EnviroTrac
Environmental Services

March 1, 2012

Ms. Kirsten Pointin-Hahn
Bureau of Case Assignment and Initial Notice
Site Remediation Program
New Jersey Department of Environmental Protection
401-05H
PO Box 420
Trenton, New Jersey 08625-0420

RE: Interim Remedial Measures Report
Hess Corporation – Port Reading Refinery
750 Cliff Road
Woodbridge, Middlesex County, New Jersey
PI # 006148

Dear Ms. Hahn,

The Hess Corporation – Port Reading Refinery (HC-PR) submits with this letter the Interim Remedial Measures Report for the Port Reading Refinery.

Should you have any questions or comments regarding the information submitted in this report, please do not hesitate to contact me at 609-387-5553. Should you have any questions or comments relating to the project, please contact John Engdahl of Hess Corporation at 732-750-6105 or Howard S. Goldman of Hess Corporation at 732-750-7735.

Sincerely,
EnviroTrac, Ltd.

David J. Carlson, PG
Senior Project Manager
NJDEP Certification # 266010
LSRP # 511447

cc: Atiya Wahab – NJDEP (w/o enclosure)
Phil Cole- NJDEP (w/o enclosure)
Howard Goldman – Hess Corporation (electronic)
John Engdahl – Hess Corporation (electronic)
Project File

3 Terri Lane, Suite #8 Burlington, NJ 08016 (609) 387-5553 Fax: (387) 387-5533
www.envirotrac.com

New Jersey Department of Environmental Protection
Site Remediation Program

LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) REPORTING FORM

☒ Non LSRP (Existing Case) ☐ LSRP ☐ Subsurface Evaluator

Date Stamp
(For Department use only)

This form is to be used to report to the Department the presence of Light Non-Aqueous Phase Liquid (LNAPL) and to document initial LNAPL recovery efforts. (Note: Submittal of this form does not substitute for notifying the Department of a discharge pursuant to N.J.A.C. 7:26E-1.4.) In addition, this same form is used to accompany the report submittal that document actions taken for initial LNAPL recovery efforts and implementation of the interim remedial measure for LNAPL following completion of a focused remedial investigation conducted to determine the extent of LNAPL.

Submittal Type: ☐ Initial LNAPL Discovery ☒ 1-Year LNAPL Reporting Submission

SECTION A. SITE NAME AND LOCATION

Site Name: Hess Corporation- Port Reading Refinery

List all AKAs:

Street Address: 750 Cliff Road

Municipality: Woodbridge Township (Township, Borough or City)

County Middlesex County Zip Code 07077

Program Interest (PI) Number(s): 006148 Case Tracking Number(s): See Attached

Date Remediation Initiated Pursuant to N.J.A.C.26C-2: 10/30/1969

State Plane Coordinates for a central location at the site: Easting: 561544 Northing: 630878

Municipal Block(s) and Lot(s):

Block #	756	Lot #	3	Block #	756B	Lot #	1
Block #	760B	Lot #	3	Block #	751	Lot #	1
Block #	760	Lot #	6	Block #	760B	Lot #	1
Block #		Lot #		Block #		Lot #	

SECTION B. NJDEP CASE MANAGER

Do you have an assigned Case Manager? ☒ Yes ☐ No

If "Yes," please list the Case Manager: Atiya Wahab

SECTION C. ACTIONS BEING REPORTED

1. ☒ **LNAPL Discovery Date:** 10/30/1969

Type of LNAPL (Check all that apply)

☒ Gasoline ☐ Diesel Fuel ☐ #2 Fuel Oil ☐ #4 Fuel Oil ☐ #6 Fuel Oil ☐ Jet Fuel
☐ Lubricating Oil ☐ Hydraulic Fluid ☐ Waste Oil ☐ Kerosene ☐ Unknown
☒ Other, list: Crude Oil, with components of unspecified diesel/fuel oil

List source(s) of LNAPL release (put unknown if source not identified) Tank Rupture, Facility Operations

Was an ongoing release discovered? ☒ Yes ☐ No
Was any ongoing release stopped? ☒ Yes ☐ No

If "No," explain:

LNAPL Thickness: Ranged from 0.00 to 0.35 feet during most recent gauging event

How was LNAPL discovered?

☐ In Monitoring Well ☒ In Excavation ☐ In Utility, list type:
☐ On Surface Water ☐ Seep ☐ Within a sump
☐ Other, explain:

Initial LNAPL Recovery Efforts. (check all that apply)

☐ Bailing ☐ Sorbent material (socks, pads, etc.)

☒ Skimmers ☐ Ejector pumps

☒ Single or Dual-Phase Vacuum Extraction ☐ Technically Impracticable

☐ Other, explain: _____

List frequency of action: Monthly Vacuum Extraction, skimmer recovery operates daily during 9 months of year

2. ☐ LNAPL Interim Remedial Measure (IRM)

a. Is the focused remedial investigation (delineation) for LNAPL complete? ..... ☒ Yes ☐ No

If "No," explain: _____

b. Is LNAPL still present at the site following initial recovery efforts?..... ☒ Yes ☐ No

If "No," skip to 2.g. below.

c. Is the LNAPL present offsite? ..... ☐ Yes ☒ No ☐ Unknown

d. Has a LNAPL IRM been implemented at this site? ..... ☒ Yes ☐ No

If "No," explain: _____

If "Yes," provide date IRM implemented: 11/04/1989

List type of IRM: Vacuum Extraction, Recovery System

e. Does any monitoring data, information or observations indicate that the LNAPL is migrating horizontally (i.e. aerial extent of LNAPL is expanding)? ..... ☐ Yes ☒ No

If "Yes." is the IRM designed to prevent further migration? ..... ☒ Yes ☐ No

g. Has the LNAPL response (Initial recovery, RI, IRM and reporting, as applicable) been performed following the "Light Non-Aqueous Phase Liquid (LNAPL) Initial Recovery and Interim Remedial Measures Guidance (LNAPL Guidance)"? ..... ☒ Yes ☐ No

If "No", define any variance from the LNAPL Guidance. _____

Note: Whenever a narrative explanation is requested, attach additional sheets as need to provide a complete response. Attach reports documenting all remedial investigation and initial/interim remedial measure activities related to LNAPL including plans for operational monitoring. See the LNAPL Guidance for suggested report format.

SECTION D . VARIANCE FROM REGULATIONS

If the Licensed Site Remediation Professional has varied from the Technical Rules, provide the citation(s) from which the remediation varied and the page(s) in the attached document where the rationale for the variance is provided.

N.J.A.C. 7:26E- _____ Page _____

N.J.A.C. 7:26E- _____ Page _____

N.J.A.C. 7:26E- _____ Page _____

SECTION E. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Hess Corporation

Representative First Name: John Representative Last Name: Engdahl

Title: Senior Specialist, Remediation

Phone Number: (732) 750-6934 Ext: Fax: (732) 750-6105

Mailing Address: 1 Hess Plaza

City/Town: Woodbridge State: NJ Zip Code: 07095

Email Address: jengdahl@hess.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including 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 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.

Signature: Date: 2/29/2012

Name/Title: John Engdahl/ Senior Specialist, Remediation **No Changes Since Last Submittal** ☐

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 511447

First Name: David Last Name: Carlson

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Mailing Address: 3 Terri Ln, Suite #8

City/Town: Burlington State: NJ Zip Code: 08016

Email Address: davec@envirotrac.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☐ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date: 2/29/12

LSRP Name/Title: David J. Carlson/ Senior Project Manager **No Changes Since Last Submittal** ☑

Company Name: EnviroTrac Ltd.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

SECTION F. SUBSURFACE EVALUATOR UST REPORT CERTIFICATION FORM

Certification by the Subsurface Evaluator:

I certify under penalty of law that the work was performed under my oversight and I have reviewed the report and all attached documents, and the submitted information is true, accurate and complete in accordance with the requirements of N.J.A.C. 7:14B and N.J.A.C. 7:26E. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information including fines and/or imprisonment.

Name: David J Carlson UST Cert. No.: 266010

Firm: EnviroTrac Ltd Firm's UST Cert. Number: US00898

Firm Address: 3 Terri Ln, Suite #8

City/Town: Burlington State: NJ Zip Code: 08016

Phone Number: (609) 387-5553 Ext: Fax: (609) 387-5533

Signature: Date: 2/29/12

No Changes Since Last Submittal ☑

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PO Box 420
Trenton, NJ 08625-0420

INTERIM REMEDIAL MEASURE REPORT

Hess Corporation – Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

SRP PI # 006148

March 1, 2012

Prepared for:

John J. Engdahl
Senior Specialist
Hess Corporation
One Hess Plaza
Woodbridge, NJ 07095

Prepared by:

EnviroTrac Ltd.
3 Terri Lane, Suite #8
Burlington, NJ 08016

Prepared By:

Sarah J. Dyson
Staff Scientist

Reviewed by:

David J. Carlson, PG
Senior Project Manager
NJDEP UST Certification # 26610
LSRP # 511447

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Table 2	Monthly Gauging Summary Table
Table 3	Historic Groundwater Sampling Summary Table
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APPENDICES

Appendix I:	NJDEP 2007 iMaps- Wetlands
Appendix II:	Monitoring Well Logs
Appendix III:	Temporary Well Logs
Appendix IV:	Laboratory Data Packages- Fingerprint Analysis
Appendix V:	Graphical Depiction of LNAPL Thickness versus Depth Groundwater
Appendix VI:	Graphical Depiction of LNAPL Thickness versus Groundwater Elevation
Appendix VII:	1970 and 1972 Aerial Photographs – AOC 7 Area

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Interim Remedial Measures Report
Hess Corporation – Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

I. GENERAL INFORMATION

EnviroTrac Ltd. (EnviroTrac), on behalf of the Hess Corporation (Hess), has prepared this *Free Product Interim Measure Report* (IRM) for the active Hess Port Reading (HC-PR) refining facility located at 750 Cliff Road, Port Reading, Middlesex County, New Jersey (the Site).

There are four distinct areas containing Liquid-non aqueous phase liquids (LNAPL) and are discussed in separate detail in sections III, IV, V and IV. Sections I and II discuss general site conditions relevant to all four areas.

A. Site Name:

Hess Corporation- Port Reading Refinery (P001)

B. Case Identifiers:

PI Number: 006148
Case Numbers: 90-0425-0021; 91-1-28-1002-17; 92-1-17-1447-31; 92-6-3-1318-27; 92-10-28-1052-59;93-4-30-1638-14 ;93-08-23-0952-57; 93-10-21-1435-21; 94-01-28-0737-38; 94-4-26-1139-52; 94-10-03-0819-31; 95-03-07-0055-00; 95-03-18-1523-41; 97-10-10-2359-11; 97-11-7-1647-16; 98-04-02-0944-48; 00-05-14-2106-28; 02-05-28-1640-14; 03-06-16-1258-24; 06-05-25-1243-17; 07-03-09-1437-52; 07-05-11-1330-47; 07-11-01-1625-32; 08-08-14-0949-36; 09-05-19-1218-35; 09-12-29-1109-47; 10-04-25-0820-32; 10-07-17-0836-07
Note: Not all of the Case Numbers listed above exhibit LNAPL.

C. Investigator(s) Name:

Hess Corporation
One Hess Plaza
Woodbridge, NJ 07015

EnviroTrac, Ltd.
3 Terri Lane, Suite #8
Burlington, NJ 08016

D. Site Location:

The subject site is an approximate 210-acre irregularly shaped parcel situated in an industrially developed waterfront area. The site is identified as Block 756 Lot 3, Block 756B Lot 1, Block 751 Lot 1, Block 760 Lot 6, Block 760B Lot1, and Block 760B Lot 3. The site is comprised of

an oil refinery, a petroleum storage terminal and approximately 30-acres of vacant land. The facility is located east of Cliff Road, and abuts the southern property boundary of the Conrail Port Reading Rail yard. Immediately east/southeast of the facility is the Arthur Kill shipping Channel and to the southwest is the PSEG Seawaren Generating facility, the former Port Reading Coal Docks, currently owned by Prologis Corporation, are located to the northeast, Port Reading Avenue is located to the northwest, a mixture of industrial and commercial properties are located to the west, two residential properties are located upgradient to the northwest, and an industrial property is located to the south. A site location map is presented as **Figure 1**; a site plan is presented as **Figure 2**.

HC-PR is comprised of refining and terminal operations. There are two terminal facilities; the Refinery Terminal and the Second Reserve Terminal. The Second Reserve Terminal maintains a marine offloading facility on the Arthur Kill shipping channel. The Refinery Terminal maintains the storage of raw materials utilized in the refinery operations, along with the final products.

The HC-PR facility currently processes low sulfur gas oils and residuals as feed to a Fluidized Catalytic Cracking Unit (FCCU) that converts gas oil into gasoline, fuel oil and other hydrocarbon products (e.g. methane, ethane, and liquid petroleum gas).

Petroleum products are stored in ASTs on-site. The ASTs have secondary containment sufficient to hold in place, or convey to permitted onsite treatment facilities, the entire content of the single largest tank within the containment area, plus provide additional capacity for six inches of rainfall. The tank basins and berms are of earthen construction and covered with crushed stone. Additionally, these areas have pumps, which would pump any released petroleum substance out of the containment area to the facility treatment system and to the oil/water separator. In addition to contained petroleum storage areas, chemical storage areas are also present at the facility. The chemical storage areas are paved with concrete, either acid-resistant or coated with a chemically resistant coating, as appropriate, to contain spills and to prevent seepage.

The marine off loading facility is comprised of the North Dock and South Dock; they are located on the west side of the Arthur kill shipping channel, approximately 1.1 and 1.0 miles north of the entrance to the Smith Creek, respectively. The transfer operations in the North Dock consists of 20-inch pipeline on the wharf side leading to four 10-inch and five 8-inch pipelines that extend to 72 steel storage tanks at the refinery, with a total capacity of 5,546,000 gallons. The South Dock transfer operations consist of one 24-inch, two 14-inch and five 10-inch pipelines that extend from the wharf to steel storage tanks.

A review of historic Topographic and Aerial Maps indicates the property was undeveloped prior to the commencement of refinery construction in 1955. The undeveloped land was occupied by Smith Creek and associated tributaries. HC-PR site operations were initiated in 1958 with a Crude Topping Unit and underwent various expansions between 1958 and 1970. In 1974, refining operations were suspended and the facility operated only as a bulk storage and distribution terminal until 1985. In April 1985, following a retrofit, the HC-PR facility resumed refining operations, which continue today.

II. Physical Setting

A. Topography

According to the United States Geological Survey *Arthur Kill Quadrangle, New Jersey / New York* 7.5 Minute Series Topographic Map, topography of the site is generally level at an approximate elevation of 7- to 15-feet (ft) above mean sea level (msl). The USGS Topographic Map is presented as **Figure 1.**

B. Soils, geology, hydrogeology and groundwater flow direction

The Site is located in the Piedmont Lowland section of the New Jersey Physiographic Province. Published data indicates that the geology underlying the site area consists of the Triassic Age sedimentary rocks of the Newark Super Group. Unconsolidated Pleistocene and recent deposits form a thin, discontinuous cover over the bedrock surface. Bedrock geology underlying the Site is the Raritan Formation which consists of clayey silt overlaying quartz sand.

There are no predominant geological surface features, such as rock outcroppings, on the subject site. Site-specific stratigraphy was gathered during soil boring advancement and monitoring well installation activities. Based on soil data collected, the subject site is geographically divided into two distinct sections. A thick clay unit underlies the western portion of the site. The eastern and southeastern portions of the site are underlain by 10 to 20 feet of natural sandy fill assumed to be from dredging operations related to the Arthur Kill. This material sits above an approximately 10-foot thick confining marsh layer comprised of organic matter, sands, and peat. Beneath this stratum is approximately 10 feet of primarily fine to coarse sands followed by an approximately 15-foot layer of dense glacial till. This is subsequently underlain by a layer of fine to coarse sand with some silt and gravel, and weathered, jointed shale. The unconsolidated strata with the exception of the marsh layer, thickens considerably towards the east of the site. Shale bedrock is present at 30 ft below ground surface (bgs) at Cliff Road, while a 1958 boring log for a closed water supply well near the Arthur Kill shows bedrock surface at 160 ft bgs.

The bedrock aquifer which underlies the Site is part of the Potomac-Raritan-Magothy aquifer system. The Potomac-Raritan-Magothy aquifer system is a wedge-shaped mass of sediments of Cretaceous age and is composed of alternating layers of clay, silt, sand, and gravel. These deposits range in thickness from a featheredge along the Fall Line to more than 4,100 feet beneath Cape May County. Groundwater has historically been encountered at the Site within the fill material at depths ranging from 0 to 12 feet below ground surface (bgs).

Groundwater movement, is generally to the southeast with an average hydraulic gradient of 0.001 (ft/ft), but varies in relation to the topography, lithology, elevations of recharge and discharge area, man-made influences, and seasonal influences. See **Figure 3** for the August 25, 2011 Groundwater Flow Map.

C. Surface Water Bodies/Wetlands

A detention pond and two surface water bodies are located proximal to the HC-PR facility. The Arthur Kill is a navigable waterway that abuts the eastern boundary of the site, and is used for both commercial and recreational traffic. It is classified "SE3", a general surface water classification applied to saline waters of estuaries. Two docks, the North Dock and the South Dock, project from the site into the Arthur Kill. These docks and associated pipelines facilitate the loading and offloading of petroleum and petroleum related products from barges and/or shops to/from the facility.

Smith Creek, is classified as FW2-NT/SE3 tidal channel, a general surface water classification applied to freshwater non-trout tributaries to saline estuaries, and is located immediately south of the site. According to historic aerial photographs, Smith Creek once traversed the HC-PR facility, and has since been filled with dredge materials, from the Arthur Kill. A small portion of Smith's Creek can be seen at the southern extent of the property, just west of the PSEG facility.

One detention basin is located onsite. Surface runoff from the non operational areas of the HC-PR is diverted into this detention basin. There is no surface water outlet from the detention basin. Water from the basin is routinely pumped and treated via the facility wastewater treatment facility, located onsite. The treated water is then discharged under NJPDES Permit #0028878.

