer was identified based on the following results:

- PCB transformer if oil results were greater than 500 ppm
- PCB-contaminated if oil results were greater than 50 and less than 500 ppm
- Non-PCB if oil sample results were less than 50 ppm.

According to IMTT personnel, there have been no releases of PCB oil at the site. Locations of the Transformers are shown on Figure 22.

5.5.1.1 AOC-CS-227 TC-37

5.5.1.1.1 General Information

AOC-CS-227 TC-37 is the location of a 1,000 KVA transformer. The transformer is located southwest of AST-12401. The transformer was sampled on June 26, 1997 and classified as a non-PCB transformer.

5.5.1.2 AOC-CS-228 TC-39

5.5.1.2.1 General Information

AOC-CS-228 TC-39 is the location of a 1,500 KVA cabinet transformer. The transformer is located east of AST's 1168 and 11672. The transformer was sampled on June 26, 1997 and was classified as non-PCB.

5.5.1.3 AOC-CS-229 TC-40

5.5.1.3.1 General Information

AOC-CS-229 TC-40 is the location of a 1,500 KVA cabinet transformer. The transformer is located east of AST-12667. The transformer was sampled on June 26, 1997 and classified as non-PCB.

5.5.2 Hazardous Material Storage or Handling Areas (PA Form Question E2)

A hazardous material storage and handling area is located in the Plant 2 Warehouse adjacent to dike #100 at the Chem South facility. The location of the hazardous material storage area is shown on Figure 12. IMTT subcontracts the management of the storage and handling area to Specialty Disposal Services of Mt. Lakes, New Jersey. The storage area is separated from the rest of the building by a locked chain-link fence with barbed wire. The storage area is located on a concrete surface. Within this section, wastes are sorted into 3 categories:

1. Universal Waste
2. Non-Hazardous Waste
3. Hazardous Waste

Universal waste includes waste products that are not permitted to be disposed of using regular trash dumpsters. Wastes includes such items as computers, fax machines, monitors, batteries, televisions, cell phones, etc. Universal wastes are disposed of approximately 1 to 2 times per year. The area used for storage of universal waste is clearly marked and located on a concrete floor.

Hazardous waste is drummed and staged in this area before off-site disposal. Typically, 20 to 30 drums of waste are stored inside this secured area prior to off-site disposal. Each drum is labeled with the contents and date generated. The drums are disposed within 90 days of generation. The area used for hazardous waste storage is clearly marked and located on a concrete surface. The drums are stored on wooden pallets allowing for visual inspection of any leaks during the staging process. During the April 2005 inspection, no evidence of leaks was identified.

Non-hazardous waste is drummed and staged in this area before off-site disposal. Typically, 20 to 30 drums of waste are stored inside this secured area prior to off-site disposal. Each drum is labeled with the contents and date generated. The area used for non-hazardous waste staging is clearly marked and located on a concrete surface. During the April 2005 inspection, no evidence of leaks was identified.

Approximately 50 to 100 drums of new product are also stored inside this warehouse. New products stored included compressor oil, odor neutralizers, lubricants, etc. In addition, unused empty drums are also stored in this area.

The hazardous material storage and handling area is shown on Figure 12.

5.5.3 Waste Treatment Areas (PA Form Question E3)

Wastewater generated at the Chem South facility is treated at the East Side Wastewater Treatment Plant. See Section 5.3.5 Storm Sewer Collection System for further details. No other waste treatment areas are at the Chem South facility.

5.5.4 Discolored or Spill Areas (PA Form Question E4)

Surficial staining was observed at a number of locations throughout the Site during site inspections conducted in 2004 and 2005. All the locations at which staining were observed are within AOCs identified and described in this report.

5.5.5 Open Areas Away From Production Areas (PA Form Question E5)

The Chem South operation encompasses the entire property. There are no open areas away from the production areas.

5.5.6 Areas of Stressed Vegetation (PA Form Question E6)

There are no areas of stressed vegetation at the Chem South site; most of the Site is paved.

5.5.7 Underground Piping Including Industrial Process Sewers (PA Form Question E7)

Underground piping at the Chem South facility is associated with the storm sewer collection system (see Section 5.3.5 Storm Sewer Collection System for further details).

5.5.8 Compressor Vent Discharges (PA Form Question E8)

A former compressor was located in Building 2 – Compressor Room. The compressor was used by Powell Duffryn and removed from the building some time between 1990 and 1992. The building is equipped with a concrete floor. It is unknown where or how the compressor vented. The location of the former compressor is shown on Figure 12.

The main compressor for the Chem South facility is shown on Figure 12. The compressor vent discharges into an oil/water separator and then outside of the building. IMTT subcontracts the maintenance operations of the on-site compressors to Inline, Inc. of Bayonne, New Jersey. Inline is responsible for changing the oil water separator filter and transferring any accumulated oil into 55-gallon drums for off-site disposal.

There is one compressor vent discharge at the Packaging Building. The back-up compressor is located inside the Packaging Building and the location of the compressor vent discharge is shown on Figure 12. The compressor vent discharges into an oil/water separator. IMTT subcontracts the maintenance operations of the on-site compressors to Inline, Inc. of Bayonne, New Jersey. Inline is responsible for changing the oil water separator filter and transferring any accumulated oil into 55-gallon drums for off-site disposal.

5.5.9 Non-Contact Cooling Water Discharges (PA Form Question E9)

There are no non-contact cooling water discharges at the Chem South facility.

5.5.10 Areas Which Receive Floor Or Storm Water From Potentially Contaminated Areas (PA Form Question E10)

Stormwater is contained and treated on-site before discharging to the Kill van Kull.

5.5.11 Active or Inactive Production Wells (PA Form Question E11)

There are no active or inactive production wells at the Chem South facility.

5.6 Building Interior Areas With A Potential For Discharge To The Environment (PA Form Question F)

5.6.1 Loading or Transfer Areas (PA Form Question F1)

See Section 5.1.5 Loading and Unloading Areas AND Section 5.2.1 Storage Pads.

5.6.2 Waste Treatment Areas (PA Form Question F2)

There are no waste treatment areas at the Chem South facility.

5.6.3 Boiler Rooms (PA Form Question F3)

The Boiler House is located north of AST 12402 and is shown of Figure 12. Inside the boiler house are 3 generators. Two are fueled by No. 2 fuel oil from an AST located outside of the building. The AST is located within a concrete dike. On March 31, 2005, a visual inspection of the AST and Dike was conducted and no evidence of leakage or staining was observed.