The North Drainage Ditch is located on the northern portion of the site. It is ephemeral over much of it length but is a perennial tidal channel closer to the Arthur Kill. The ditch runs west to east, and serves as a municipal storm water drainage channel accepting surface water flow from the street, nearby Conrail railroad property, and non-operational areas of the subject facility.

The NJDEP iMap online database indicates wetlands are located along the perimeter of the detention basin, the adjoining PSE&G property to the southwest of the basin, and north of the site beyond the Conrail railroad facility. The NJDEP iMap also indicates, in error, that a former water treatment area is a wetland. This former basin was part of the historical waste water treatment process. It is an Area of Concern, addressed under Memorandum of Agreement dated April 7, 1993, and is being closed in accordance to an NJDEP approved plan. A copy of the NJDEP iMap page is included as **Appendix I**.

D. Tidal Study

A tidal study was conducted in May and June 2002. Separate five and seven day studies involved introduction and monitoring of pressure tranducer/data loggers in seven site monitoring wells (AB-1, BG-3, Li-3, PER-2, PER-3, PER-7, and PER-8). To monitor the Arthur Kill a transducer was suspended from a steel bulkhead along the south side of the Hess Refinery property and submerged in the Arthur Kill.

Tidal fluctuations were observed in the Arthur Kill and in the seven monitoring wells included in the monitoring program. The patterns were similar during the May and June 2002 periods, except the amplitudes were slightly greater in the Arthur Kill and some monitoring wells in May.

Analysis of the data estimates water elevations in the Arthur Kill ranged between approximately -3 ft and 6 ft, with the asymmetrical water elevation fluctuations between approximately 5 and 8 ft. The asymmetrical groundwater elevation tidal fluctuations ranged between approximately 0.05 feet (AB-1) and 1.0 ft (PER-2 and PER-7). There was a lag time between tidal fluctuations in the Arthur Kill and corresponding fluctuations in the monitoring wells. Calculated groundwater tidal amplitudes range from 0.1 to 1.0 feet, with lag times ranging from 50 minutes to 160 minutes.

The monitoring program detected a groundwater elevation decline of approximately 0.5 to 0.75, and 0.3 to 1.4 ft in May and June, respectively. The tidal influence in AB-1, BG-3 and PER-3 was primarily expressed as a periodic halt in the decline in groundwater elevations. Total daily precipitation from Newark Airport (located approximately 10 miles northeast of the site), showed no measurable precipitation during either the May or June monitoring program.

III. Receptor Evaluation

A. Location of Wells and Other Collection Points near the LNAPL Body

The Site area is serviced by a municipal water supply, which is provided by the Middlesex Water Company. The Middlesex Water Company pulls water from the Delaware-Raritan Canal to a water treatment and pumping station located in New Brunswick, New Jersey. Well searches were conducted in 2006 and 2010; no potable or public supply wells were identified in vicinity of the facility.

Between 1985 and 2011 a total of 73 monitoring wells were installed throughout HC-PR, a summary of well construction is presented in **Table 1**; well logs are included as **Appendix II**, as per Appendix B, Section 2 of the July 22, 2011 NJDEP LNAPL Guidance document, delineation of LNAPL and dissolve constituents in groundwater has been completed by temporary well installation and sampling. A total of 198 temporary wells were installed at HC-PR, between 2009 and 2011. Temporary well logs are included in **Appendix III**. Historically LNAPL has been detected at 11 site monitoring wells and 3 temporary well locations. The location of the monitoring and temporary wells points in proximity to the identified LNAPL onsite is discussed in Section V.B.

B. Land Use near the LNAPL Body

The facility is located east of Cliff Road, and abuts the southern property boundary of the Conrail Port Reading Rail yard. Immediately east/southeast of the facility is the Arthur Kill shipping Channel and the southwest is the PSE&G power facility, the former Port Reading Coal Docks are located to the northeast, Port Reading Avenue is located to the northwest, a mixture of industrial and commercial property is located to the west, and industrial property is located to the south. None of the four LNAPL bodies extend beyond HC-PR property lines.

C. Location and details regarding potential preferential pathways for LNAPL migration

Four distinct bodies of LNAPL have been identified at the site. All petroleum product used and manufactured (crude oil through finished products) at the facility is transported via aboveground lines. Subsurface utilities, including storm sewer lines and process sewer lines and pipelines relating to HC-PR operations are present at the facility. The facility storm and process water lines are typically up to six feet below grade, ranging from 10 to 18 inches in diameter and are discussed below. In each LNAPL area temporary wells have been installed to assess potential migration routes through utility and sewer trenches. Temporary well locations are depicted on enclosed figures as indicated in the paragraphs below.

Interstate pipelines traverse the site from east to west (see **Figure 3**) near the LNAPL bodies in AOC 14B and AOC 7. Their influence has been assessed in relation to these areas and a clean monitoring well (AB-2) is located along the pipeline corridor in a position downgrade from all LNAPL presence.

AOC 7- Colonial Pipeline, located in the central area of the site. Land use in the area is dedicated to several access roads, piping runs, AST S-1945 and TK-1911. There is one large subsurface line that traverses the area from west to east. This line is connects the API Separator Unit to the Advanced Wastewater Treatment Plant. The location of the line is well known and potential preferential transport along the line has been evaluated. The location of AOC-7 is depicted in **Figure 2** and **Figure 4**.

AOC 10- The second LNAPL body is located within Truck Loading Rack Area, located in the southwest corner of the site. There are closed underground piping manifold in the Truck Loading Rack and a closed interstate pipeline just east of AOC 10. The underground portions of the piping manifold begin and terminate within the area and do not preferentially transport beyond AOC 10. The plume of dissolved constituents extending from the LNAPL body does traverse the closed interstate pipeline. Observations from borings/temporary wells have established the LNAPL body does not encounter the line. The location of AOC-10 is depicted in **Figure 2** and **Figure 5**.

AOC 14B- The third LNAPL body is within tank field area known as AOC-14B -TM Monitoring Wells, located north of AOC 7. AOC-14B is a double containment area that houses 10 ASTs. AOC 14B also contains a gasoline additive truck unloading area and associated concrete pad. Current and historical storage within this AOC includes Slurry Oil, Light Cycle Oil, Raffinate, Methanol, Process Water, Gasoline, Hydrogen Sulfide, and Sour Water. There are subsurface lines outside the secondary containment on all four sides of AOC 14B. Boring and temporary wells have established the LNAPL body is in contact only with those lines (storm water and process wastewater) on the eastern side of AOC 14B. The area has been extensively investigated to establish the extent of LNAPL migration along these lines. The location of AOC-14B is depicted in **Figure 2** and **Figure 6**.

AOC 15A- The fourth LNAPL body is located within the Third Tank Field and is associated with Former UST Area (UST 0010 and UST 0011), located northeast of AOC 7. There are subsurface storm water lines in this area. The 2009 - 2011 temporary well program has

investigated the potential for preferential LNAPL migration along these lines. None has been encountered but investigation is continuing in the area. The location of AOC 15A is depicted in **Figure 2** and **Figure 7**.

D. Identification of real or suspected vapor concerns associated with the LNAPL body

The majority of the site consists of ASTs, and refinery production machinery and equipment. As per the *NJDEP Vapor Intrusion Guidance Document, January 2012*, Chapter 5, Section 3; indoor air sampling is not required at site related buildings. Therefore, with the exception of the administration building, indoor air sampling has not been conducted. HC-PR plans to establish Deed Notice Restriction and Groundwater Classification Area (CEA) that will be in place until remediation has been completed to applicable standards or the property use changes. Therefore Sub-Slab Soil Gas (SSSG) sampling is not currently required but will be considered in the monitoring, maintenance, and evaluation (MME) plan of the CEA as per Chapter 6, Section 4 of the guidance document. See additional details below.

AOC-7- Is located east of the detention basin (See **Figure 2** and **Figure 4**), land cover is a mix of asphalt, concrete and stone, the structures located within 100 feet of indentified LNAPL include the API Separator, Tanks 1911, and S-1945, the Advanced Wastewater treatment area, and subsurface and above ground piping associated with these operations, all uninhabited structures used in the treatment of petroleum products, and are therefore, exempt from indoor air sampling as per the *NJDEP Vapor Intrusion Guidance Document, January 2012*. Due to the nature of the facility, structures in this area, and shallow (less than 2 ft bgs.) groundwater sub-slab sampling is not feasible or warranted. Remediation is ongoing, and change in land use is not anticipated, institutional controls are anticipated in the Site, therefore no sub-slab sampling is proposed at this time.

AOC-10- Is located northwest of the detention basin (**Figure 2** and **Figure 5**) at the truck loading rack. The land cover in the area is a mix of asphalt and concrete; structures located within 100 feet of the identified LNAPL body include, the ASTs 1175, 1176, truck loading rack, and dispatch office. These structures are used in the distribution of gasoline and other petroleum products are exempt from indoor air sampling as per the *NJDEP Vapor Intrusion Guidance Document, January 2012*. Due to the nature of the facilities, and shallow (less than 4 ft bgs) groundwater, sub-slab sampling is not proposed at this time. Remediation is ongoing, and change in land use is not anticipated, institutional controls are planned, therefore, no sub-slab sampling is proposed at this time.

AOC-14B- Is located north of the detention basin (**Figure 2** and **Figure 6**), land cover is a mixture of asphalt, stone, and some concrete. Structures located within 100 feet of the indentified LNAPL body include ASTs, 7916, 7917, 7914, 7915, 7909, 7908, and 7906, and associated piping. These are uninhabited structures used in the storage and refining of petroleum products, and are exempt from indoor air sampling, as per the *NJDEP Vapor Intrusion Guidance Document, January 2012.* Due to the nature of the structures sub-slab sampling is not warranted. Remediation is ongoing, and change in land use is not anticipated, institutional controls are planned, therefore. No sub-slab sampling is proposed at this time.

AOC-15A- Is located north northeast of AOC-7 (**Figure 2** and **Figure 7**), land cover in the area is asphalt and stone. Structures located within 100 feet of the identified LNAPL body include ASTs 1216, 1215, and 1219, and associated piping. These are uninhabited structures used in the storage and refining of petroleum products, and are therefore exempt from indoor air sampling as per the *NJDEP Vapor Intrusion Guidance Document, January 2012*. Due to the nature of the structures, sub-slab sampling is not feasible or warranted. Remediation is ongoing, and change in land use is not anticipated institutional controls are planned, therefore no sub-slab sampling is proposed at this time.

E. Location of any real or potential ecologic receptors affected by the LNAPL

AOC-7- Is located east of the detention basin, (**Figure 2** and **Figure 4**) land cover is a mix of asphalt, concrete and some stone, refinery operations are undertaken onsite including the operation of heavy machinery and industrial equipment, the site is enclosed by a fence inhibiting movement of wildlife. The area is covered predominately by surfaces with limited vegetation; and presents no opportunity for habitat. One ecological receptor is present in this area. There is a delineated wetland on the PSEG property, immediately east of the property line. The combination of temporary wells (PL-TW9, PL-TW10, PL-TW11, PL-TW12) and visual observations of standing water in the wetland demonstrate that LNAPL has not impacted the wetland. See **Figure 4** for temporary well location and **Appendix I** for wetland location.

AOC-10- Is located northwest of the detention basin (**Figure 2** and **Figure 5**), at the truck loading rack, the land cover in the area is a mix of asphalt and concrete. The area is subject to heavy traffic and the movement of trucks. The area is covered entirely of impervious surfaces. One ecological receptor is present in this area; this is the detention basin and wetlands along the basin perimeter. A combination of temporary wells and visual observation of standing water in the basin confirm that measureable LNAPL has not impacted the receptor. See **Figure 5** for the temporary well and boring locations.

AOC-14B- Is located north of the detention basin (**Figure 2** and **Figure 6**), land cover is a mixture of asphalt, stone, and some concrete, the area houses 10 ASTs, and associated piping. The area is covered entirely of impervious surfaces; ecological receptors are not present in this area.

AOC-15A- Is located north northeast of AOC-7 (**Figure 2** and **Figure 7**) and land cover in the area is asphalt, and stone. The area houses 10 ASTs, and associated piping. Ecological receptors are not present in this area.

IV. TECHNICAL OVERVIEW

A. Summary of the LNAPL Discharge

AOC 7- Between 1958 and 1970 different areas beneath and around the South Landfarm served as oil water lagoons. There are no recorded discharges specifically attributed to these lagoons, but it is likely the historical operations contributed LNAPL to the subsurface. These lagoons are considered together as AOC 13 for remedial investigation of the site and are co-located with the LNAPL body identified as AOC 7. The locations of the lagoons are shown on **Figure 2**.

Several reported released have occurred within or in proximity of AOC-7. The first occurred on October 30, 1969, in the Third Tank field, located immediately northeast of AOC 7. A catastrophic failure occurred within AST 1214, prompting the release of 8-million gallons of crude oil. Due to the volume of the LNAPL released, the LNAPL breached the containment dikes and spread to the south low lying area of AOC 7. The second reported release occurred May 14, 1991; HC-PR reported a release when, a petroleum product was observed in an excavation along the Colonial Pipeline Right of Way. This pipeline was later abandoned in place. The third and fourth releases are identified as Historic Spill 14 (HS-14) depicted in **Figure 2** and **Figure 4**, which occurred on April 2, 1998 when excess wastewater from the refinery's wastewater equalization Tank 1911, was temporarily transferred to the adjacent secondary containment system. This measure was taken to prevent the overfilling and damaging of the tank. The fourth release, also identified as HS-14 occurred at Tank 1911 on December 29, 2009 when approximately one gallon of residual oil was entrained with storm water runoff. The oil followed the onsite sewer line to the onsite storm water collection basin, where it was collected via absorbent pads and vacuum truck. A minor excavation was performed; cleanup was completed that same day.

AOC-10- Several reported releases have occurred within or in proximity of AOC-10. Two distinct releases are indentified as HS-10, see **Figure 2** and **Figure 5.** The first occurred October 21, 1993, when an inspection of the oily water sewer box in the vicinity indicated a mixture of gasoline and water, draining into the sewer box from the subsurface. A 6-inch diameter underground section of pipe used to transfer finished gasoline product was found to be leaking and was repaired. Samples obtained from the sewer box identified the product as standard grade gasoline. The second release identified as HS-10 occurred on May 25, 2006 when the fuel line from a diesel pump cracked causing the release of diesel fuel. The final recorded release, identified as HS-13 was reported on November 7, 1997 when liquid gasoline was observed being discharged from the Vapor Recovery Unit (VRU) vent pipe. The VRU was shut down and the discharged liquid ended. HC-PR concluded that approximately 50-gallons of gasoline were discharged into the VRU containment area.

AOC-14B- There have been seven reported discharges within AOC 14B. The first recorded release in this area, identified as HS-6, occurred on June 3, 1992 when a flange failed at Tank 7904 causing 40-50 gallons of recovered oil to be released. Three separate releases have occurred at tank 7914 and associated piping and identified at the location identified as HS-9. The first occurred on August 23, 1993 when approximately 20 gallons of light cycle oil was released when an above ground transfer pipe adjacent to tank 7914 failed due to corrosion. The second incident occurred on October 3, 1994 when approximately 25 gallons of oil was released from an above ground transfer pipe adjacent to tank 7914 failed due to corrosion. The third occurred on March 18, 1995, when a crack formed between two 45° stub out flanges, spraying 50-100 gallons of slurry oil onto the secondary containment wall and the shell of Tank 7914. The oil in the line was heated by steam tracing, resulting in a buildup of pressure, causing line failure. The final Historic Spill, HS-12, refers to two separate incidents. The first occurring on March 7, 1995 when approximately 100 gallons of slurry oil was released when corrosion caused the failure of an aboveground oil transfer line at tank 7908. The second occurred on

October 10, 1997 when an undetermined amount of low sulfur gas oil was released as the result of a fire at the main oil charge pump. See **Figure 2** and **Figure 6** for the locations of Historic Spills.

AOC-15A- One release has been identified in this area. In 1989 UST 00100, a 500-gallon carbon steel tank, located beneath a cement pad, near AST 1215 and AST 1216, and used for the temporary storage of medium weight oil and #4 heating oil, was removed from the subsurface. Six holes were observed upon removal. The total excavation size measured 7.5' long x 4.75' wide x 5' deep. Groundwater occurred at approximately 2' bgs and, LNAPL was present. Also in 1989, UST 0011 a 500-gallon carbon steel vessel, located beneath a cement pad, near AST 1215 and AST 1216, approximately 30 feet from UST 0010, used for the temporary storage of medium weight oil and #4 heating oil, was removed from the subsurface. The final excavation size measured 5.3' wide x 7.8' long x 5.5 deep, no holes where noted upon removal and groundwater was observed at approximately 2' bgs. LNAPL was present on the water table, but UST 0011 was not suspected as the source. The location of AOC 15A is depicted in **Figure 2** and **Figure 7**.

B. Summary of activities conducted to delineate the LNAPL

Between 1985 and 2011 a total of 73 monitoring wells were installed throughout HC-PR, and are monitored routinely. LNAPL has historically been detected in 11 monitoring wells (PL-1, PL-2, PL-3R, PL-5, PL-7, TM-6, TM-7, TF-1, TF-2, TR-2R, and TR-4) and groundwater gauging is currently conducted on a monthly basis at these wells. The most recent available gauging data from December 2011 identified LNAPL at seven (7) well locations (PL-2, PL-5, TM-6, TM-7, TF-1, TF-2, and TR-2R). The results of the monthly gauging activities are included within **Table 2**.

Wells with historic detections of LNAPL are included as part the annual groundwater sampling program, the results of which are summarized in **Table 3**. During the September 2011 sampling event LNAPL was not detected in any monitored well with the exception of PL-2 and PL-5.

Additional remedial investigation activities were completed in October 2009, October 2010 and the fall of 2011, to further delineate the LNAPL areas and other AOCs identified on Site, as per Appendix B, Section 2 of the July 22, 2011 NJDEP LNAPL guidance document temporary wells were used to delineate LNAPL bodies at the site. A total of 198 temporary wells were installed and groundwater samples collected, LNAPL was identified in three temporary wells TR-TW-14, SLF-TW-2 and HS14-TW-7 that therefore were not sampled. The location of all monitoring wells and temporary wells can be found in **Figure 2**, temporary well logs are presented as **Appendix III**, and summarized analytical results are presented in **Table 4**.

AOC-7- In September 1995, a total of nine (9) monitoring wells (PL-1 through PL-9) were installed within this AOC. Historically, LNAPL has been detected within PL-1, PL-2, PL-3R, PL-5, and PL-7. In an effort to delineate these locations, in October of 2009, HC-PR installed nineteen (19) temporary wells (PL-TW-1 through PL-TW-19) with an additional temporary well (PL-TW-20) being installed in October 2011, to a depth of approximately 10 feet below grade via Geoprobe direct push method. LNAPL was not observed in any of these temporary wells. The location of monitoring wells and temporary wells can be found on **Figure 2** and **Figure 4**, the summarized analytical temporary well data is presented in **Table 4**.

The PL series wells are included as part the annual groundwater sampling program, the results of which are summarized in **Table 3**. During the September 2011 sampling event LNAPL was not detected in any PL series well with the exception of PL-2 and PL-5.

AOC-10- During November 1993, four ground water monitoring wells were installed (TR-1 through TR-4, formerly known as MW-1 through MW-4). Historically, LNAPL has been observed within monitoring well TR-2, and subsequent replacement well TR-2R, and in TR-4.

In October 2009, HC-PR installed seventeen (17) temporary wells (TR-TW-1 through TR-TW-17), see **Figure 2** and **Figure 5**, to a depth of approximately 10 feet below grade via Geoprobe direct push method. These temporary wells were installed to delineate LNAPL previously detected within TR-2/TR-2R and TR-4. All temporary wells were gauged and sampled in accordance with the NJDEP Field Sampling Procedures Manual. LNAPL was detected in TR-TW14, immediately northeast of TR-2R, and sheen was detected in TR-TW-2, TR-TW-3, TR-TW-5, TR-TW-7, TR-TW-8, TR-TW-9, TR-TW-10, TR-TW-13, and TR-TW-15. Summarized analytical data is presented in **Table 4**.

Based on these results, two (2) additional monitoring wells (TR-5 and TR-6) were installed on October 7, 2010, in the area containing the highest concentrations of volatile organic compounds. The TR series wells area monitored and sampled during the annual facility wide groundwater sampling event. The TR series wells are included as part of the annual groundwater sampling program, the results of which are summarized in **Table 3**. During the September 2011 event, LNAPL was not detected in any TR series well.

AOC-14B- Three monitoring wells (TM-5 through TM-7) were installed within this area in December 1998. Historic GW gauging reported measureable LNAPL product within TM-6 and intermittently at TM-7 and LNAPL continues to be detected, with decreasing trends. AOC 14B appears to contain two separate areas of groundwater impact. The first is at the western side of AOC 14B. LNAPL is reported intermittently in well TM-7. The second area of groundwater impact in AOC 14B is on the western side of AOC 14B and associated with historic LNAPL observations in well TM-6. The TM series wells are included as part of the annual groundwater sampling program, the results of which are summarized in **Table 3**. During the September 2011, LNAPL was not detected in any TM series well.

In October 2009, HC-PR installed temporary wells TM-TW-5 through TM-TW-14 in AOC 14B. Temporary wells were installed to a depth of approximately 10 feet below grade via Geoprobe direct push method. No measurable LNAPL was detected; sheen was detected in TM-TW-11, TM-TW-12, and TM-TW-14. Summarized analytical data is presented in **Table 4;** locations are depicted in **Figure 2** and **Figure 6**.

Based on these results, additional groundwater delineation was conducted in AOC 14B during the second phase of the facility groundwater delineation program. Between September 20 and 21, 2010, HC-PR installed nine additional temporary wells (HS9-TW1 through HS9-TW4 and HS6-TW1 through HS6-TW5) in the area of AOC-14B. LNAPL was not present in any temporary well. Summarized analytical data is presented in **Table 4;** locations are depicted in **Figure 2** and **Figure 6**.

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AOC-15A- In 1995 three wells were installed in this area (TF-1, TF-2 and TF-3), approximately 60 feet from the former locations of USTs 0010 and 0011. LNAPL is routinely detected at TF-1 and TF-2, during the September 2011, annual sampling event. LNAPL was not detected in any TF series wells, with the exception of TF-2. Summarized analytical data is presented in **Table 3**; locations are depicted in **Figure 2** and **Figure 7**.

In October 2009, HC-PR installed five (5) temporary wells (TF-TW-1 through TF-TW-5), in October 2011 two additional temporary wells (TF-TW6 and TF-TW7) were installed down gradient to a depth of approximately 10 feet below grade via the Geoprobe direct push method. All temporary wells were gauged in accordance with the NJDEP Field Sampling Procedures Manual. No LNAPL was detected in any temporary well. Summarized analytical data is included in **Table 4**.

C. Summary of Initial Recovery Efforts.

AOC-7- Due to the tank failure in October 1969, at the former AST 1214, approximately 8 million gallons of crude oil was released. The majority of the volume was contained and recovered within the bermed area of the tank farm and pumped to other ASTs. An undetermined amount of oil seeped through the secondary containment berm and subsequently into Smith Creek, please note that the current detention basin did not exist in 1969. A 1972 aerial photograph shows that the bed of the Smith Creek beneath the current Detention Basin was excavated, prior to the construction of the current detention basin.

An unknown petroleum product was observed in the Colonial Pipeline right of way; the pipeline was later abandoned and rerouted.

In response to the April 2, 1998 (HS-14) release of 100,000 gallons of wastewater, the material was recovered and treated at HC-PR Advanced wastewater treatment facility.

In response to the to the December 29, 2009 (also identified as HS-14) release of one gallon of residual oil, a vacuum truck was deployed to remove the oil, oil absorbent pads were utilized, a minor excavation was performed, and all cleanup activities were completed December 29, 2009.

AOC-10- In response to the October 21, 1993 (HS-10) reported release, gasoline transfer operations was discontinued, and the affected pipe isolated and repaired. A vacuum truck was used to recover liquids within the sewer box, and the gasoline of the concrete surface was cleaned up.

In response to the May 25, 2006 release (also identified as HS-10), the cracked line was replaced, and the spilled material was removed and properly disposed of.

In response to HS-13, all liquid gasoline was removed from the vapor recovery containment area, and transferred to the facility slop tank for eventual reprocessing. All contaminated soil and debris recovered was disposed of at an approved treatment facility.

AOC 14B- In response to HS-6 on June 3, 1992, a vacuum truck was dispatched to pump out the recovered oil line and stop the discharge, approximately 20 yards of crushed stone was collected and disposed of at an approved treatment facility. The damaged line was inspected and repaired.

In response to HS-9 dated August 23, 1993, gasoline transfer was discontinued and the affected pipe section isolated, terminating the discharge. One 20-foot section of pipe was removed and replaced, with a hydrostatic test conducted prior to reinstatement of operation.

In response to the October 3, 1994 release, the leaking pipe section was isolated and the release terminated. A vacuum truck was used to remove residual petroleum from the pipe. Affected soils were removed and disposed of at an approved treatment facility. One 30-foot section of pipe was replaced. A hydrostatic test was conducted before reinstatement of operation.

In response to the March 18, 1995 release, the leaking slurry oil line was isolated, and steam tracing was secured. Impacted soil, crushed stone, and absorbent material was removed and disposed of at an approved treatment facility. One 12-foot section of pipe was replaced, eliminating the 45° stub outs. Pressure relief valves were inspected, and either cleaned or replaced, as needed.

In response to HS-12, the feed to the failed pump was terminated, and the fire extinguished, all liquid was cleaned up from the containment area and transferred to the facility slop oil tank, for processing. Generated oil and debris were disposed of at an approved treatment facility.

AOC 15A- In response to the LNAPL observed in the excavations of former USTs 0010 and 0011, soil and free product were removed from the subsurface before the area was restored.

D. Summary of Ongoing Recovery Efforts

In November 1998 HC-PR initiated monthly Pump and Haul events, targeting wells indentified to contain LNAPL. Groundwater gauging and subsequent Pump and Haul events are currently conducted monthly at eleven (11) monitoring wells throughout the facility (PL-1, PL-2, PL-3R, PL-5, PL-7, TM-6, TM-7, TF-1, TF-2, TR-2R, and TR-4). The Monthly Gauging Results Summary Table is included as **Table 2**.

Available Pump and Haul data dates from October 2001 to present, in that time period a total of 31,295 gallons, of hydrocarbon impacted groundwater have been removed and disposed of at the refinery's permitted Advanced Wastewater Treatment System (AWTS). The Pump and Haul Summary Table is included as **Table 5**.

Monitoring wells PL-1, PL-2, PL-3R, PL-5, PL-7, TF-1, TF-2, TM-6, TM-7, TR-2R, and TR-4 will continue to be gauged on a monthly basis to monitor presence and thickness of LNAPL. Pump and Haul events will be conducted to recover and remove identified LNAPL.

During the Second Quarter 2010, HC-PR completed the design and assembly of a Mobile Solar-Powered LNAPL Recovery System that is utilized throughout the facility. The system is comprised of a solar-powered belt skimmer and recovery tank located on a single axle trailer

that can be moved to wells where LNAPL has been identified. The system operates on a timer that allows the system to run for one half hour twice a day, and is monitored weekly to ensure proper operation. The LNAPL is collected from the well and into the recovery tank on the trailer for subsequent pumping to the AWTS. Since June 10, 2010 the mobile LNAPL system has collected ten gallons of LNAPL, from monitoring well TF-2.

E. Discussion of the Reliability of Data

All field work was completed by trained field personnel qualified for the task(s). All sampling and field measurements procedures were conducted in accordance with the New Jersey Department of Environmental Protection Field Sampling Procedures Manual (2005). Laboratory analyses and fingerprint samples were transported under chain-of-custody procedures. Environmental analytical samples have all been analyzed by NJDEP licensed laboratories Accutest Laboratories (Accutest) of Dayton, New Jersey (NJDEP Certification #12129) and Integrated Analytical Laboratories (IAL) of Randolph, New Jersey (NJDEP Certification 22-3498363). GW/S Environmental Consulting of Tulsa Oklahoma conducted fingerprint analysis and interpretation.

F. Discussion of Any Problems Encountered During Remedial Investigation

The site is comprised of an oil refinery and petroleum storage terminal, as such rigorous security and safety procedures are in place. Locations must be vetted by site safety procedures, many locations have been moved to accommodate these procedures, and several were relocated due in inaccessibility.

V. INVESTIGATIVE FINDINGS

A. Physical Characteristics and Chemical Composition of LNAPL

AOC-7- LNAPL samples were collected from PL-5 on November 10, 1998 and August 26, 2008 and a 'fingerprint' analysis completed to determine the composition of the LNAPL. The results from both sampling events confirmed the LNAPL to be a very highly degraded crude oil. The samples consisted entirely of crude oil, confirmed by the lack of nCF olefins, which are present in refined petroleum and not crude oil. The sample collected in 2008 was reported to be related to the 1998 sample; both samples were also observed to be near "maximum biodegradation". Copies of analyses are included at **Appendix IV**.

On November 10, 1998 a LNAPL sample was also collected from PL-1 and submitted for fingerprint analysis. Results indicate that the sample was a very highly degraded crude oil with a highly degraded diesel/fuel oil component superimposed on the crude oil fraction. Both the crude oil and diesel/fuel oil components have been in the subsurface and subject to degradation for a minimum of 18 years or more. A copy of analysis is included at **Appendix IV**.

On October 28, 2009 a LNAPL sample was collected from temporary well location SLF-TW-2, immediately west of PL-3R, and submitted for fingerprint analysis. Results indicate that the LNAPL is a mixture of four petroleum products. The sample was comprised of 50 to 60 percent highly degraded crude oil, approximately 30 percent of the sample was comprised of a

moderately degraded distillate (diesel/fuel oil) released between 10 and 20 years ago. Approximately 5 percent or less was comprised of a highly weathered gasoline, and less than 5 percent was comprised of kerosene boiling range product, possibly Jet A. A copy of analysis is included as **Appendix IV**.

It is concluded that the crude oil component identified within PL-1, PL-5 and SLF-TW-2 is associated with the known release on October 30, 1969. The distillate diesel/fuel oil component identified in PL-1 and SLF-TW-2, as well as the gasoline fraction and possible Jet A fraction likely is attributed to former operations of the former Oily Water Lagoons.

AOC-10- On October 22, 2009 a LNAPL sample was collected from temporary well location TR-TW-14, immediately adjacent to TR-2R, and submitted for fingerprint analysis. Analysis shows that the sample was comprised of 95 percent regular grade gasoline (octane rating index of 2.1) and less than 5 percent a relatively "fresh" released distillate (diesel/fuel oil). The assessment of recent nature of the diesel/fuel oil is based on a nC17/pristine ratio of 1.71. The fingerprint report suggested an age of 2 to 10 years for the gasoline fraction. However this assessment was less definitive due to conflicting lines of evidence. A copy of analysis is included as **Appendix IV**.

It is concluded that the LNAPL is associated with activities at the truck loading rack and associated piping. In addition, the determination of the product as 'fresh' is likely due to the impervious concrete cover at the area that inhibits biological degradation. Facility operations are diligent and observe all tenets of the facility permits and NJDEP regulations. No recent spills have been recorded and facility records do not indicate any ongoing release in the area.

AOC-14B- On April 27, 1999 a LNAPL sample was collected from TM-6, and submitted for fingerprint analysis. The analysis shows that approximately 86 percent of the sample is comprised of a refined gasoline, to which MTBE was not added, the sample may not represent a finished gasoline. Approximately 14 percent of the sample represents a highly degraded distillate which was probably released to the subsurface thirty or more years ago. A copy of analysis is included as **Appendix IV**.

It is concluded that the LNAPL is associated with activities within the tank field and associated piping.

AOC-15A- On February 11, 2009 a LNAPL sample was collected from TF-2, and submitted for fingerprint analysis. The analysis shows that the sample was comprised entirely of a highly degraded crude oil. A copy of analysis is included as **Appendix IV**.

It is concluded that the LNAPL present in this area is not clearly attributable to a specific event. The material is extremely weathered and aged. In addition to the potential sources discussed in Section IV above the area contains significant pipe manifolds controlling the flow of products and feed oils between the Reserve Terminal and the Refinery.

B. Horizontal and Vertical Extent of the Measurable LNAPL

Since 1985, 73 monitoring wells have been installed onsite, historically LNAPL has been identified within 11 (PL-1, PL-2, PL-3R, PL-5, PL-7, TM-6, TM-7, TF-1, TF-2, TR-2R, and TR-4) monitoring wells, see **Figure 2**. Four distinct areas of LNAPL have been identified and delineated. A total of 198 temporary wells were installed and 194 samples collected and analyzed between September 2010 and November 2011 remedial investigation. The locations of the temporary wells are illustrated on **Figure 2**. The temporary well investigations served to delineate LNAPL in the four areas of indentified LNAPL.

AOC-7- Within or immediately adjacent to AOC-7, LNAPL has been identified in PL-1, PL-2, PL-3R, PL-5, SLF-TW-2, HS14-TW7-7 and intermittently at PL-7, where it has not been detected since May 2008. The LNAPL present in PL-1 is delineated to the north by SLF-TW-31, to the south by SLF-TW-22, to the west by SLF-TW-23 and to the east by SLF-21 and SLF-TW19. The LNAPL present in PL-2 is delineated to the north by PL-TW-1, to the south by PL-TW-2, PL-TW-3 and PL-TW-4, to the west by PL-TW-5 and to the east by PL-TW-19. The LNAPL present in PL-3R and SLF-TW-2 is delineated to the north by SLF-TW-14, to the south by SLF-TW-16 and SLF-TW-35, to the west by SLF-TW-1 and SLF-TW-3, and to the east by PL-6R. The LNAPL present in PL-5 is delineated to the north by PL-TW-17, to the south by PL-TW-10 and PL-TW-11, to the west by PL-TW18, and to the east by PL-TW-12. The LNAPL identified in HS14-TW-7 is delineated to the north by HS14-TW-6 and PL-TW-20, to the south by AB-1 to the west by HS14-TW1 and to the east by AB-TW-1. The horizontal extent of LNAPL in AOC-7 is depicted in **Figure 8** – Isopleth Map of AOC-7**, Figure 9** – North-South Cross-Section of AOC-7 and **Figure 10** – East-West Cross-Section of AOC-7. LNAPL appears to range from 6 - 11 ft bgs in AOC-7. Based on the observations made during the temporary well program, LNAPL in this area is horizontally inconsistent. The primary discharges of product in the area are greater than 40 years, and the material is highly weathered crude oil that is no longer mobile. Maximum water table fluctuations at AOC-7 has been 8.5 feet in PL-1 (see **Table 2** April 1999 – August 2003) and typical seasonal fluctuations are less than 3-feet (See **Appendix V** – LNAPL thickness versus Depth to Water Graphs and **Appendix VI** -- LNAPL Thickness versus Groundwater Elevation Graphs). The combination of low mobility and limited water table fluctuations minimized vertical migration of LNAPL. This is demonstrated by review of monitoring well logs and temporary well logs presented in **Appendix II** and **Appendix III**, respectively.

The data presented in **Appendix V** – LNAPL Thickness versus Depth to Water Graphs and **Appendix VI -- ** LNAPL Thickness versus Groundwater Elevation Graphs, the Depth to Water Versus Groundwater Elevation, and the Monthly Gauging Summary Table, included as **Table 2**, demonstrates the overall thickness of LNAPL in these locations are decreasing. During the December 2011 gauging event, of the PL series well, LNAPL was not detected in any well, with the exception of PL-2 (at a thickness of 0.01 feet) and PL-5 (at a thickness of 0.01 feet). This trend is due to the low mobility of highly degraded crude oil, and the extended Pump and Haul program.