In addition, there is one generator that fueled by natural gas. The locations of these generators are shown on Figure 12.

5.6.4 Air Vents and Ducts (PA Form Question F4)

Air vents and ducts will be investigated as appropriate as part of the site-wide Site Investigation Workplan in preparation for the IMTT sites.

5.6.5 Hazardous Material Storage or Handling Areas (PA Form Question F5)

See Section 5.5.2 Hazardous Material Storage and Handling Areas.

5.7 Any Other Site-Specific Area of Concern (PA Form Question G)

5.7.1 Indoor Air Quality

Based on the findings of the Free Product Investigation conducted in October 2004, a plume exists at the Chem South facility. As such, a potential for exterior contamination to migrate inward to occupied building exists at the site. Therefore, a survey of buildings currently occupied has been completed for the Chem South facility. Table 6 identifies the buildings at Chem South, the number of occupants, dimensions, and the building use. The locations of the buildings are shown on Figure 23.

Indoor air quality sampling was conducted at several locations on June 27, 2002 following the Indoor Air Sampling Guide for Volatile Organic Contaminants. The results of this investigation were included in the Phase II Remedial Investigation Report and Remedial Investigation Workplan submitted to the NJDEP in September 2002. The locations sampled at Chem South were:

- Lefarge MCC in the silo building (Lefarge MCC)
- Lefarge Marketing Office (Lefarge Office)
- Packaging Office located off Commerce Street (Packaging Office)
- IESI Building 1st Floor (IESI 1st Floor)

Air sampling locations can be referenced in **Figure 23**.

Samples were collected using 6-liter Summa Canisters fitted with an adjustable flow orifices set to approximately 4 cubic centimeters per minute (cc/minute). All samples were placed approximately 3-5 feet from the surface. Each sampling location was visually checked for chemicals (cleaners etc.) and noted when applicable. Sampling commenced at approximately 11:00 a.m. on the 27th and was ceased 24-hours later. Samples were then packaged and shipped to Accutest Laboratories located in Dayton, New Jersey for analysis. Each sample was analyzed using U.S. EPA methods Toxic Organic (TO)-14 & TO-15.

The June 2002 air sampling and analysis demonstrates parts-per-billion by volume existence of 34 compounds.

- None of the samples collected had results exceeding extrapolated regulatory or industry standard occupational exposure limits.
- Seven compounds were detected above the U.S. EPA Region III Risk Based Concentrations (RBCs) values in the April 2, 2002 version. The compounds include benzene, chloroform, p-dichlorobenzene, methylene chloride, methyl tert-butyl ether, tetrachloroethylene, and trichloroethylene.

IMTT proposed to conduct additional sampling in order to establish statistical confidence in the previously attained data. Lafarge has been notified of these sampling results and IMTT and Lafarge are working together to address this matter.

CERTIFICATIONS - NJ.A.C. 7:26-1.2 et. seq.

Any person making a submission to the Department required by this chapter and pursuant to N.J.A.C. 7:26E, shall include the following signature and notarized certification, for each technical submittal. Additionally, the certification shall indicate the case name and address, case number, type of documents submitted, e.g. Remedial Action Report, for each technical submittal.

TYPE OF DOCUMENT Preliminary Assessment Report – Chem South

CASE NAME

CASE ADDRESS

CASE NUMBER

"I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge. I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement that I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties."

PRINTED NAME Richard R. Fisette TITLE Vice President

SIGNATURE DATE 7.26.05

NOTARY SIGNATURE DATE 7/26/05

LYNN MARIE SHEEHAN
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 3/31/2009

Table 1. Summary of Violations at the Chem South Facility.

Company Cited for Violation/Case #	Program Description	Program Interest ID	Date of Discovery	Section of Statute, Rule or Permit Violated	Violation Description	Resolution or Status
Delta Atlantic Inc. @ IMTT Terminal	Hazardous Waste	NJR000000919	3/29/2001	[40 CFR 262.40(a)]	Failure of generator to keep copy of manifest for 3 years.	Satisfied; closed 7/6/01
Delta Atlantic Inc.@ IMTT Terminal	Hazardous Waste	NJR000000919	3/29/2001	[N.J.A.C. 7:26G-6.1(c)3]	Failure of generator to properly complete the manifest. Specifically, manifest #NJA 2727529 incorrectly identified the generators name and location of the waste generated.	Satisfied; closed 7/6/01
IMTT-BAYONNE	Air	10084	6/26/2002	[N.J.A.C. 7:27- 8.3 (a)]	Installed a methylene chloride storage tank #12610 without first obtaining a preconstruction permit.	Satisfied; closed 2/13/03
IMTT-BAYONNE	Air	10084	6/26/2002	[N.J.A.C. 7:27- 8.3(b)]	Operated the methylene chloride storage tank #12610 without first having obtained a valid operating certificate.	Satisfied; closed 2/13/03
IMTT-BAYONNE	Air	10084	6/26/2002	[N.J.A.C. 7:27- 16.2(h)]	Permitted the storage of the VOC HAP methylene chloride, in a stationary storage tank #12610 equipped with an internal floating roof having a double seal-envelope combination while the secondary seal was not intact, having visible holes, tears or other openings.	Satisfied; closed 2/13/03
Caleb Brett USA Inc. @ Powell Duffryn	Pollution Prevention/Right-to-know	40349000000	9/13/2001	[N.J.A.C. 7:1G-3.1(a)]	The Department determined Caleb Brett USA Inc. failed to complete and submit to the Department by March 1, 2001, the Community Right-to-know Survey for the facility for the 2000 reporting year	Rescinded 3/25/04

Table 2. Hazardous Substance Inventory - 2003 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
02055 Startex Antifreeze Coolant	Mixture/Liquid	N/A	TA	12625, 12636, 12661, 12662, 12664, 14104, 14352	17
02055 Startex Antifreeze Coolant	Mixture/Liquid	N/A	RC	TGOX100005, TILX21011, TILX21014, UTLX85848	14
02355 Texaco Antifreeze/Coolant JC-86	Mixture/Liquid	N/A	TA	11667	18
07958 Texaco Formulated Antifreeze/Coolant 1	Mixture/Liquid	N/A	TA	11688, 12619	18
07965 Texaco OEM ETX-628OD3 Blend	Mixture/Liquid	N/A	TA	11674, 12618	17
1,2 Butylene Oxide (in Neu-Tri)	Mixture/Liquid	106-88-7	TA	11672, 11675	13
1,4 Butanediol	Pure/Liquid	110-63-4	RC	GATX72627, GATX72628, GATX72629	18
1,4 Butanediol	Pure/Liquid	110-63-4	TA	14106, 14200, 14201	16
2-Ethyl Hexyl Acrylate	Mixture/Liquid	103-11-7	TA	14363	18
2-Propenoic Methyl Ester (in Methyl Methacry)	Mixture/Liquid	96-33-3	TA	14364	19
2790 Concentrate	Mixture/Liquid	N/A	TA	12623	15
2792 Concentrate	Mixture/Liquid	N/A	TA	12643	16
2797 Concentrate	Mixture/Liquid	N/A	TA	14108	14
Acetone	Pure/Liquid	67-64-1	RC	DCIU 74937	13
Aerothene MM	Mixture/Liquid	Unknown	TA	12630	16
Aminoethanolamine	Pure/Liquid	111-41-1	TA	12659	16
AMP 95	Mixture/Liquid	Proprietary	TA	12627	16
Antifreeze	Mixture/Liquid	N/A	BP	Packaging	16
Antifreeze	Mixture/Liquid	N/A	DS	Packaging	16
Butyl Acrylate	Mixture/Liquid	141-32-2	TA	14351, 14357	18
Cashew Nut Oil	Pure/Liquid	8007-24-7	TA	14350	19
Caustic Soda 50%	Pure/Liquid	1310-73-2	TA	11687, 11689, 12300, 12400, 12401, 12402, 12403, 12604	20
Cobrate TT 50S	Mixture/Liquid	N/A	TA	12616	14
D.E.R. 592-a80 Epoxy Resin	Mixture/Liquid	Unknown	TA	12654	15
D.E.R. 331 Epoxy Resin	Pure/Liquid	25085-99-8	TA	12656	16
Diethanolamine	Pure/Liquid	111-42-2	RC	TILX21013, TILX21016	14
Diethanolamine (in Triethanolamine 99)	Mixture/Liquid	111-42-2	RC	GATX88664, UTLX660602, UTLX660647, UTLX664523	12
Diethylene Glycol	Pure/Liquid	111-46-6	TA	14009, 14353, 14354, 14369	19
Dimethyl Formamide	Pure/Liquid	68-12-2	TA	14365	17
Dioctyl Phthalate	Pure/Liquid	117-84-0	TA	14050, 8032	19
Dipotassium Phospahte	Pure/Liquid		TA	12617	15
Dipropylene Glycol	Pure/Liquid	25265-71-8	TA	11670, 12612, 14368	19
Dipropylene Glycol Ind/lo	Pure/Liquid	25265-71-8	TA	14101	17

Table 2. Hazardous Substance Inventory - 2003 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
Dowanol DB	Pure/Liquid	Unknown	TA	12412	16
Dowanol DM	Pure/Liquid	111-73-3	TA	14111	16
Dowanol EB	Pure/Liquid	111-76-2	TA	14367	18
Dowfrost HD	Mixture/Liquid	N/A	TA	12615	16
Dowfrost HTF	Mixture/Liquid	N/A	TA	12624	16
Dowper Solvent	Pure/Liquid	127-18-4	TA	11672, 11682	19
DWS 4002.01 Development Polyol	Mixture/Liquid	009082-00-2	TA	12653	16
Ethylene Diamine	Pure/Liquid	107-15-3	TA	14370	19
Ethylene Glycol (All Grades)	Pure/Liquid	107-21-1	TA	11676, 11677, 11678, 11684, 12500, 14073, 14074	19
Ethylene Glycol (in 02055 Startex Antifreeze)	Mixture/Liquid	107-21-1	RC	TGOX100005, TILX21011, TILX21014, UTLX85848	13
Ethylene Glycol (in 02055 Startex Antifreeze)	Mixture/Liquid	107-21-1	TA	12625, 12636, 12661, 12662, 12664, 14104, 14352	14
Ethylene Glycol (in 02355 Texaco Antifreeze)	Mixture/Liquid	107-21-1	TA	11667	18
Ethylene Glycol (in 07958 Texaco Formulated...)	Mixture/Liquid	107-21-1	TA	11688, 12619	18
Ethylene Glycol (in 07965 Texaco OEM ETX 6)	Mixture/Liquid	107-21-1	TA	11674, 12618	16
Ethylene Glycol (in Antifreeze)	Mixture/Liquid	107-21-1	DS	Packaging	16
Ethylene Glycol (in Antifreeze)	Mixture/Liquid	107-21-1	BP	Packaging	16
Ethylene Glycol (in Glycol Ether DE)	Mixture/Liquid	107-21-1	TA	14110	13
Ethylene Glycol (in Glycol Ether DE)	Mixture/Liquid	107-21-1	RC	UTLX48112	13
Ethylene Glycol (in Infineum C9394)	Mixture/Liquid	107-21-1	TA	14001	15
Ethylene Glycol (in N-217)	Mixture/Liquid	107-21-1	TA	11000, 11668, 12649, 12650	18
Ethylene Glycol (in Permanent Antifreeze and ...)	Mixture/Liquid	107-21-1	TA	12642	16
Ethylene Glycol (in Texaco Havoline DEX-COO...)	Mixture/Liquid	107-21-1	TA	12620, 12647	16
Ethylene Glycol (in Wintrex)	Mixture/Liquid	107-21-1	TA	14103	15
Exxate 600	Pure/Liquid	88230-35-7	TA	14365	17
Furfuryl Alcohol	Pure/Liquid	98-00-0	TA	14011, 14020, 14024	19
Glycerine, USP 96%	Pure/Liquid	56-81-5	TA	12655	16
Glycerine, USP 97.7%	Pure/Liquid	56-81-5	TA	11669	18
Glycol Ether DE	Mixture/Liquid	Unknown	RC	UTLX48112	16
Glycol Ether DE	Mixture/Liquid	Unknown	TA	14110	16
Hexanediol	Mixture/Liquid	629-11-8	TA	12613	18
Infineum C9394	Mixture/Liquid	Unknown	TA	14001	19
Infineum C9417 (Parabar 9417)	Mixture/Liquid	N/A	TA	14022, 14362	19