AOC-10- LNAPL has historically been identified in TR-2R (and former TR-2), TR-TW14, and a limited occurrence in TR-4. LNAPL has not been detected in TR-4 since July 2011, at which time it was detected at a thickness of 0.01 feet. The horizontal extent of the LNAPL has been

delineated to the north by TR-TW15 and TR-TW-16, to the south by TR-TW-13, to the west by TR-TW-2 and to the east by TR-TW-15 and TR-TW-4. The horizontal extent of LNAPL in AOC-10 is depicted in **Figure 11** – Isopleth Map of AOC-10 and **Figure 12** – Cross-Section of AOC-10. LNAPL appears to be sitting on top of the groundwater (ranging from 3 -7 ft bgs in TR series monitoring wells) underlying the site, preventing vertical migration. Maximum water table fluctuations observed in the TR wells of the AOC 10 area is 7.5-feet in TR-2 (see **Table 2**- August 1999- May 2007) and typical seasonal fluctuations are less than 3-feet (see **Appendix V** and **Appendix VI**). The vertical extent of LNAPL in AOC 10 is limited by these fluctuations.

The data presented in **Appendix V --** LNAPL Thickness versus Depth to Water Graphs, **Appendix VI** – LNAPL Thickness versus Groundwater Elevation Graphs and the Monthly Gauging Summary Table, included as **Table 2**, demonstrates the overall thickness of LNAPL in these locations are decreasing. During the December 2011 gauging event, of these wells, LNAPL was not detected in TR-4, and was identified in TR-2R at a thickness of 0.02 feet. This trend is due to the extended Pump and Haul program.

AOC- 14B- LNAPL is currently detected at TM-6 and TM-7. As depicted in **Figure 13 –** Isopleth Map of AOC-14B, and **Figure 14 –** Cross Section of AOC-14B, the horizontal extent of the LNAPL present in TM-6 is delineated to the north by TM-TW-7, to the south by TM-TW-5, to the west by TM-TW-9 and to the east by TM-TW-6. The LNAPL present in TM-7 is delineated to the north by TM-TW-14, to the south by TM-TW-11, to the west by TM-TW-12 and to the east by TM-TW-13.

Maximum water table fluctuation in AOC 14B is 5.5 feet in TM-6 (see **Table 2**- July 2000- November 2005) and typical seasonal fluctuations are less than 1.5-feet (see **Appendix V** and **Appendix VI**). Vertical presence of LNAPL in AOC 14B is limited by these fluctuations.

The data presented in **Appendix V --** LNAPL Thickness versus Depth to Water Graphs, **Appendix VI** – LNAPL Thickness versus Groundwater Elevation Graphs, and the Monthly Gauging Summary Table, included as **Table 2**, demonstrates the overall thickness of LNAPL in these locations are decreasing. During the December 2011 gauging event, of these wells, LNAPL was not detected in TM-7, TM-6 could not be gauged during this event, however during the November 2011 gauging event, LNAPL was detected in TM-6 at a thickness of 0.01 feet. This trend is due to the extended Pump and Haul Program.

AOC- 15A- LNAPL is currently detected at TF-1 and TF-2. As depicted in **Figure 15** – Isopleth Map of AOC-15A **and Figure 16** – Cross-Section of AOC-15A, the horizontal extent of the LNAPL is delineated to the north by TF-TW-5, to the south by TF-TW-1, to the west by TF-TW-4 and to the east by TF-3.

Maximum water table fluctuation in AOC-15A is 5.5-feet in TF-1 (See **Table 2**) and typical seasonal fluctuation is less than 2 feet (see **Appendix V**). The combination of low mobility product (degraded crude oil), and small seasonal variations limits the vertical presence of LNAPL.

The data presented in **Appendix V --** LNAPL Thickness versus Depth to Water Graphs, **Appendix VI** – LNAPL Thickness versus Groundwater Elevation Graphs, and the Monthly

Gauging Summary Table, included as **Table 2**, demonstrates the overall thickness of LNAPL in these locations are decreasing. During the December 2011 gauging event, of these wells, LNAPL was detected in TF-1 at a thickness of 0.01 feet, and TF-2 at a thickness of 0.35 feet. The decreasing trend is due to the low mobility product and the extended Pump and Haul program.

C. Migratory Path of the LNAPL from the Discharge Point to its Current Distribution

The LNAPL in each area is typically attributed to several different sources, sometimes unknown, at each LNAPL area. In every known case the sources were surface spills that infiltrated the unconsolidated sediment to the water table, spreading laterally until vertical pressure from the product volume decreased to less than interpore pressures and vertically in accordance with water table fluctuations.

D. Changes in LNAPL Thickness with Water Table Fluctuation

Graphs have been prepared depicting LNAPL Thickness versus Depth to Water and LNAPL Thickness versus Groundwater Elevation, and are presented in **Appendix V** and **Appendix VI**, respectively.

AOC-7- There does not appear to be a historical trend between LNAPL thickness and water table fluctuation.

AOC-10- There does not appear to be a historical trend between LNAPL thickness and water table fluctuation.

AOC-14B- There does not appear to be a consistent historical trend, but since 2005 LNAPL has consistently been observed in TM-7, when depth to water is greater than 7.5 feet and in TM-6 when depth to water is greater than 7.0 feet.

AOC-15A- There does not appear to be a historical trend in product thickness versus water table fluctuations, but throughout 2011 there appears to be an inverse relationship in TF-2. A lowering of the water table coincides with LNAPL increase and vice versa.

E. Stratigraphic and/or Structural Controls that may be Influencing LNAPL Distribution

The LNAPL in all areas within unconsolidated fill, primarily on top of the groundwater underlying the site. The water table fluctuations and gravity induced pressure are the drivers for horizontal and vertical migration. There is one exception to this condition, in AOC 7 the most reticent LNAPL thicknesses are still encountered at PL-5 (1.06 feet in September 2011), yet the LNAPL is not present in temporary wells less than 20-feet down grade (east). Analysis of the 1970 and 1972 aerial photographs (**Appendix VII**) shows a compacted dirt road, trending north to south, just east of the current AOC 7. It appears this road acted as a dam, halting surface flow of crude oil from the October 1969 Tank 1214 failure. The compacted dirt road (now paved) likely continues to be a semi-permeable hydraulic boundary.

F. Stability of the LNAPL body

The LNAPL bodies are stable at this time. The lack of LNAPL observed in most on-site monitoring wells (62 of 73 monitoring wells have no historical occurrence of LNAPL), as well as the lack of LNAPL in the majority of on-site temporary wells (195 of 198 reported no occurrence of measureable LNAPL), indicates that the LNAPL bodies are not moving horizontally. The water table is limiting the vertical migration of the LNAPL as there are no current continuing sources at any area.

G. Results of Aquifer Tests

In May and June of 2002 slug testing was conducted on (AB-1, BG-3, L1-3, PER-2, PER-3, PER-7, PER-8, PL-1, LN-1, LN-2, PER-1, PER-5, PER-6 and PL-7. Fieldwork consisted of a rising head and falling head test at each location. The slug utilized was 2.5-feet in length and 2 inches in diameter, the volume was approximately 0.055 cubic feet and the displacement equivalent to 0.625 feet in height.

The falling head hydraulic conductivity values ranged from 0.2 to 30.4 feet/day averaging 9.2 feet/day. The rising head conductivity values ranged from 0.7 to 29.9 feet/day and averaged 9.3 feet/day. The hydraulic conductivity values from the slug testing correspond to silty sand and sand.

H. Results of any LNAPL Mobility, Recoverability or Treatability Tests

LNAPL mobility, recoverability or treatability tests have not been completed at this time.

I. Results of any Tests Necessary for the Development of any Permits

Not applicable

VI. Conclusions and IRM Selection

A. Description of Chosen IRM

Monitoring wells PL-1, PL-2, PL-3R, PL-5, PL-7, TF-1, TF-2, TM-6, TM-7, TR-2R, and TR-4 will continue to be gauged on a monthly basis to determine if LNAPL is present and to monitor increasing or decreasing trends. Pump and Haul events will be conducted to recover and remove LNAPL measured during gauging events.

The Mobile Solar-Powered LNAPL Recovery System is currently not in operation due operational challenges associated with winter weather. During the Second Quarter of 2012 the system will be put back online and utilized on wells where LNAPL has been identified, weekly monitoring will commence to ensure proper operation.

B. Methodologies and Data used to Support the IRM

When applicable, the preferred method of remediation is source or LNAPL removal, Pump and Haul events are utilized maximize the removal of LNAPL from the site. Since the inception of Pump and Haul activities, overall LNAPL trends have decreased; therefore monthly gauging and subsequent Pump and Haul events will continue to recover LNAPL and petroleum impacted groundwater from site wells.

The Mobile Solar Powered LNAPL recovery system, utilized at TF-2, has to date recovered approximately 10 gallons of LNAPL. While the total LNAPL recovered seems low, the November 2011 gauging event identified LNAPL at a thickness of 0.02 feet, while during the December 2011 gauging event, approximately 2 weeks after the removal of the LNAPL system for winter storage, the LNAPL thickness was measured as 0.35 feet. It seems that the system is having a positive effect, and will continue to be utilized, as weather conditions allow.

C. Monitoring Plan Associated with the LNAPL Plume

LNAPL has historically detected in eleven monitoring wells (PL-1, PL-2, PL-3R, PL-5, PL-7, TM-6, TM-7, TF-1, TF-2, TR-2R, and TR-4), these wells are monitored for LNAPL on a monthly basis. Site wells not included in the monthly gauging program are gauged and sampled on an routine basis. Sixteen wells (SLF, NLF, and LN series) are gauged and sampled on a quarterly basis as part of the facility RCRA operating permit, and all others are gauged and sampled annually. Upon discovery of LNAPL in any additional well, it will be included in the monthly gauging and Pump and Haul program.

D. Metrics That Have or Will Be Used to Evaluate the Effectiveness of the IRM

Monthly gauging will continue to be conducted at any well with historic or current detection of LNAPL. In addition 16 monitoring wells are gauged and sampled quarterly, with reporting occurring semi annually. Annual monitoring and sampling is conducted on 57 wells, and included within the RCRA Quarterly Progress Reports. The metrics used to evaluate effectiveness will be continually evaluated of the LNAPL thickness in each well via the graphs presented in **Appendix V** and **Appendix VI**. The graphs clearly show the positive effects of the Pump and Haul program. Once the LNAPL thickness in all wells of an LNAPL body reaches a static level for a period of more than one year HC-PR will re-evaluate the remedial approach.

E. Metrics to be Used to Document the Future Stability of the LNAPL Body

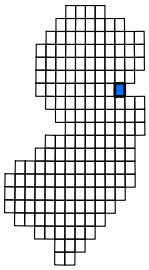
The LNAPL bodies have been delineated. Remediation, monitoring, and sampling at the site are ongoing. Further evaluation of the LNAPL bodies will be conducted as per section VI.D. above and as part of the complete site remediation program.

F. Discuss of Possible Changes to the IRM based on metrics

At this time monthly Pump and Haul events will be continue, use of the Mobile Solar Powered Recovery System will be reinstated as weather permits. The overall LNAPL trends are decreasing, upon the discovering of LNAPL in any additional wells, the location(s) will be added

to the Pump and Haul schedule, and further evaluation and recovering procedures will be implemented as warranted.

FIGURES

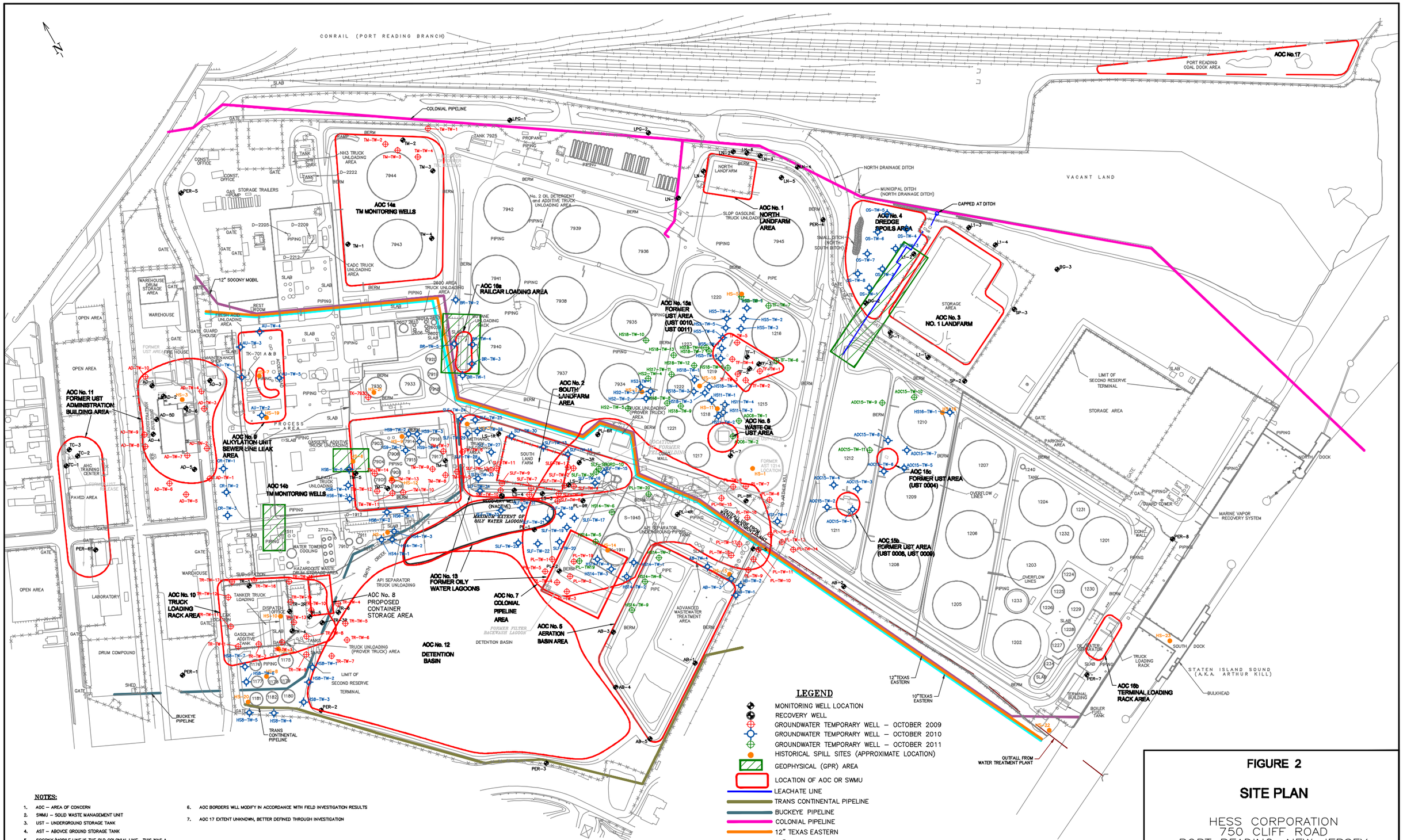


QUADRANGLE LOCATION:
ARTHUR KILL, NEW JERSEY

0 1,000 2,000 4,000 6,000 8,000 Feet

N W E S

FIGURE #	U.S.G.S. TOPOGRAPHIC MAP	DRAWN BY: B.J.S.	EnviroTrac ENVIRONMENTAL SERVICES
1	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	DATE: 7/15/10	400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757-1900 FAX: (908)757-0017



NOTES:

1. AOC – AREA OF CONCERN
2. SWMU – SOLID WASTE MANAGEMENT UNIT
3. UST – UNDERGROUND STORAGE TANK
4. AST – ABOVCE GROUND STORAGE TANK
5. SOCONY/MOBILE LINE IS THE OLD COLONIAL LINE. THIS WAS A COLONIAL PIPELINE TIE IN FOR SOCONY MOBIL. IT WAS ABANDONED IN PLACE. IT WAS CAPPED OFF AT THE SOUTH DOCK. THE LINE UNDER ARTHUR KILL IS UNDER NITROGEN BLANKET.
6. AOC BORDERS WILL MODIFY IN ACCORDANCE WITH FIELD INVESTIGATION RESULTS
7. AOC 17 EXTENT UNKNOWN, BETTER DEFINED THROUGH INVESTIGATION