Table 2. Hazardous Substance Inventory - 2003 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
Isobutyl Methacrylate	Mixture/Liquid	97-86-9	TA	14359	18
Isononanoic Acid	Mixture/Liquid	N/A	TA	14051	18
Methanol	Pure/Liquid	67-56-1	TA	11680, 11681, 12601, 12602	20
Methyl Acrylate	Mixture/Liquid	96-33-3	TA	14356	18
Methyl Methacrylate	Mixture/Liquid	80-62-6	TA	14364	19
Methylene Chloride UG	Mixture/Liquid	101-77-9	TA	12631	12
Methylene Chloride (in Aerothene MM)	Mixture/Liquid	75-09-2	TA	12630	16
Methylene Chloride (in Methylene Chloride,..)	Mixture/Liquid	75-09-2	TA	12631	12
Methylene Chloride FCC/NF Cyclohexane Inhi...	Pure/Liquid	75-09-2	TA	11675, 12631	16
Methylene Chloride, Technical	Pure/Liquid	75-09-2	TA	11685	18
Mono Ethylene Glycol	Pure/Liquid	N/A	TA	12301, 12603, 14006, 14021, 14023, 14025, 14052, 14355	19
MP Diol-Glycol	Mixture/Liquid	N/A	TA	12622	14
N-217	Mixture/Liquid	N/A	TA	11000, 11668, 12649, 12650	18
n-Methyl Pyrrolidone	Pure/Liquid	872-50-4	TA	12621, 14202	16
N-Paraffin	Pure/Liquid	64771-72-8	TA	14003	17
Naxomate 4L	Mixture/Liquid	N/A	TA	12665	16
Neu-Tri	Mixture/Liquid	79-01-6	TA	11672, 11675	18
o-Toluidine	Mixture/Liquid	95-53-4	TA	11673	17
OLOA 219M	Mixture/Liquid	N/A	TA	14008	17
Palatinol 711P	Mixture/Liquid	N/A	TA	11679	17
Palatinol 79P	Mixture/Liquid	N/A	TA	14360	17
Perchloroethylene	Pure/Liquid	127-18-4	TA	14358	19
Permanent Antifreeze and Summer Coolant (...)	Mixture/Liquid	N/A	TA	12642	16
Propylene Glycol	Pure/Liquid	57-55-6	TA	11671, 11686, 14100, 14102	19
Propylene Glycol	Pure/Liquid	57-55-6	RC	Pipeline	16
Propylene Oxide (in Aerothene MM)	Mixture/Liquid	75-56-9	TA	12630	12
Puradd FD100	Pure/Liquid	PMN92-0410	TA	14351, 14361	19
S Quata	Mixture/Liquid	Unknown	TA	12614	16
Safewing MP IV Anti-icing Fluid	Pure/Liquid	Unknown	TA	12657, 12658, 14073	17
Tebol 99	Pure/Liquid	75-65-0	TA	12646	16
Tetrahydrofuran	Pure/Liquid	109-99-9	TA	12635	16
Texaco Havoline DEX-COOL	Mixture/Liquid	Unknown	TA	12620, 12647	16
Trichloroethylene	Pure/Liquid	79-01-6	TA	12607, 14366	18
Triethanolamine 99	Mixture/Liquid	N/A	RC	GATX88664, UTLX660602, UTLX660647, UTLX664523	15

Table 2. Hazardous Substance Inventory - 2003 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
Triethanolamine 99	Mixture/Liquid	N/A	TA	12663	16
Triethylene Glycol	Pure/Liquid	112-27-6	RC	OPIX21054, OPIX82012, PLCX220503, PLCX221882, RACX51765, RACX51788, SHPX203209, SHPX203258, SHPX203260, UTLX48021, UTLX48061, UTLX660636	15
TRILON R BX LIQUID	Mixture/Liquid	Unknown	TA	12628	16
Versene 100	Mixture/Liquid	N/A	TA	12608	17
Versene 100	Mixture/Liquid	N/A	RC	GATX 32267, GATX 43121	15
Versene 100EP Chelating Agent	Pure/Liquid	000064-02-8	TA	12633	16
Versene 100XL	Mixture/Liquid	N/A	TA	12639	16
Versene 80	Mixture/Liquid	N/A	TA	12640, 12641	16
Voralux HL 430 Polyol	Mixture/Liquid	Unknown	TA	12660	16
Voranol 2070	Pure/Liquid	25791-96-2	TA	12666	15
Voranol 3010 Polyol	Mixture/Liquid	9082-00-2	TA	12605	16
Voranol 3943A	Mixture/Liquid	N/A	TA	12660	16
Wintrex	Mixture/Liquid	N/A	TA	14103	15
Zinc Compounds (In Infineum C9417 (Parabar...))	Mixture/Liquid	N982	TA	14022, 14362	19

Container Codes/Descriptions	Inventory Range Codes	
TA Aboveground storage tank	20- Greater than 10 million pounds	14- 10,001 to 50,000 pounds
RC Railcar	19- 1,000,001 to 10 million pounds	13- 1,001 to 10,000 pounds
BP Bottles or jugs (plastic)	18- 500,001 to 1 million pounds	12- 101 to 1,000 pounds
DS Steel Drum	17- 250,001 to 500,000 pounds	11- 11 to 100 pounds
	16- 100,001 to 250,000 pounds	10- 1 to 10 pounds
	15- 50,001 to 100,000 pounds	

Table 3. Hazardous Substance Inventory - 2004 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
02055 Startex Antifreeze Coolant	Mixture/Liquid	N/A	TA	12613, 12636, 12661, 12662, 12663, 12664, 14051, 14052, 14104, 14352	18
02055 Startex Antifreeze Coolant	Mixture/Liquid	N/A	RC	SHPX203063, SHPX203066, TILX21011, TILX21017, TILX21015, TILX21019, UTLX85846, UTLX85848	15
07958 Texaco Formulated Antifreeze/Coolant 1	Mixture/Liquid	N/A	TA	11688, 12619	17
07965 Texaco OEM ETX-628OD3 Blend	Mixture/Liquid	N/A	TA	11674, 12618	18
1,2 Butylene Oxide (in Neu-Tri)	Mixture/Liquid	106-88-7	TA	11675	13
1,4 Butanediol	Pure/Liquid	110-63-4	TA	14105, 14200, 14201	16
2-Ethyl Hexyl Acrylate	Mixture/Liquid	103-11-7	TA	14363	18
2790 A/F	Mixture/Liquid	N/A	TA	12623, 14108	15
2792 Fuschia A/F	Mixture/Liquid	N/A	TA	12643	16
Aerothene MM	Mixture/Liquid	Unknown	TA	12630, 12631	16
Aminoethanolamine	Pure/Liquid	111-41-1	TA	12659	16
AMP 95	Mixture/Liquid	Proprietary	TA	12627	15
Antifreeze	Mixture/Liquid	N/A	BP	Packaging	16
Antifreeze	Mixture/Liquid	N/A	DS	Packaging	16
Butyl Acrylate	Mixture/Liquid	141-32-2	TA	14357	18
Cashew Nut Oil	Pure/Liquid	8007-24-7	TA	14350	19
Caustic Soda	Pure/Liquid	1310-73-2	TA	1121, 1706, 11687, 11689, 12300, 12400, 12401, 12402, 12403, 12604	20
Cobrate TT 50S	Mixture/Liquid	N/A	TA	12616	14
D.E.R. 331 Epoxy Resin	Pure/Liquid	25085-99-8	TA	12656	17
Diethanolamine (DEA)	Pure/Liquid	111-42-2	RC	TILX21013, UTLX660603, UTLX660642, UTLX660645	14
Diethanolamine (in Triethanolamine 99)	Mixture/Liquid	111-42-2	TA	12663	13
Diethanolamine (in Triethanolamine 99)	Mixture/Liquid	111-42-2	RC	PLCX220505, UTLX660601, UTLX660662	13
Diethylene Glycol	Pure/Liquid	111-46-6	TA	14009, 14353, 14354, 14369	19
Dipotassium Phospahte	Pure/Liquid	7758-11-4	TA	12617	14
Dipropylene Glycol (DPG)	Pure/Liquid	25265-71-8	TA	11670, 12612, 12628, 14050	19
Dowanol DB	Pure/Liquid	Unknown	TA	12412, 12622	16
Dowanol DM	Pure/Liquid	111-73-3	TA	14111	16
Dowanol DPM	Pure/Liquid	34590-94-8	TA	12647	16
Dowanol EB	Pure/Liquid	111-76-2	TA	14367	18
Dowper Solvent	Pure/Liquid	127-18-4	TA	11672	19
Eastman PM Acetate	Pure/Liquid	12648	TA	12648	16
Ethylene Diamine (EDA)	Pure/Liquid	107-15-3	TA	14370	17

Table 3. Hazardous Substance Inventory - 2004 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
Ethylene Glycol (All Grades) (EG)	Pure/Liquid	107-21-1	TA	11676, 11677, 11678, 11684, 12500, 14074	19
Ethylene Glycol (in 02055 Startex Antifreeze)	Mixture/Liquid	107-21-1	RC	SHPX203063, SHPX203066, TILX21017, TILX21011, TILX21015, TILX21019, UTLX85846, UTLX85848	13
Ethylene Glycol (in 02055 Startex Antifreeze)	Mixture/Liquid	107-21-1	TA	12613, 12636, 12661, 12662, 12663, 12664, 14051, 14052, 14104, 14352	15
Ethylene Glycol (in 07958 Texaco Formulated...)	Mixture/Liquid	107-21-1	TA	11688, 12619	17
Ethylene Glycol (in 07965 Texaco OEM ETX 6)	Mixture/Liquid	107-21-1	TA	11674, 12618	17
Ethylene Glycol (in 2790 A/F)	Mixture/Liquid	107-21-1	TA	12623, 14108	15
Ethylene Glycol (in 2792 Fuschia A/F)	Mixture/Liquid	107-21-1	TA	12643	15
Ethylene Glycol (in Antifreeze)	Mixture/Liquid	107-21-1	DS	Packaging	16
Ethylene Glycol (in Antifreeze)	Mixture/Liquid	107-21-1	BP	Packaging	16
Ethylene Glycol (in Glycol Ether DE)	Mixture/Liquid	107-21-1	TA	14110	13
Ethylene Glycol (in Havoline Dex-Coolant(	Mixture/Liquid	107-21-1	TA	12620	16
Ethylene Glycol (in Infineum C9394)	Mixture/Liquid	107-21-1	TA	14001	14
Ethylene Glycol (in N-217)	Mixture/Liquid	107-21-1	TA	11668, 12649, 12650	17
Ethylene Glycol (in Permanent Antifreeze and ...)	Mixture/Liquid	107-21-1	TA	12642	16
Ethylene Glycol (in Texaco Anti-freeze Coolant)	Mixture/Liquid	107-21-1	TA	11667	17
Ethylene Glycol (in Wintrex)	Mixture/Liquid	107-21-1	TA	14103	15
Exxate 600	Pure/Liquid	88230-35-7	TA	14365, 3126	17
Foray Dry Chemical Extinguishing Agent	Pure/Liquid	N/A	TA	11670, 11671, 11672, 11673, 11675, 11676, 11677, 11678, 11679, 11680, 11681, 11682, 11683, 11684, 11685, 11686, 11687, 12301, 12400, 12401, 12402, 12403, 12500, 12601, 12602, 12603, 12606, 12608, 12614, 14006, 14050, 14074, 14100, 14101, 14012, 14352, 14354, 14355, 14361, 14367, 14369, 1710, 2096, 2097, 2117, 2120, 2139, 2141, 2142, 2144, 2145, 2146, 2147, 2153, 2156, 4010, 4011, 4012, 4015, 4016, 4051, 8026, 8027, 8032, 8047, 8048, 8049	20
Furfuryl Alcohol	Pure/Liquid	98-00-0	TA	14011, 14020	19
Glycol Ether DE	Mixture/Liquid	Unknown	TA	14110	16
Havoline Dex-Coolant	Mixture/Liquid	Unknown	TA	12620	16