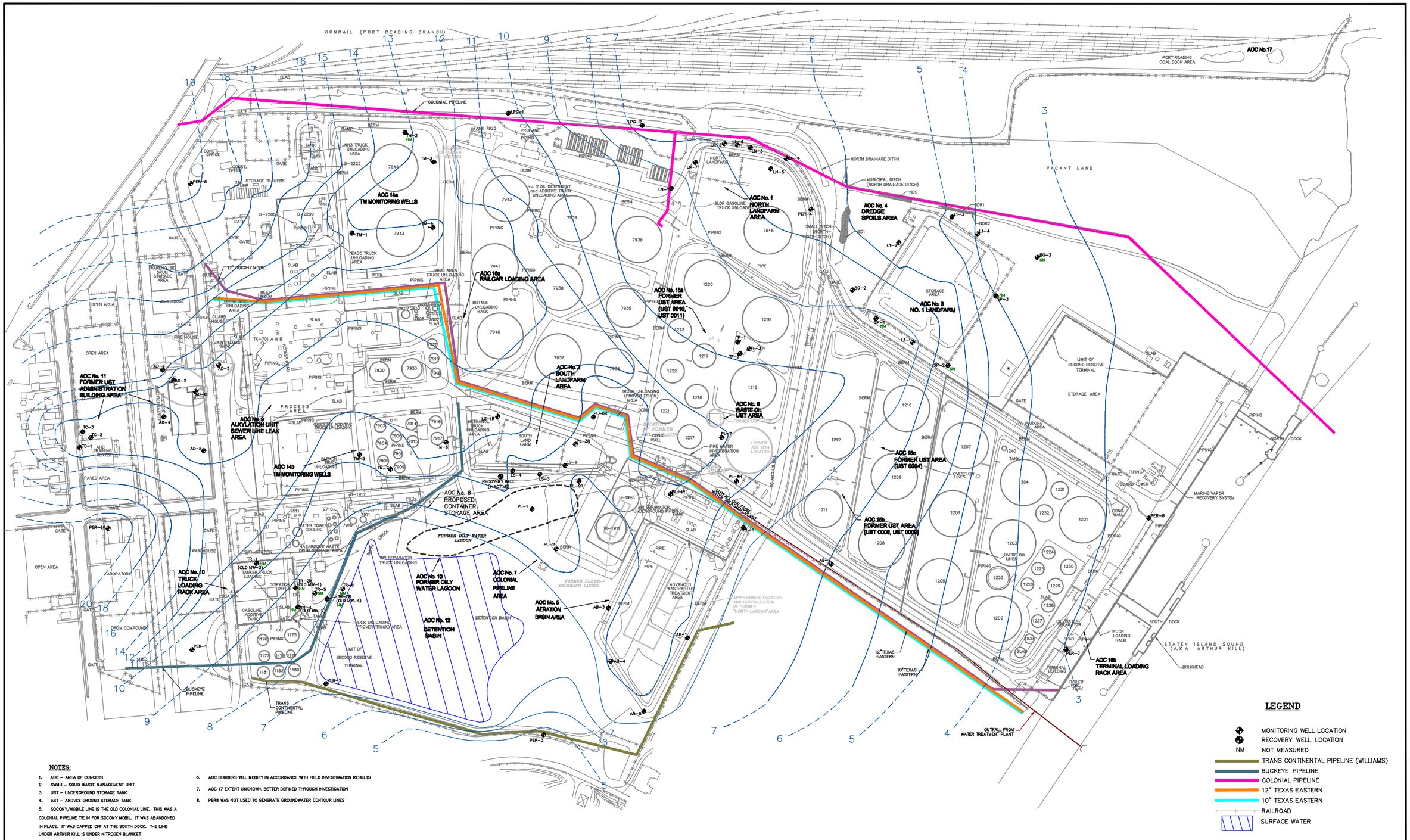
FIGURE 2

SITE PLAN

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

DRAWN BY: B.S.	0 150 SCALE IN FEET
DATE: 2/2/12	

EnviroTrac ENVIRONMENTAL SERVICES
400E CORPORATE COURT, Sp. PLAINFIELD NJ 07080
PHONE: (908)757-1900 FAX: (908)757-0017



NOTES:

1. AOC – AREA OF CONCERN
2. SWMU – SOLID WASTE MANAGEMENT UNIT
3. UST – UNDERGROUND STORAGE TANK
4. AST – ABOVCE GROUND STORAGE TANK
5. SOCONY/MOBILE LINE IS THE OLD COLONIAL LINE. THIS WAS A COLONIAL PIPELINE TIE IN FOR SOCONY MOBIL. IT WAS ABANDONED IN PLACE. IT WAS CAPPED OFF AT THE SOUTH DOCK. THE LINE UNDER ARTHUR KILL IS UNDER NITROGEN BLANKET
6. AOC BORDERS WILL MODIFY IN ACCORDANCE WITH FIELD INVESTIGATION RESULTS
7. AOC 17 EXTENT UNKNOWN, BETTER DEFINED THROUGH INVESTIGATION
8. PER8 WAS NOT USED TO GENERATE GROUNDWATER CONTOUR LINES

FIGURE # 3

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

GROUNDWATER FLOW MAP
AUGUST 25, 2011

DRAWN BY: B.S.

REVISION DATE: 11/7/11

0 350
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
400E CORPORATE COURT, So. PLAINFIELD NJ 07080
PHONE: (908)757-1900 FAX: (908)757-0017

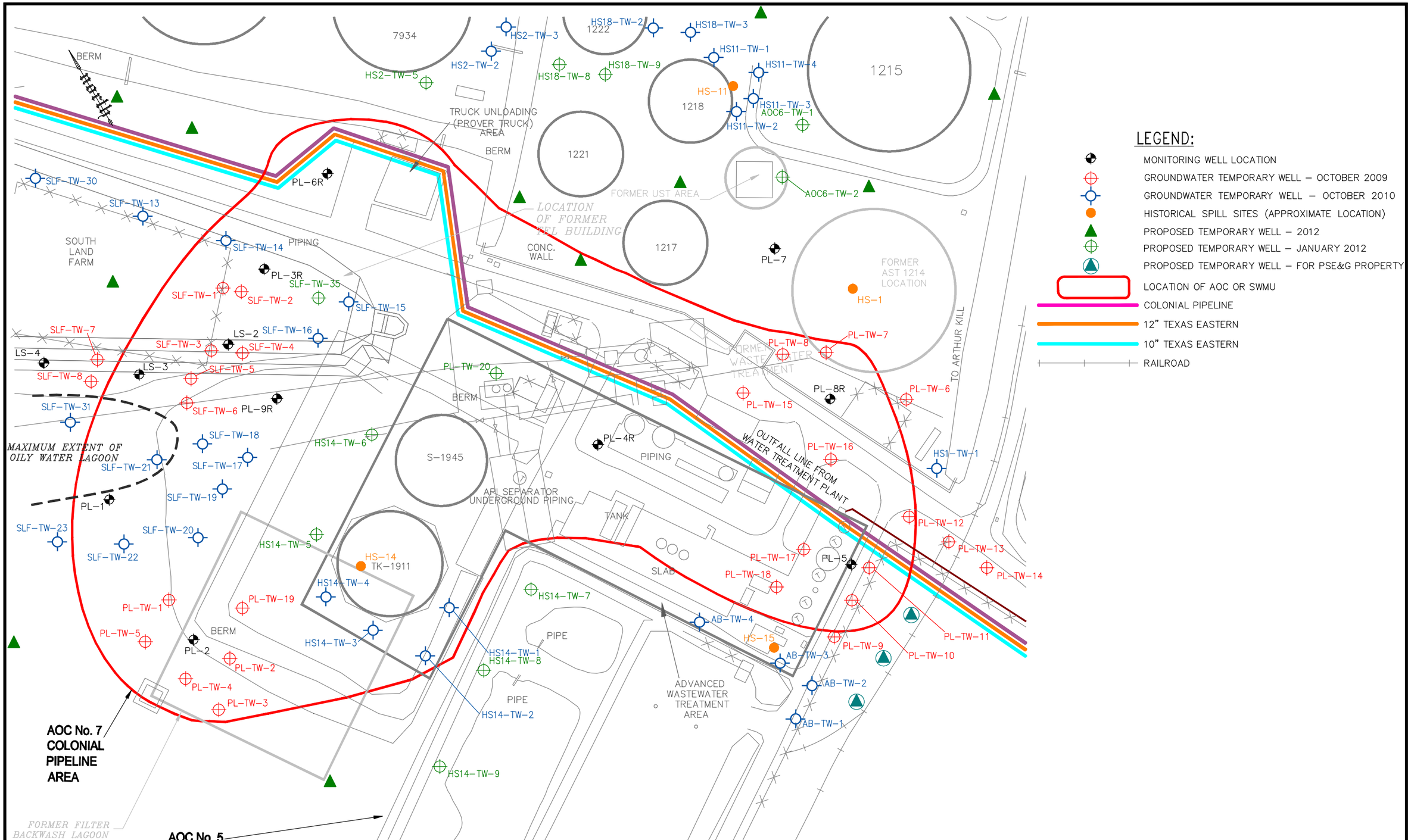


FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY		SITE PLAN – AOC 7		0 50 100 SCALE IN FEET	EnviroTrac ENVIRONMENTAL SERVICES 3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5533
4			DRAWN BY: B.S.	REVISION DATE: 2/27/12		

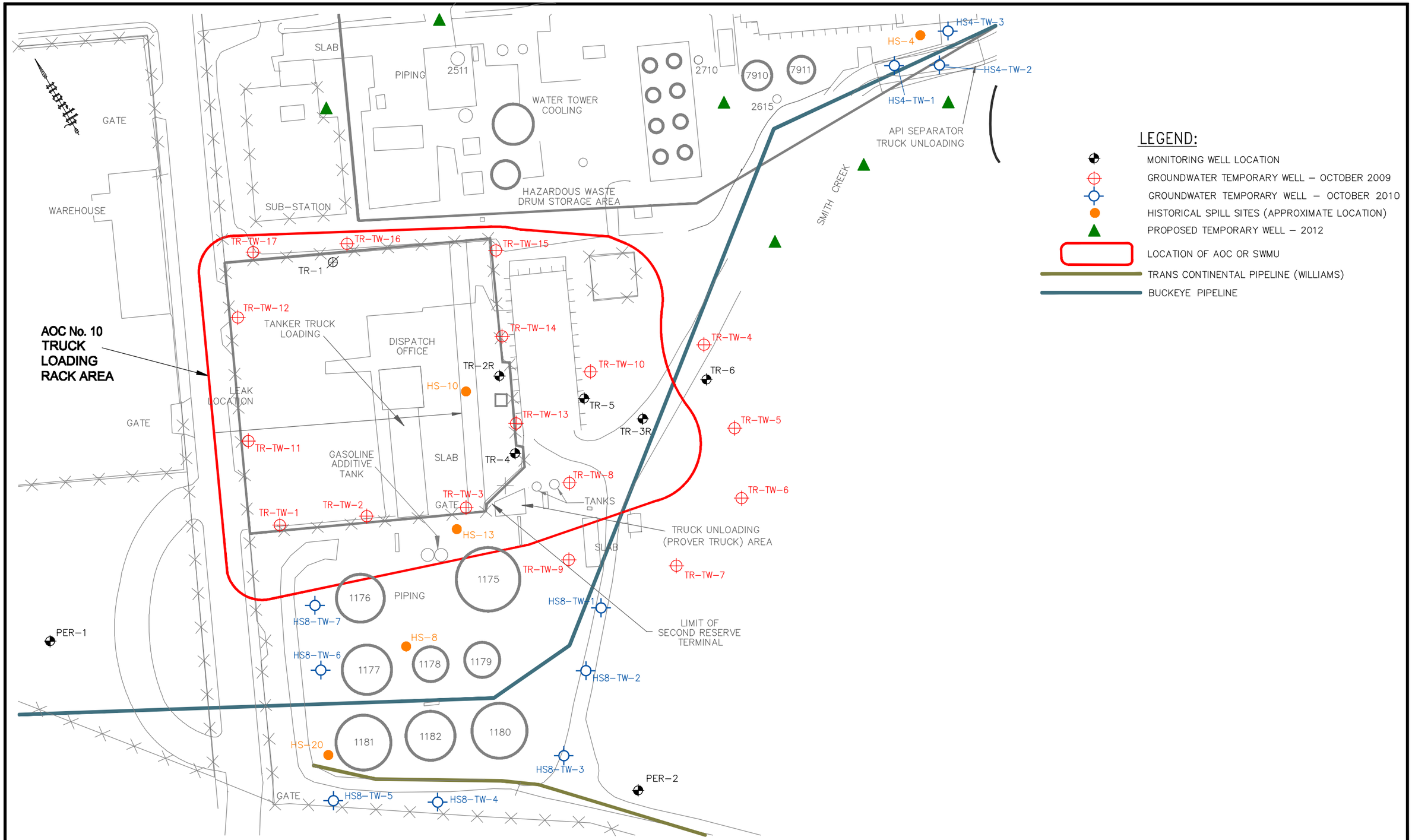


FIGURE #				
5	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	HESS	SITE PLAN – AOC 10	0 40 80 SCALE IN FEET
			DRAWN BY: B.S. / REVISION DATE: 2/24/12	EnviroTrac ENVIRONMENTAL SERVICES 3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5533

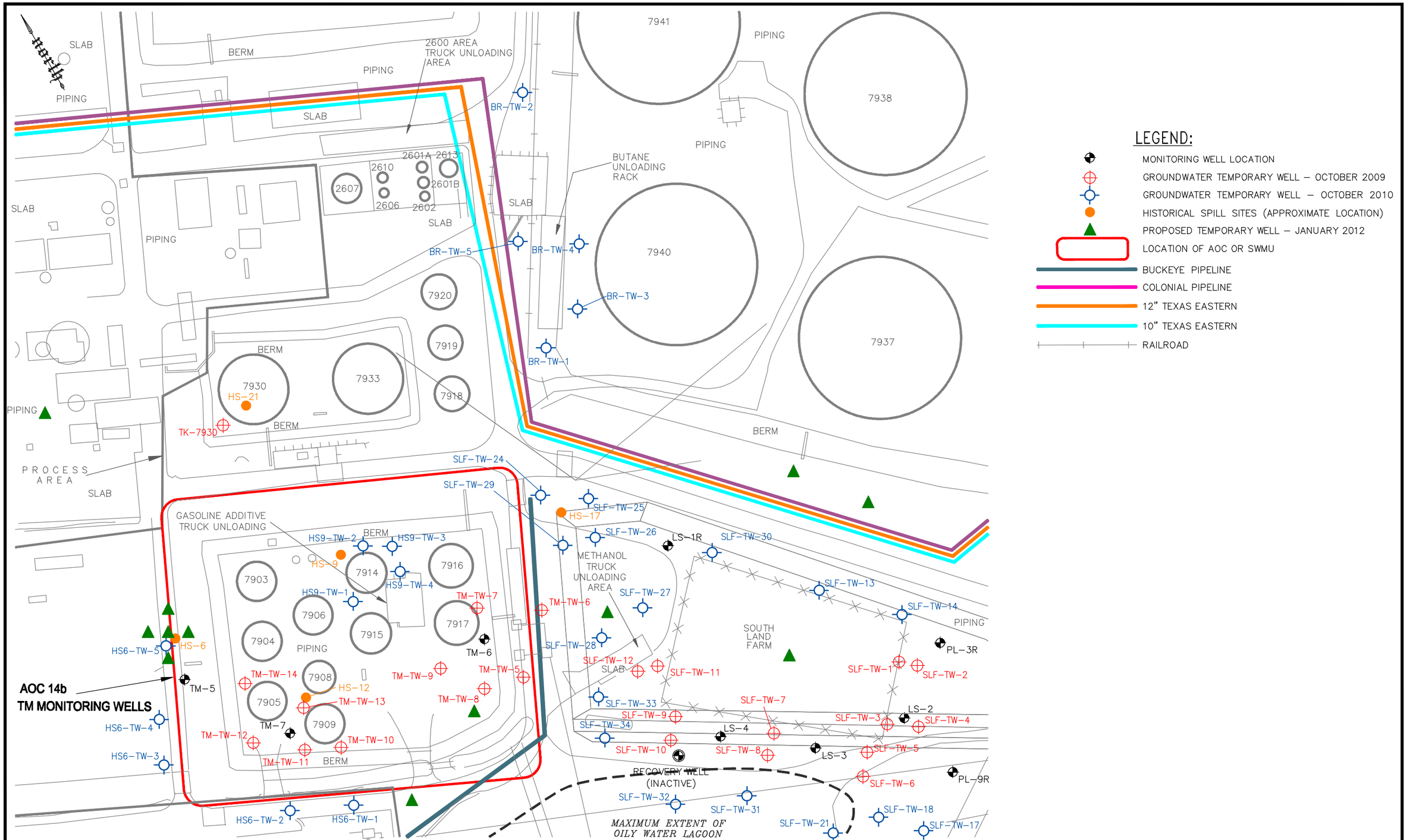


FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	HESS	SITE PLAN – AOC 14b	0 50 100 SCALE IN FEET	EnviroTrac ENVIRONMENTAL SERVICES 3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016 PHONE: (609)387-5553 FAX: (609)387-5533
6			DRAWN BY: B.S.	REVISION DATE: 2/28/12	

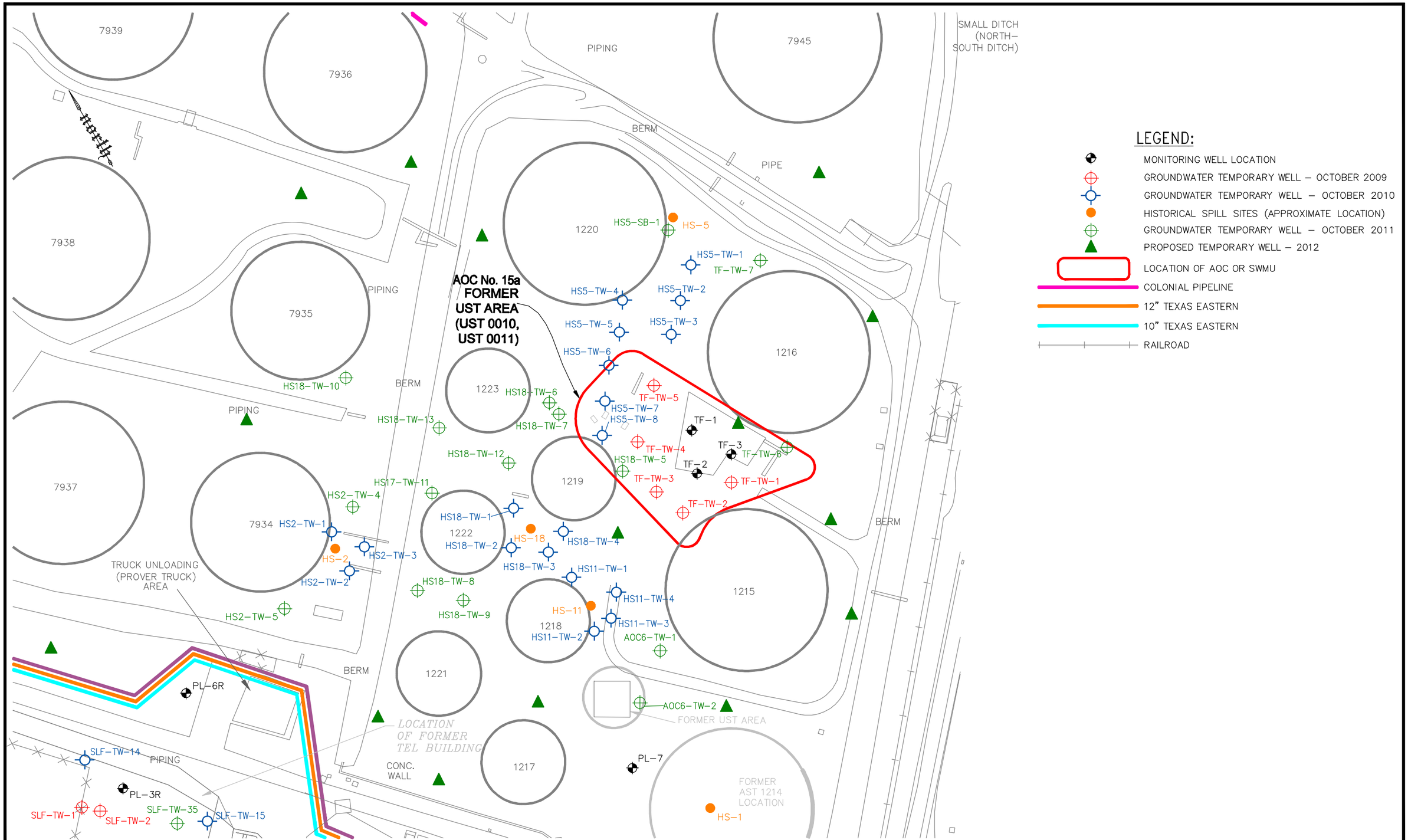


FIGURE # 7

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

HESS

SITE PLAN – AOC 15a

DRAWN BY: B.S.