Table 3. Hazardous Substance Inventory - 2004 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
1,6 Hexanediol	Mixture/Liquid	629-11-8	TA	12613, 9844	17
Infineum C9380	Mixture/Liquid	Unknown	TA	14019	14
Infineum C9394	Mixture/Liquid	Unknown	TA	14001	19
Infineum C9417 (Parabar 9417)	Mixture/Liquid	N/A	TA	14022, 14362, 9880	19
IPA	Pure/Liquid	67-63-0	TA	14368, 3107, 3114, 8027	19
Isobutyl Methacrylate	Mixture/Liquid	97-86-9	TA	14359	18
Isononanoic Acid	Mixture/Liquid	N/A	TA	14051	16
Methanol	Pure/Liquid	67-56-1	TA	11680, 11681, 11682, 11683, 12601, 12602, 4010, 4011, 4012, 4015	20
Methyl Acrylate	Mixture/Liquid	96-33-3	TA	14356	18
Methyl Methacrylate (MMA)	Mixture/Liquid	80-62-6	TA	14364	19
Methylene Chloride (in Aerothene MM)	Mixture/Liquid	75-09-2	TA	12630, 12631	16
Methylene Chloride FCC/NF Cyclohexane Inhi...	Pure/Liquid	75-09-2	TA	12631	16
Methylene Chloride, Technical	Pure/Liquid	75-09-2	TA	11685	19
Mono Ethylene Glycol (MEG)	Pure/Liquid	N/A	TA	11679, 12301, 12603, 14006, 14355	19
N-217	Mixture/Liquid	N/A	TA	11668, 12649, 12650	17
n-Methyl Pyrrolidone	Pure/Liquid	872-50-4	TA	12621, 14202	16
Naxonate 4L	Mixture/Liquid	N/A	TA	12665	14
Neu-Tri	Mixture/Liquid	79-01-6	TA	11675	18
Nitrogen	Pure/Liquid	7727-37-9	TA	Chem South, Tank #1, Tank #2, Tank #3, Tank #4, Tank #6, Tank #8, Tank #9	15
o-Toluidine	Mixture/Liquid	95-53-4	TA	11673	18
Palatinol 711P	Mixture/Liquid	N/A	TA	11679, 14003	17
Perchloroethylene	Pure/Liquid	127-18-4	TA	14358	18
Permanent Antifreeze and Summer Coolant (...)	Mixture/Liquid	N/A	TA	12642	16
PM Solvent (Arcosolv PM-Electronics)	Mixture/Liquid	Unknown	TA	12637	16
Propylene Oxide (in Aerothene MM)	Mixture/Liquid	75-56-9	TA	12630, 12631	12
Puradd FD100 (PIBA)	Pure/Liquid	PMN92-0410	TA	14352, 14361, 9777	19
Tebol 99	Pure/Liquid	75-65-0	TA	12646	16
Tetrahydrofuran (THF)	Pure/Liquid	109-99-9	TA	12634, 12635	17
Texaco Anti-freeze Coolant	Mixture/Liquid	Unknown	TA	11667	18
TPM	Mixture/Liquid	Unknown	RC	RACX51361, RACX51484, RACX51919	15
Trichloroethylene (TCE)	Pure/Liquid	79-01-6	TA	14366	18
Triethanolamine 99	Mixture/Liquid	N/A	RC	PLCX220505, UTLX660601, UTLX660662	16
Triethanolamine 99	Mixture/Liquid	N/A	TA	12663	17

Table 5. Hazardous Substance Inventory - 2004 Right-to-Know Survey.

Product Name/ID	Description	CAS Number	Storage Method	Storage Location	Average Daily Inventory
Triethylene Glycol	Pure/Liquid	112-27-6	RC	PLCX221884, SHPX203206, UTLX660638	16
Triethylene Glycol	Mixture/Liquid	112-27-6	TA	12629	16
TRILON R BX LIQUID	Mixture/Liquid	Unknown	TA	12628	16
Versene 100	Mixture/Liquid	N/A	TA	12608	18
Versenex 100XL	Mixture/Liquid	N/A	TA	12639	18
Versene 80	Mixture/Liquid	N/A	TA	12640, 12641	16
Wintrex	Mixture/Liquid	N/A	TA	14103	15
Zinc Compounds (in Infineum C9417 (Parabar...))	Mixture/Liquid	N982	TA	14022, 14362, 9880	19

Container Codes/Descriptions	Inventory Range Codes	
TA Aboveground storage tank	20- Greater than 10 million pounds	14- 10,001 to 50,000 pounds
RC Railcar	19- 1,000,001 to 10 million pounds	13- 1,001 to 10,000 pounds
BP Bottles or jugs (plastic)	18- 500,001 to 1 million pounds	12- 101 to 1,000 pounds
DS Steel Drum	17- 250,001 to 500,000 pounds	11- 11 to 100 pounds
	16- 100,001 to 250,000 pounds	10- 1 to 10 pounds
	15- 50,001 to 100,000 pounds	

Tab[illegible]: Summary of Discharges at the Chem South Facility

North NJ Plan	East NJ Plan	IMTT Number	NJDEP Case Number/Spill Date	Location	Source	Product	Quantity Released	Unit	Color
662075	603700	04-08-26-2150-07	04-08-26-2150-07	Chem South	Tank 12601	Methanol	215,374	Gallons	Red
N/A AIR	N/A AIR	04-06-24-0953-15	04-06-24-0953-15	Yard 14/Dike 1; Tank 14356; Pier 5B	Air Pollution Control Equipment - Acrylate Tank Scrubber	Methyl Acrylate Vapors	vapor		Red
662000	603650	04-02-11-0804-28	04-02-11-0804-28	Chem South Dike	Historical contamination of soil	Contaminated groundwater	Unknown		Red
661950	604050	01-03-07-1649-03	01-03-07-1649-03	Chem South	Railcar ACFX-94414	Methylene Chloride	N/A		Red
661700	603250	97-10-08-0949-15	97-10-08-0949-15	Dike for Tank 14009		Diethylene Glycol	75	Gallons	Red
		94-07-12-1658	94-07-12-1658	Railcar	Rupture disc on top of car	70% Hydrogen Peroxide	5	Gallons	Red
661926	603570	94-05-20	94-05-20	Tank 14 pump (14014)	Bleeder valve for pump	Terathane	1	Gallons	Orange
662105	604379	94-01-20	94-01-20	Tank 674 (11674)	Tank 674	Antifreeze	30	Gallons	Orange
662289	603628	93-12-24	93-12-24	Tank 401, Dike 300 ((12401)	Steam Coil	50% Sodium Hydroxide	5,900	Gallons	Orange
661859	603740	93-08-18	93-08-18	Tank 637 (12637)	Tank 637 filter	N-Butanol	15	Gallons	Orange
661932	603992	93-08-03	93-08-03	Tank 663 (12663)	Tank 663 filter	TEA (Dow)	Unknown		Orange
		93-04-05	93-04-05	Exxon Drum trailer unloading station	Hose for drumming	Exxon Formula 31110 (ECA 13613)	38,386	Gallons	Orange
661876	603799	93-02-03	93-02-03	Tank 643 dike (12643)	Gasket on drumming line	Unknown	40-60	Gallons	Orange
661872	603584	93-02-02	93-02-02	Tank 10, Plant 2 (14010)	Tank 10	Paranox 51	1,500	Gallons	Orange
662088	603545	92-09-02	92-09-02	Between 110 Dike & Tanks 24-25 (14024 & 14025)	Slop tank overflow	50% Sodium Hydroxide	25	Gallons	Orange
662084	603881	92-07-27-1650-1	92-07-27-1650-1	Tank 12609 blend manifold, Containment #4 pump pad	Bleeder valve on blend manifold	Methyl Chloroform	70	Gallons	Red
		91-11-07-0148-4	91-11-07-0148-4	Railcar for Tank 614	Railcar bottom valve	Dipropylene Glycol	10,789	Gallons	Red
661861	603742	91-10-23-1134-5	91-10-23-1134-5	Tank 637 (12637)	Dryer hose next to tank	Trichloroethene	2	Gallons	Red
662021	604548	91-10-17-0124	91-10-17-0124	Tank 686, Dike 9 (11686)	Heat exchanger next to tank	50% Sodium Hydroxide	100 to DEP; memo says 13,000	Gallons	Red