REVISION DATE: 1/30/12

0 50 100
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016
PHONE: (609)387-5553 FAX: (609)387-5533

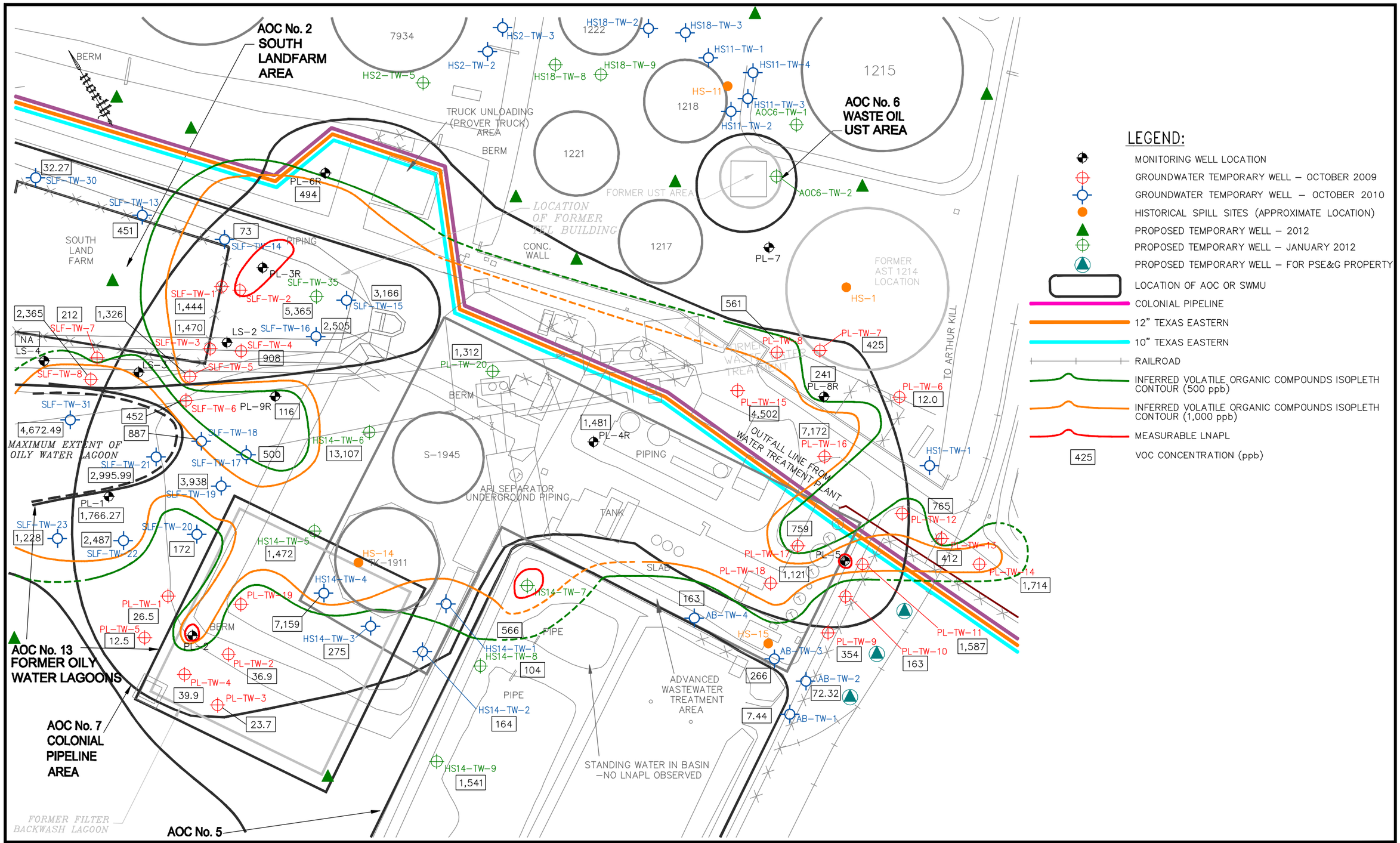


FIGURE # 8

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

HESS

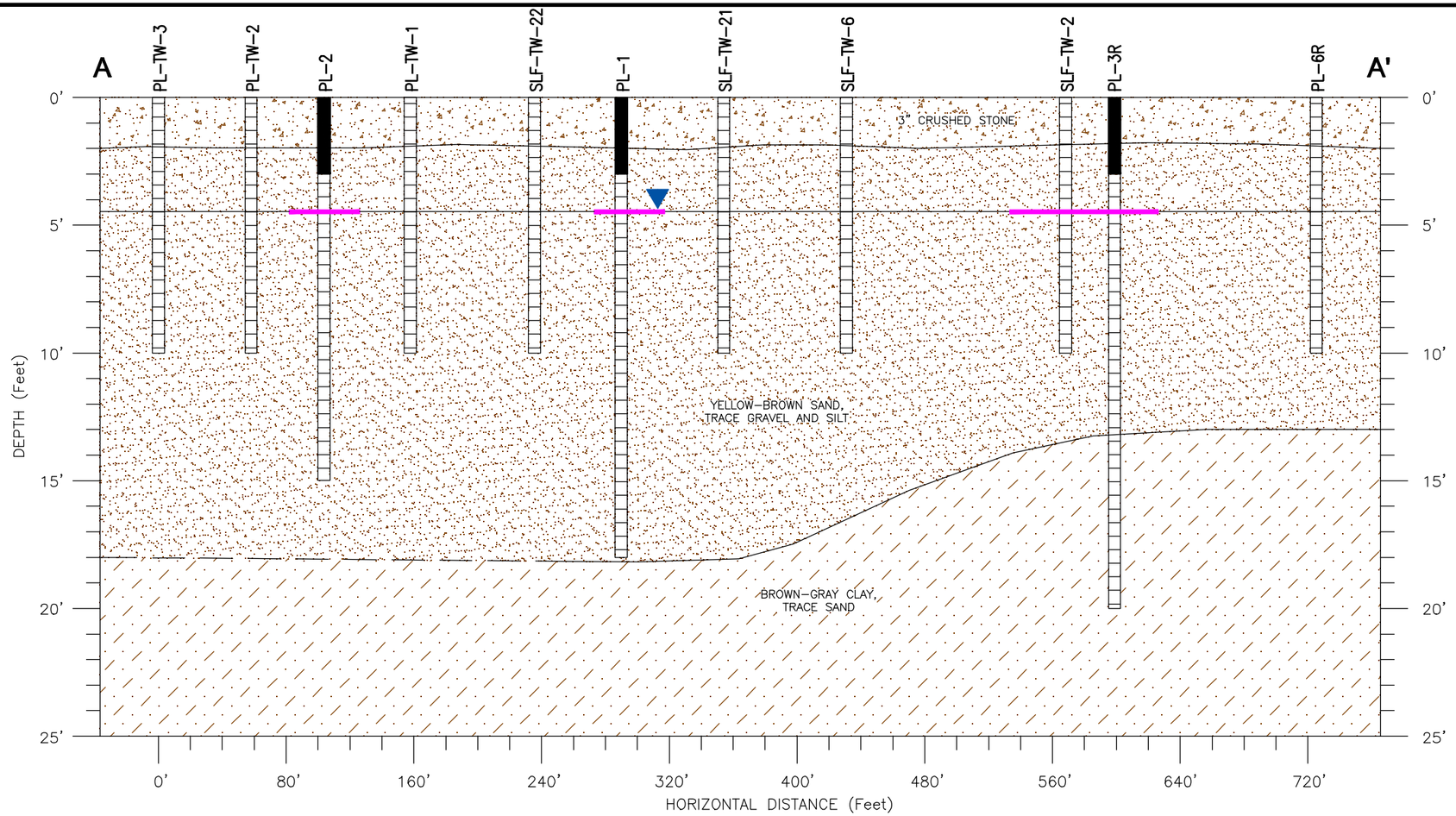
AOC 7
VOLATILE ORGANIC COMPOUNDS ISOPLETH

DRAWN BY: B.S.

REVISION DATE: 2/27/12

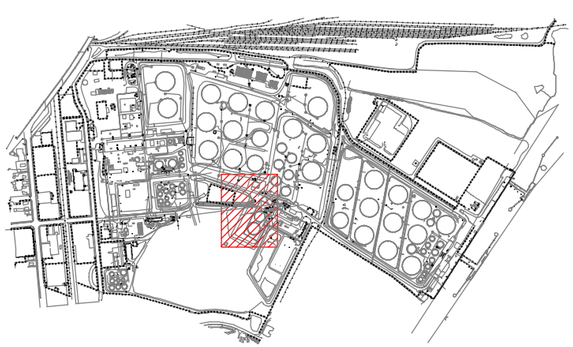
0 50 100
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016
PHONE: (609)387–5553 FAX: (609)387–5533

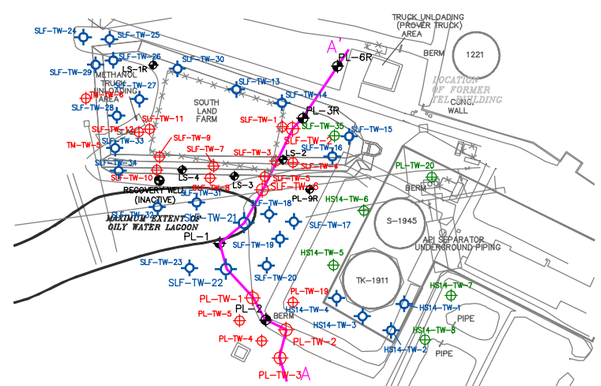


LEGEND:

- = TEMPORARY WELL SCREENED INTERVAL
- = WELL CASING
- = SCREENED INTERVAL
- GROUNDWATER TABLE
- 3" CRUSHED STONE
- YELLOW-BROWN SAND, TRACE GRAVEL AND SILT
- BROWN-GRAY CLAY, TRACE SAND
- LNAPL

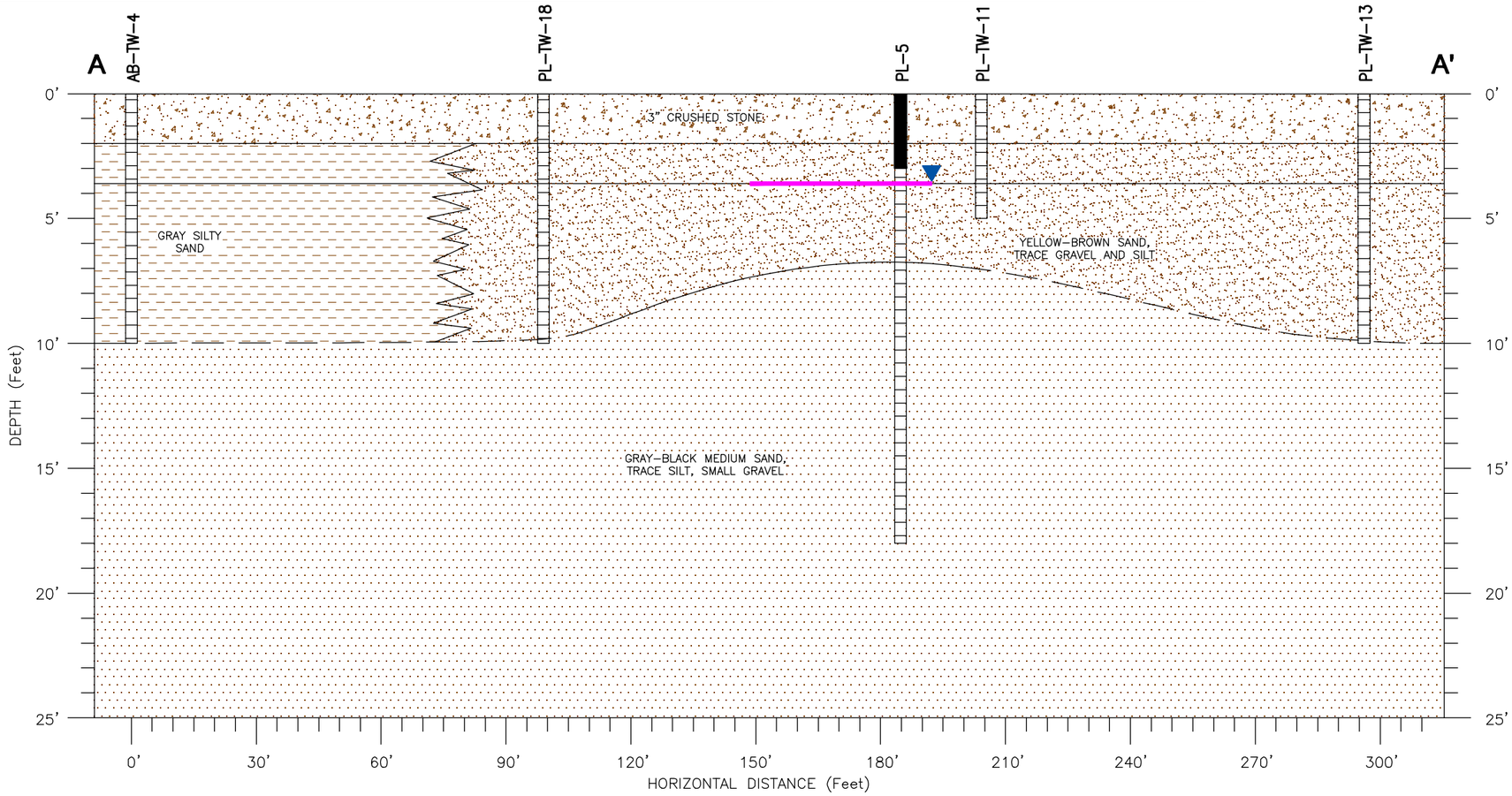


LOCATION MAP (NOT TO SCALE)



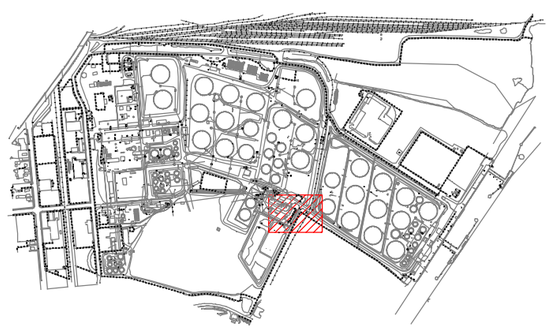
CROSS-SECTION LOCATION (1" = 300')

FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	NORTH-SOUTH CROSS-SECTION OF AOC 7	VERTICAL SCALE: 1 INCH = 5 FT. HORIZONTAL SCALE: 1 INCH = 80 FT.	EnviroTrac ENVIRONMENTAL SERVICES 400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757-1900 FAX: (908)757-0017
9		DRAWN BY: B.S. / REVISION DATE: 2/24/12		

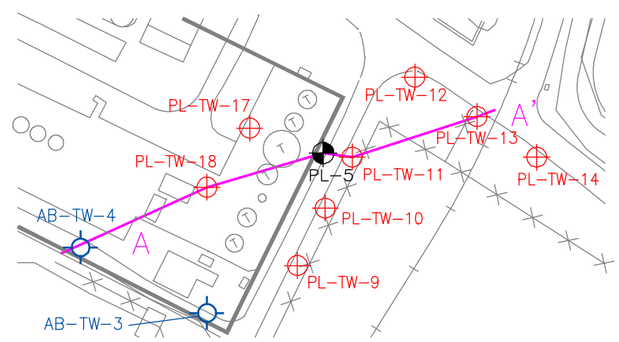


LEGEND:

- = TEMPORARY WELL SCREENED INTERVAL
- = WELL CASING
- = SCREENED INTERVAL
- GROUNDWATER TABLE
- 3" CRUSHED STONE
- YELLOW-BROWN SAND, TRACE GRAVEL AND SILT
- GRAY SILTY SAND
- GRAY-BLACK MEDIUM SAND, TRACE SILT, SMALL GRAVEL
- LNAPL



LOCATION MAP (NOT TO SCALE)



CROSS-SECTION LOCATION (1" = 100')

FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	EAST-WEST CROSS-SECTION OF AOC 7	VERTICAL SCALE: 1 INCH = 5 FT. HORIZONTAL SCALE: 1 INCH = 30 FT.	EnviroTrac ENVIRONMENTAL SERVICES 400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757-1900 FAX: (908)757-0017
10		DRAWN BY: B.S. / REVISION DATE: 2/24/12		