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Table 4: Summary of Discharges at the Chem South Facility

661886	603626	91-08-02-0839-1	91-08-02-0839-1	Next to Tank 11 (14011)	Bleeder valve on filter	Viscoplex 5011 B (acrylic polymer in refined mineral oil)	20	Gallons	Red
661921	603852	91-07-05-1434-3	91-07-05-1434-3	Tank 650, Dike #6 (12650)	Tank Overflow	Antifreeze	500	Gallons	Red
662147	6036542	91-07-01-1126-0	91-07-01-1126-0	Tank 111, Plant 2 dike (14111)	Tank line valve	Ethylene glycol	1,200	Gallons	Red
		91-05-13-0902-4	91-05-13-0902-4	Plant 2, Dike 1a	Filter head gasket	Nononal N	2	Gallons	Red
661878	603157	91-05-09-0329-4	91-05-09-0329-4	Tank 354, Dike 1 (14354)	Vacuum relief valve & fire foam injection system	Styrene Monomer	11,769	Gallons	Red
661880	603142	91-03-25-1007-4	91-03-25-1007-4	Plant 2, Railcar loading for Tank 354	Filter at car loading rack	Styrene Monomer	5	Gallons	Red
		90-06-05	90-06-05	2 Commerce St	Drum washed up on shore	Texxaco 2208-Taro Oil	15	Gallons	Orange
662022	603232	90-05-28-2148	90-05-28-2148	Tank 359, Dike 1 (14359)	Pipeline on top of tank	Xylene Solvent	300	Gallons	Red
		90-01-27	90-01-27	Hose exchange to E6	Bleeder valve	Paranox 52 (lube oil add.)	1,443	Gallons	Orange
		89-10-05	89-10-05	#8 loading rack for Tank 646	Tanker truck	Phenol	Unknown	Gallons	Orange
662174	603992	89-08-25	89-08-25	Tank 618 (12618)	Tank overflow	Old World Antifreeze	3,100	Gallons	Orange
		89-07-23	89-07-23	W-7 loading rack	Valve at loading rack	Methacrylic ester	200-500	Gallons	Orange
662753	604249	89-05-01	89-05-01	150 yards east of Powell Duffryn main gate	Tanker truck	Phenol	6	Gallons	Orange
661893	603272	89-04-13	89-04-13	Tank 367 (14367)	Unknown	Morpholine	Unknown		Orange
		89-04-06	89-04-06	Pump P-653, Dike 6A	Hose between pump and tank truck	"DER 521-A80" (80% glycidyl ether of brominated Bisphenol A; 20% acetone)	200	Gallons	Orange
661781	603613	89-04-02-0759	89-04-02-0759	Tank 14005	Gauging hatch at tank top	Exxon Paramin	2,410	Gallons	Red
		89-03-29	89-03-29	Tank 14108	Gauging hatch at tank top	111-trichloroethane	200	Gallons	Orange
661972	604418	89-01-22	89-01-22	Tank 11682	Open Tank Valve	Perchloroethylene	68,000	Gallons	Orange
662029	603175	88-12-26	88-12-26	Tank 351 (14351)	Flush Line	50% Sodium Hydroxide	250	Gallons	Orange
661967	603168	88-12-26	88-12-26	Tank 352 (14352)	Tank bleeder	111-trichloroethane	75	Gallons	Orange

Table 4: Summary of Discharges at the Chem South Facility

662017	603211	88-09-14	88-09-14	Line 351 (14351)	Product line connected to Tank 351	50& Sodium Hydroxide	6,000	Gallons	Orange
662315	604547	88-07-10	88-07-10	Tank 11672	Product line connected to Tank 11672	Trichloroethylene	40	Gallons	Orange
662124	603241	88-06-15	88-06-15	Tank 356 (14356)	Unknown	Perchloroethylene	200	Gallons	Orange
		88-02-01	88-02-01	Railcar	Hose connection	Phenol	50	Gallons	Orange
		87-10-21	87-10-21	West side loading rack	Tanker truck	Cyclohexolamine	30	Gallons	Orange
662480	603559	87-10-12	87-10-12	Tanks 250 & 251 (12250 & 12251)	Sample Valve	Interox (Hydrogen Peroxide)	1,400	Gallons	Orange
662100	603563	87-09-01	87-09-01	Tank 25 (14025)	Tank Shell	Exxon Paramin	20	Gallons	Orange
661860	603267	87-06-10	87-06-10	Tank 368 (14368)	Pig chamber of the Pier Line	Methylene Chloride	39,000	Gallons	Orange
		87-05-08	87-05-08	Tank 832 under rack	Unknown	75% Phosphoric Acid	883	Gallons	Orange
662114	604011	87-04-20	87-04-20	Tank 626 pump area (12626)	Drain Hose	Unknown	4	Gallons	Orange
		86-04-21	86-04-21	East side of Olin loading rack	Tractor trailer explosion	Morpholine	4,000	Gallons	Orange