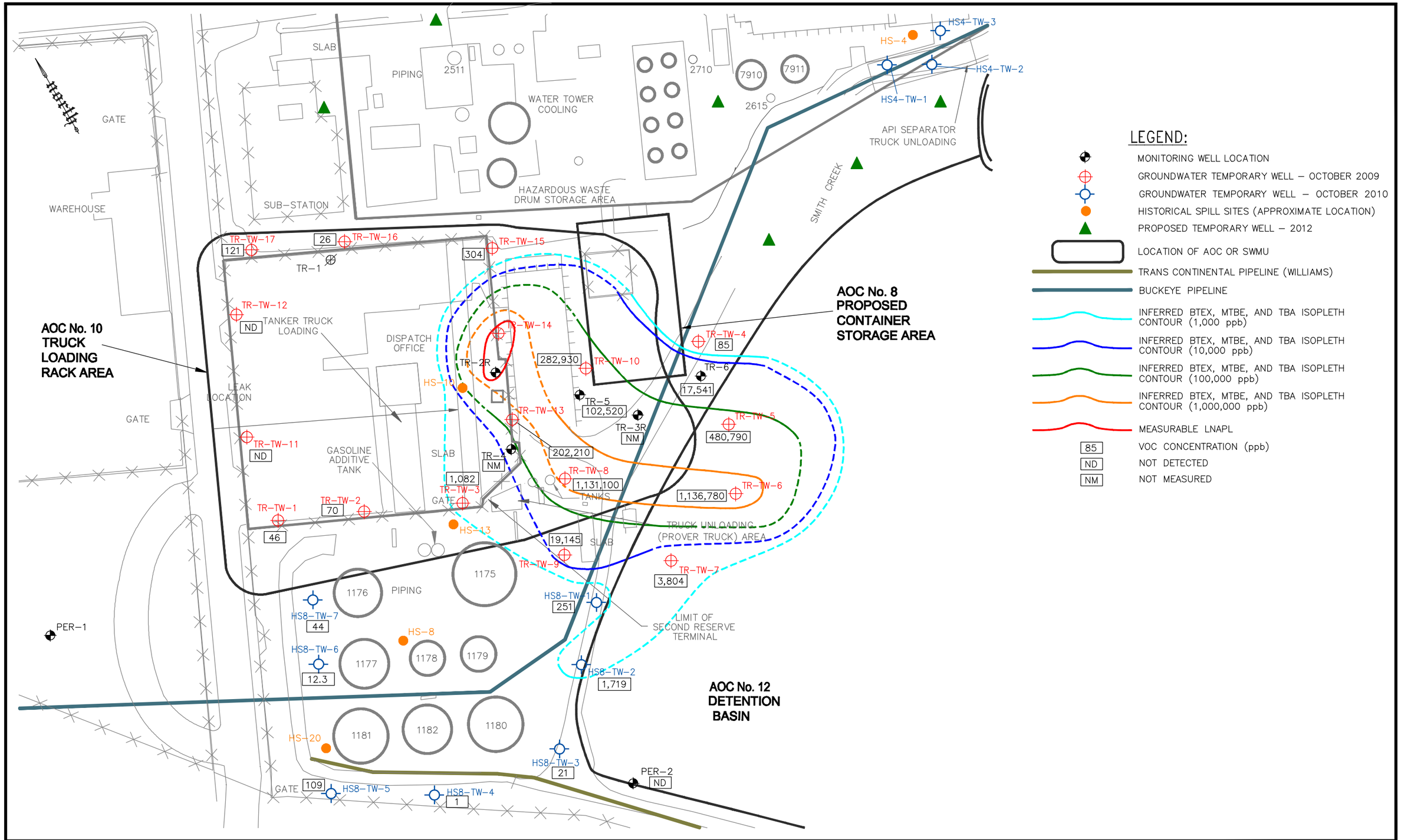


FIGURE # 11

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

HESS

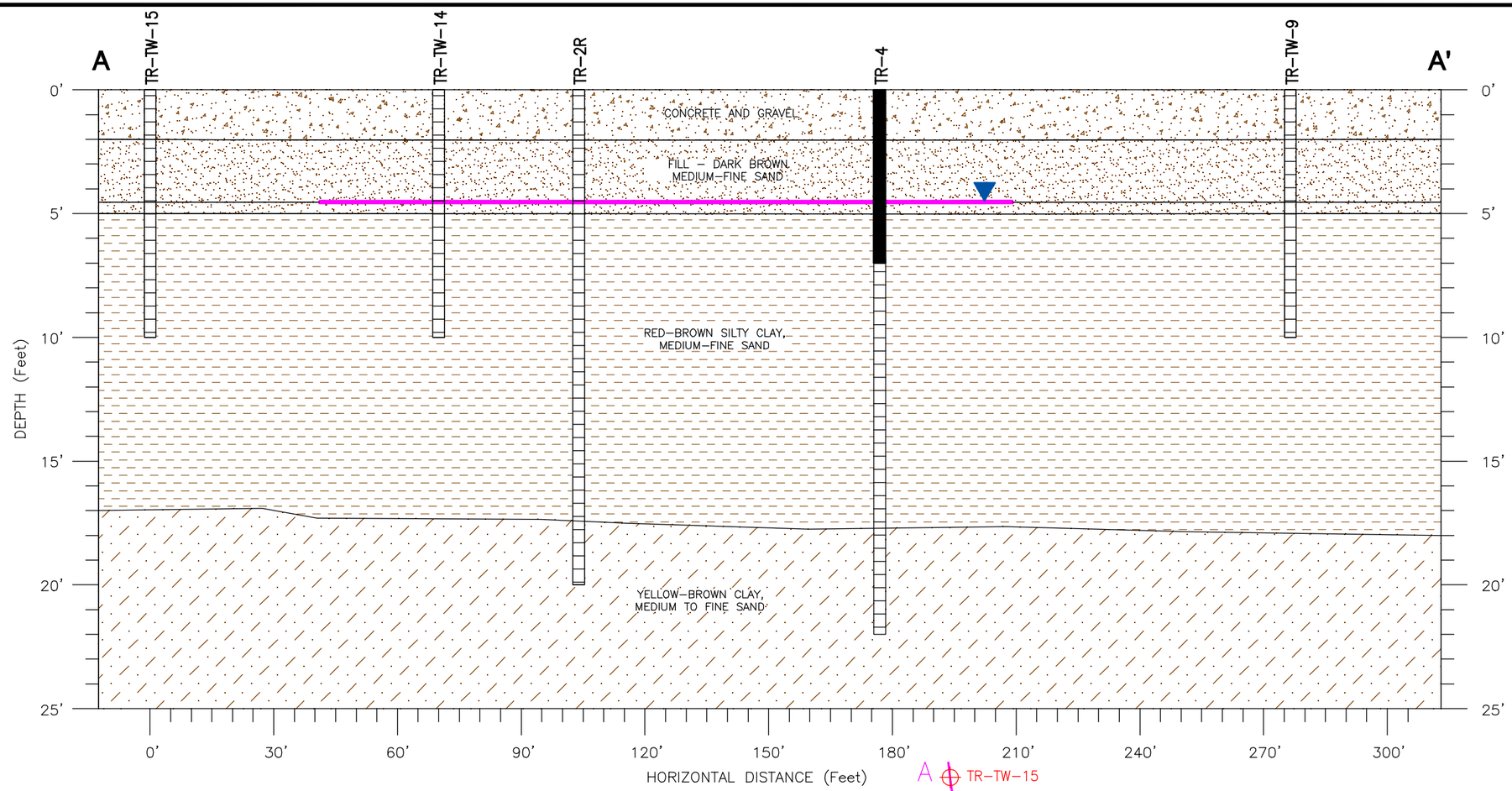
AOC 10 – TRUCK LOADING RACK AREA
BTEX, MTBE, AND TBA ISOPLETH

DRAWN BY: B.S.

REVISION DATE: 2/24/12

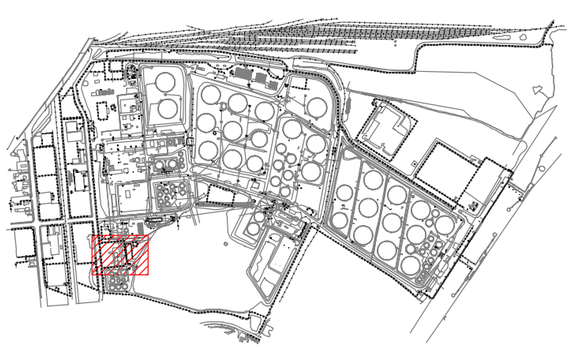
0 40 80
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016
PHONE: (609)387-5553 FAX: (609)387-5533

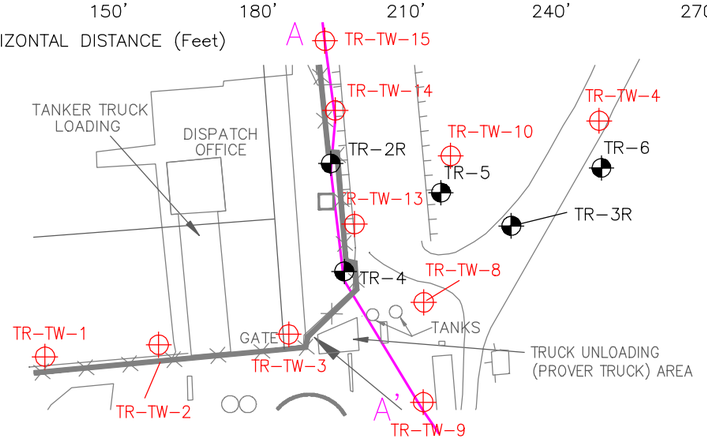


LEGEND:

- = TEMPORARY WELL SCREENED INTERVAL
- = WELL CASING
- = SCREENED INTERVAL
- GROUNDWATER TABLE
- CONCRETE AND GRAVEL
- FILL – DARK BROWN MEDIUM–FINE SAND
- RED–BROWN SILTY CLAY, MEDIUM–FINE SAND
- YELLOW–BROWN CLAY, MEDIUM TO FINE SAND
- LNAPL



LOCATION MAP (NOT TO SCALE)



CROSS–SECTION LOCATION (1" = 100')

FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	CROSS–SECTION OF AOC 10	VERTICAL SCALE: 1 INCH = 5 FT. HORIZONTAL SCALE: 1 INCH = 30 FT.	EnviroTrac ENVIRONMENTAL SERVICES 400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757–1900 FAX: (908)757–0017
12		DRAWN BY: B.S. / REVISION DATE: 2/24/12		

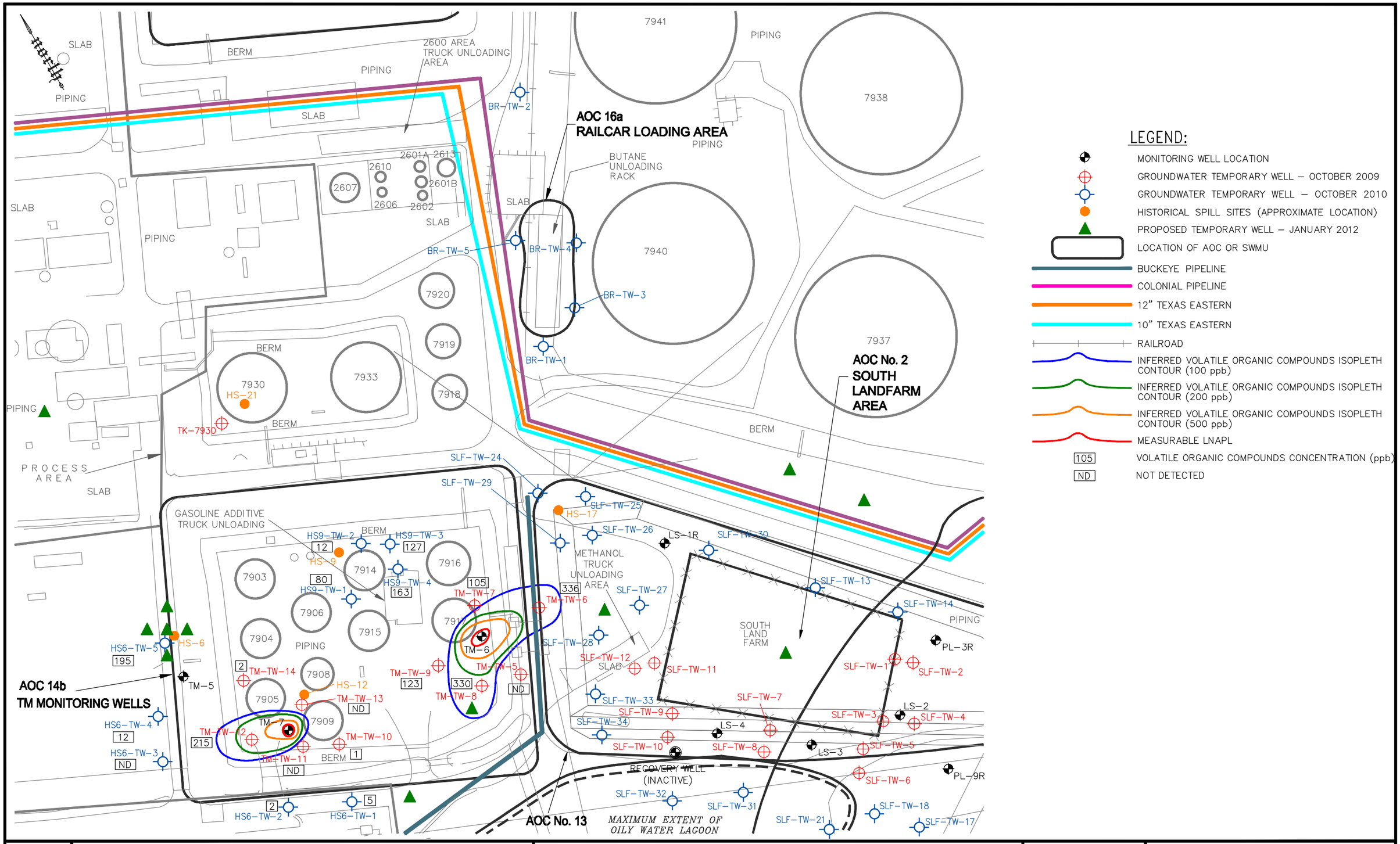


FIGURE # 13

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

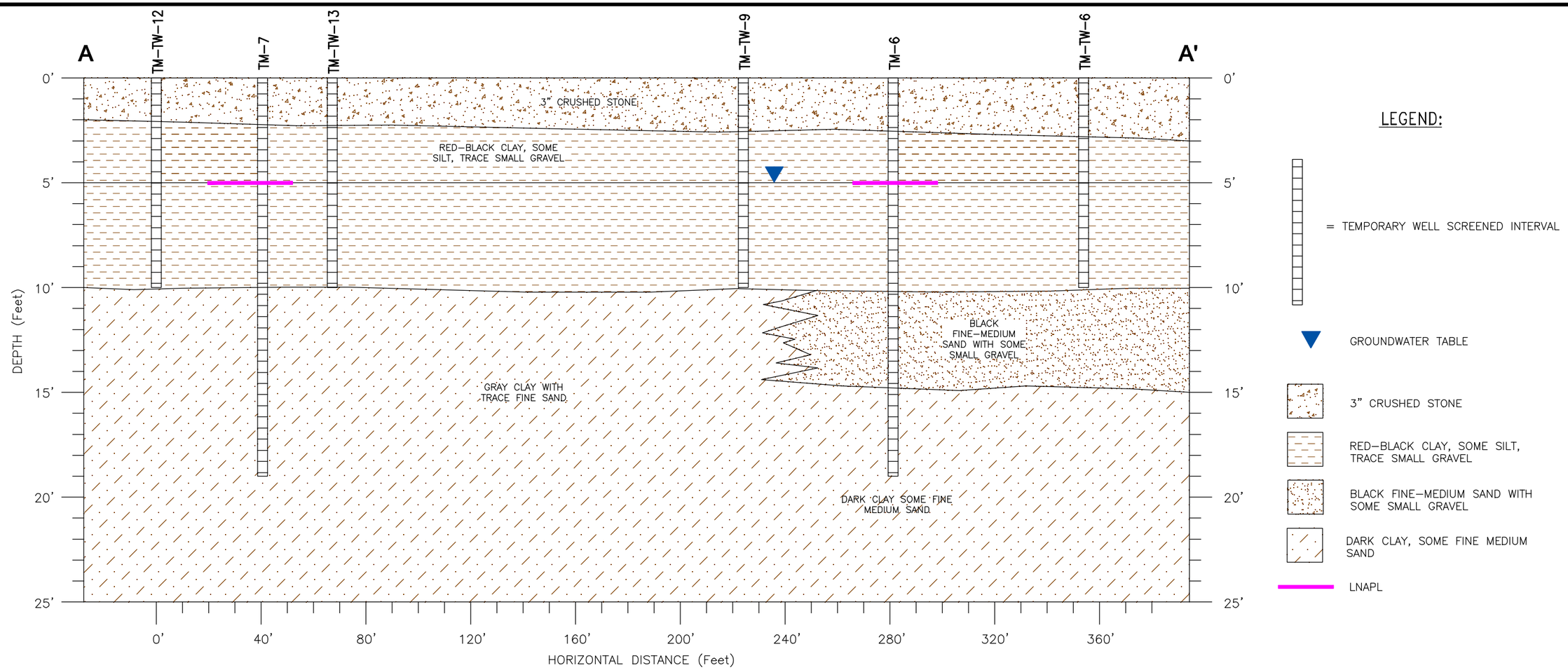
HESS

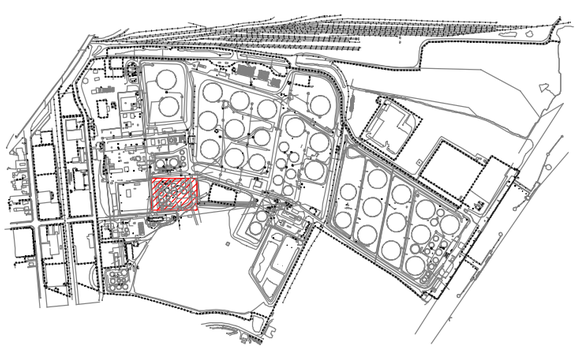
AOC 14b – TM MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS ISOPLETH

DRAWN BY: B.S.