50 spills

Table [illegible]: Summary of Offshore Discharges at the ChemSouth Facility

North NJ Plan	East NJ Plan	NJDEP Case Number/Spill Date	Location	Product	Quantity Released	Unit	Color
661900	604150	03-06-03-1017-18	Pier 5B	Sodium Hydroxide	<5	Gallons	Red
661850	603425	02-02-13-1112-28	Pier 5B	Ethylene Glycol	<2	Gallons	Red
		95-04-30-0604-5	Kill Van Kull	50% Sodium Hydroxide	<1	pounds	Red
		93-05-28-1305-3	Kill Van Kull	Paraffin	30	Gallons	Red
		92-05-09	Kill Van Kull	Tetrachloroethylene	2(150)	Gallons	Orange
		91-07-25	Kill Van Kull	Dimethyl Formamine	0-5	Gallons	Orange
		91-06-17	Kill Van Kull	Acetone	21000	Gallons	Orange
		91-04-16	Kill Van Kull	Paranox 15 (lube oil add.)	5 to 10	Gallons	Orange
		87-02-26	Kill Van Kull at Powell Duffryn #2 Pier	Exxon Paranox 15 (lube oil add.)	4	Gallons	Orange

Table-OffshoreSpillData.xls

Table 6. Summary of Chem South Buildings

Building Number	Building Name/ID	Dimensions (width x length)	Use	Occupied Yes/No	Avg # of Occupants	Duration Occupied (hrs/day)
1	Plant 2 Warehouse	110 ft x 110 ft	Waste Storage Empty Drum Storage	No	0	0
2	Old Compressor Building	15 ft x 15 ft	Work area to make small repairs	No	0	1
3	Old Maintenance Storage	15 ft x 60 ft	Current Use: Vacant Former Use: Electrical and Mechanical storage and maintenance.	No	0	0
4	Zimpro Wastewater Treatment Unit	50 ft x 80 ft	Wastewater Treatment Plant	Yes	1	8
5	Plant 2 Customer Service and Office Building	35 ft x 85 ft	Office Building	Yes	6	14
6	Operators Locker Room	25 ft x 40 ft	Shower and Bathroom Facilities, Break Room	Yes	1 to 5	1 to 2 hrs per person
7	Boiler House	40 ft x 75 ft	Generators are located within building.	No	0	0
8	Laboratory Services, Inc.	15 ft x 40 ft	On-site laboratory.	Yes	1	8
9	Operations Office and Warehouse	50 ft x 80 ft	Offices and Warehouse	Yes	4	16
10	Security Station	20 ft x 20 ft	Security Personnel	Yes	1	24
11	Main Building	90 ft x 130 ft	Offices, IMTT Laboratory	Yes	6	16
12	Packaging Building	315 ft x 255 ft	Packaging process, offices, customer service, warehouse.	Yes	13	8

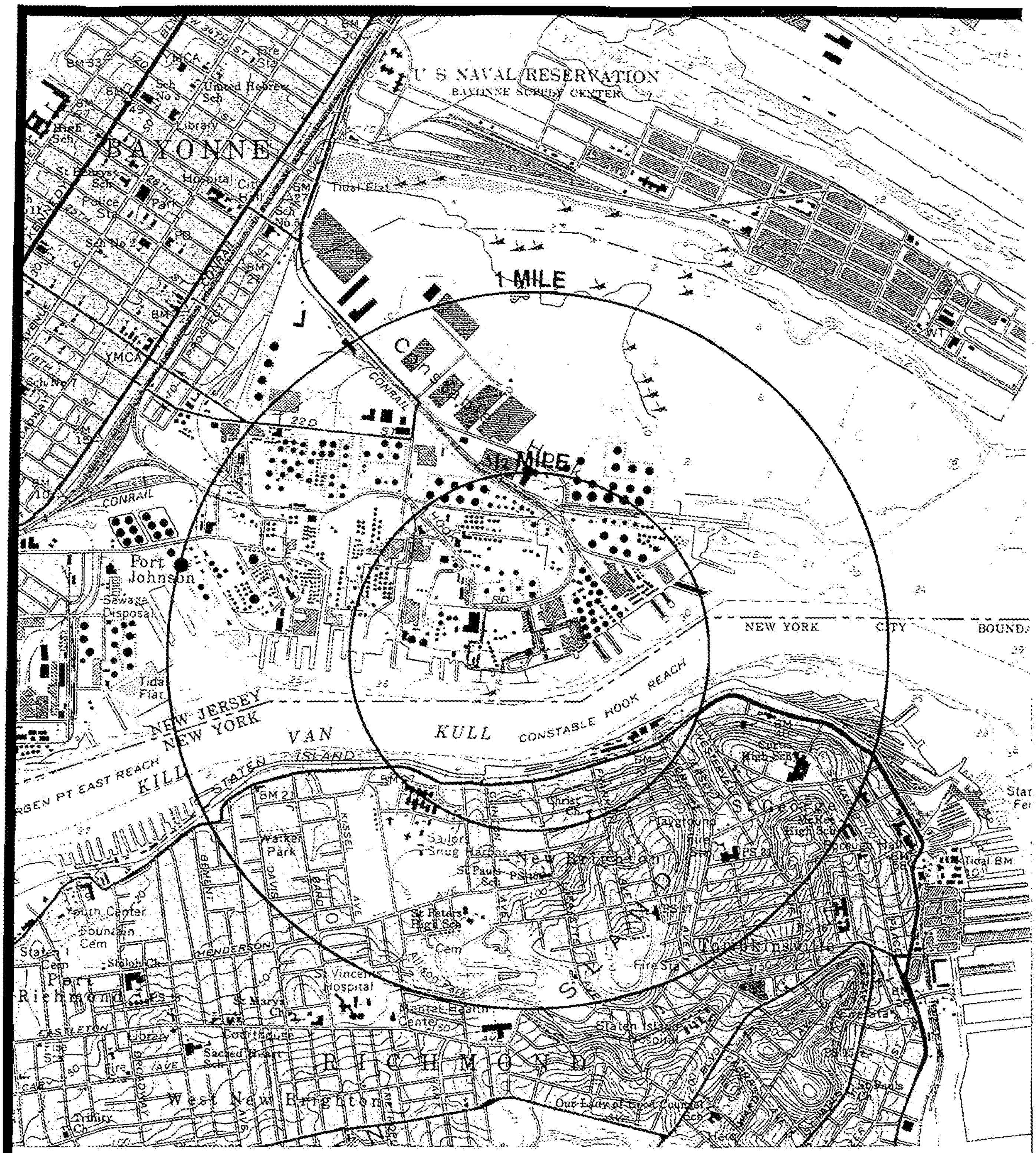

Figure 1, Site Location Map / 1- Mile Vicinity Map
Latitude: 40E 39' 00" - Longitude: 74E 05' 48"
Bayonne, Hudson County, NJ, Jersey City Quadrangle

BLUESTONE
ENVIRONMENTAL SERVICES, LLC

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Scale 1:24,000