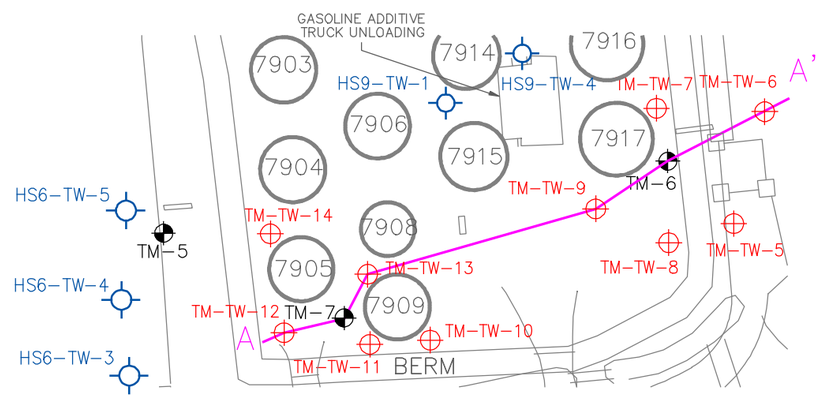
REVISION DATE: 2/28/12

EnviroTrac
ENVIRONMENTAL SERVICES
3 TERRI LANE, SUITE #8, BURLINGTON, NJ 08016
PHONE: (609)387-5553 FAX: (609)387-5533





LOCATION MAP (NOT TO SCALE)



CROSS-SECTION LOCATION (1" = 100')

FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY	CROSS-SECTION OF AOC 14B	VERTICAL SCALE: 1 INCH = 5 FT. HORIZONTAL SCALE: 1 INCH = 40 FT.	EnviroTrac ENVIRONMENTAL SERVICES 400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757-1900 FAX: (908)757-0017
14		DRAWN BY: B.S. / REVISION DATE: 2/25/12		

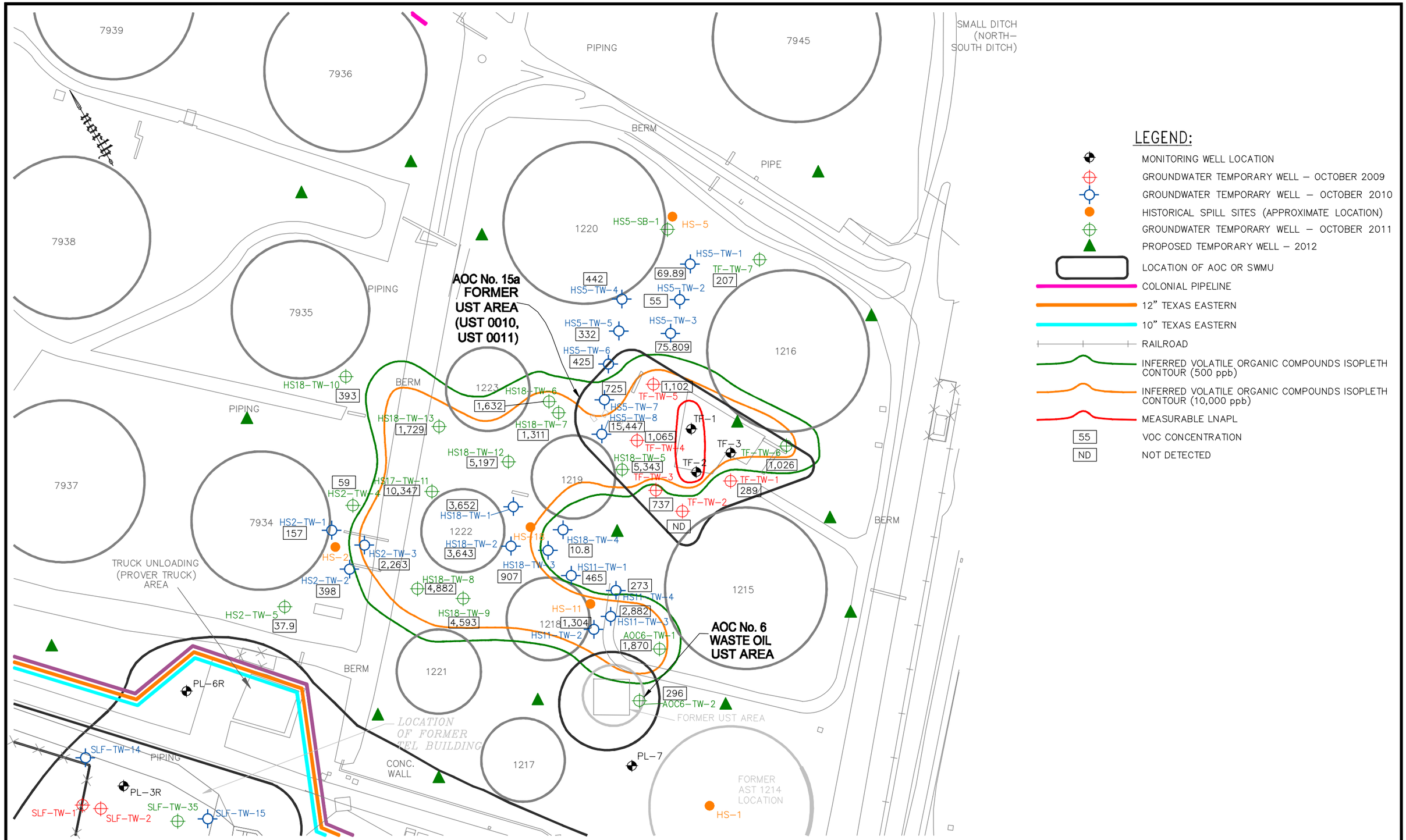


FIGURE # 15

HESS CORPORATION
750 CLIFF ROAD
PORT READING, NEW JERSEY

HESS

AOC 15a – FORMER UST AREA
VOLATILE ORGANIC COMPOUNDS ISOPLETH

DRAWN BY: B.S.

REVISION DATE: 1/30/12

0 50 100
SCALE IN FEET

EnviroTrac
ENVIRONMENTAL SERVICES
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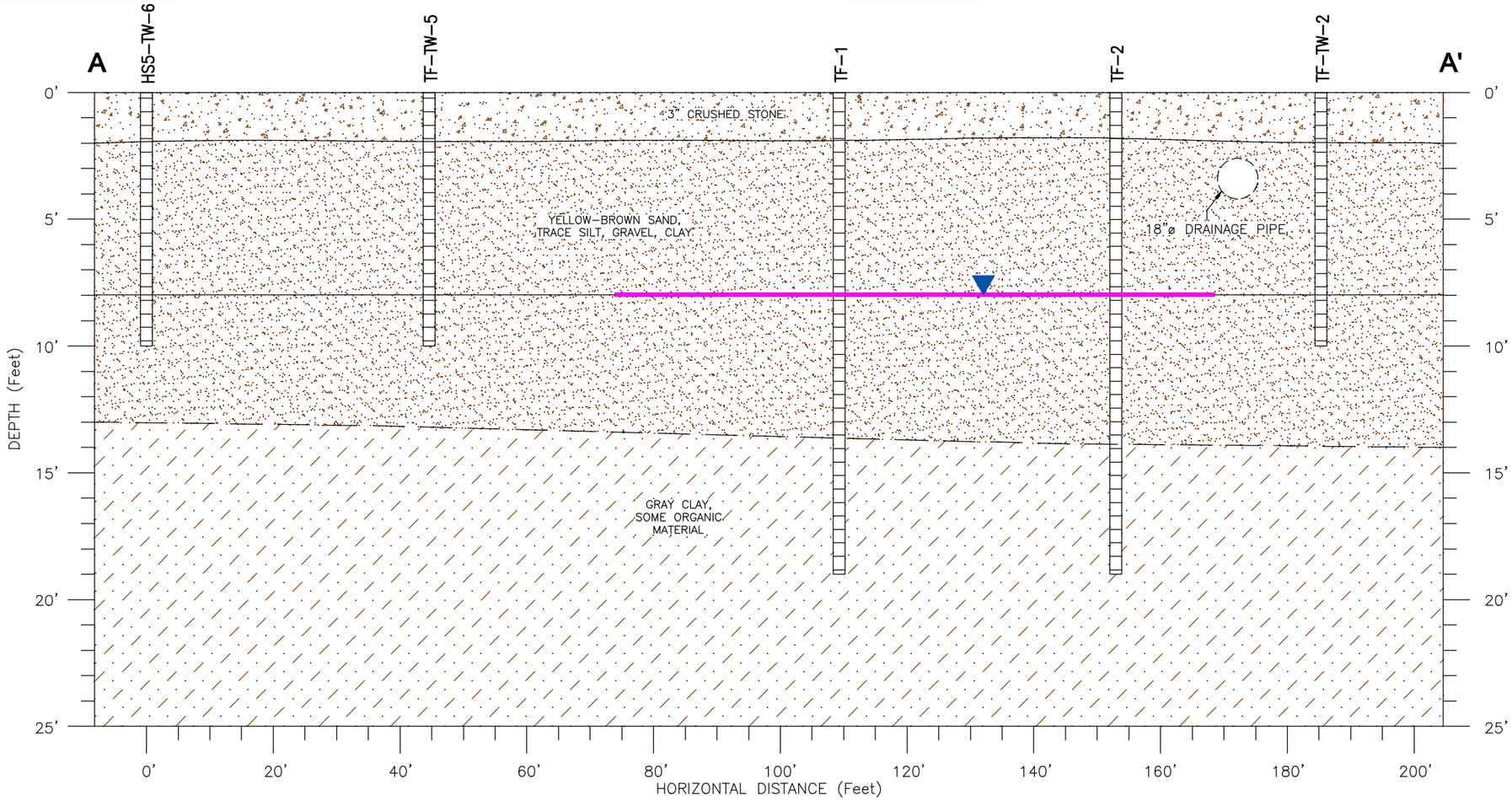
PHONE: (609)387-5553 FAX: (609)387-5533



LEGEND:

= TEMPORARY WELL SCREENED INTERVAL

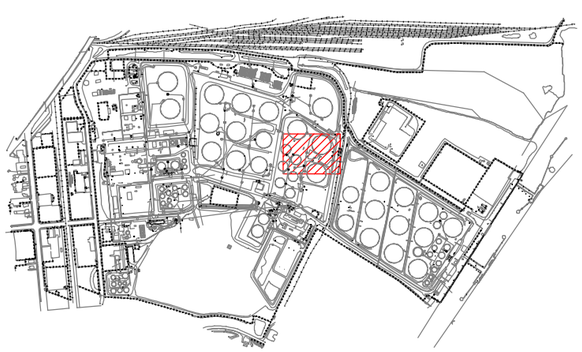
GROUNDWATER TABLE

3" CRUSHED STONE

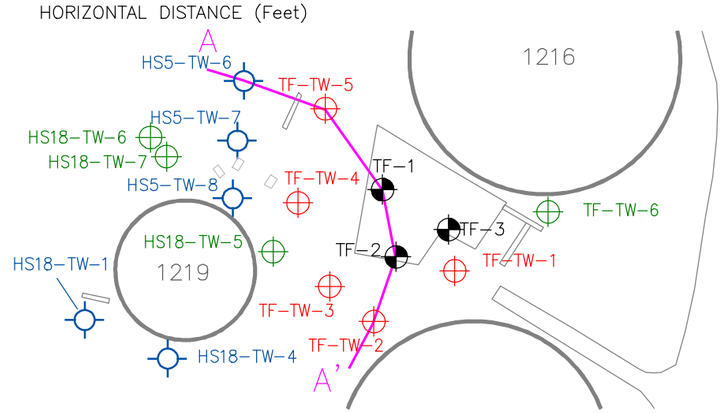
YELLOW-BROWN SAND, TRACE GRAVEL, SILT AND CLAY

GRAY CLAY, SOME ORGANIC MATERIAL

LNAPL



LOCATION MAP (NOT TO SCALE)



CROSS-SECTION LOCATION (1" = 100')

FIGURE #	HESS CORPORATION 750 CLIFF ROAD PORT READING, NEW JERSEY		CROSS-SECTION OF AOC 15A	VERTICAL SCALE: 1 INCH = 5 FT. HORIZONTAL SCALE: 1 INCH = 20 FT.	EnviroTrac ENVIRONMENTAL SERVICES 400E CORPORATE COURT, So. PLAINFIELD NJ 07080 PHONE: (908)757-1900 FAX: (908)757-0017
16			DRAWN BY: B.S. / REVISION DATE: 2/24/12		

TABLES

TABLE 1
HESS CORPORATION- PORT READING REFINERY
WELL CONSTRUCTION SURVEY DATA
750 CLIFF ROAD
PORT READING, MIDDLESEX COUNTY, NEW JERSEY

AOC	Well ID	Permit Number	Status	Longitude	Latitude	TOC Elevation (ft)	Ground Elevation	Diameter	Screen Length	Casing Length	Depth Drilled	DTB (ft)
Aeration Basin (AOC #5)/ Permeter Well	AB-1	26-63927		74'14'48.0"	40'33'34.7"	13.85		4"	8'	5'	10'	13.10
Aeration Basin (AOC #5)/ Perimeter Well	AB-2R	P200800553		74'14'38.5"	40'33'34.9'	10.81		4"	19'	3.5'	20'	21.05
Aeration Basin (AOC #5)	AB-2	26-63926	Sealed	74'14'39.9"	40'33'34.4"	12.03		4"	12'	5'		14'
Aeration Basin (AOC #5)	AB-3	26-63928		74'14'50.7"	40'33'37.2"	14.62		4"	8'	5'	10'	13.10
Aeration Basin (AOC #5)	AB-4	26-63929		74'14'52.0"	10'33'35.4	14.24		4"	8'	5'		6.65
Aeration Basin (AOC #5)/ Permeter Well	AB-5	26-63930		74'14'51.8"	40'33'33.1"	13.24		4"	8'	5'	10'	13.10
Former UST Admin Building (AOC#11)	AD-1			74'15'04.2"	40'33'53.7"	18.25		4"				16.00
Former UST Admin Building (AOC#11)	AD-2			74'15'04.0"	40'33'53.2"	18.95		4"				16.92
Former UST Admin Building (AOC#11)	AD-3			74'15'01.6"	40'33'52.8"	22.00		4"				13.60
Former UST Admin Building (AOC#11)	AD-4	26-63937		74'15'.05.3"	40'33'52.2"	17.55		4"	13'	2'	15'	14.60
Former UST Admin Building (AOC#11)	AD-5	26-63938		74'15'04.4"	40'33'50.3"	17.73		4"	13'	2'	15'	15.60
Former UST Admin Building (AOC#11)	AD-5D	E201116252		74'15'03.4	40'33'53.3	17.28		4"	5'	25'	30'	
Former UST Admin Building (AOC#11)	AD-6	26-63939		74'15'03.3"	40'33'52.4"	19.18		4"	13'	2'	15'	16.00
No. 1 Landfarm (AOC #3)/ Dredge Spoils Area (AOC#4)	BG-2	26-8132		74'14'32.0"	40'33'43.1"	11.13		4"				10.87
No. 1 Landfarm (AOC #3)/ Dredge Spoils Area (AOC#4)	BG-3			74'14'23.1"	40'33'40.7"	12.54		4"				11.00
Landfarm (AOC #3)	L1-1			74'14'30.7"	40.33'40.2"	13.38		4"				15.00
Landfarm (AOC #3)	L1-2	26-8065		74'14'28.8"	40'33'43.8"	10.98		4"				13.85
Landfarm (AOC #3)	L1-3			74'14'25.8	40'33'43.7"	11.5		4"				10.90
Landfarm (AOC #3)	L1-4	26-8067		74'14'25.1"	40'33'42.6"	12.97		4"				10.90
North Landfarm (AOC #1)	LN-1			74'14'37.4"	40'33'50.0"	12.19	10.32	4"				13.57
North Landfarm (AOC #1)	LN-2			74'14'33.9"	40'33'50.5"	12.21	10.42	4"				11.57
North Landfarm (AOC #1)	LN-3			74'14'32.9"	40'33'49.9"	11.34	10.44	4"				13.25
North Landfarm (AOC #1)	LN-4			74'14'31.6"	40'33'48.8"	13.55	11.24	4"				14.19
North Landfarm (AOC #1)	LN-5	E201013003		74'14'30.7"	40'33'48.7"	12.85	13.55	4"	19	1	20	
North Landfarm (AOC #1)	LN-6	E201013004		74'14'32.1"	40'33'50.6"	14.56	14.94	4"	19	1	20	
North Landfarm (AOC #1)	LN-7	E201013005		74'14'30.7"	40'33'50.6"	15.75	16.18	4"	19	1	20	
Perimeter Well (Colonial Pipeline?)	LPG-1	26-63940		74'14'42.6"	40'33'55.7"	13.74		4"	7'	2'	9'	8.60
Perimeter Well (Colonial Pipeline?)	LPG-2	26-63941		74'14'37.1	40'33'52.7"	9.3		4"	8'	2'	10'	9.64
South Landfarm (AOC #2)/ Former Oily Water Lagoon (AOC #13)	LS-1R			74'14'50.7"	40'33'45.8"	14.49						15.88
South Landfarm (AOC #2)/ Former Oily Water Lagoon (AOC #13)	LS-1	26-07592	Sealed	--	--	--		4"	5'	4.65'	9.65'	
South Landfarm (AOC #2)/ Former Oily Water Lagoon (AOC #13)	LS-2	26-01593-5		74'14'49.0"	40'33'42.8"	11.69		4"	5'	5.25'	10.25'	12.02
South Landfarm (AOC #2)/ Former Oily Water Lagoon (AOC #13)	LS-3	26-07594-3		74'14'50.3"	40'33'43.0"	10.7		4"	6'	6'	12'	13.10
South Landfarm (AOC #2)/ Former Oily Water Lagoon (AOC #13)	LS-4	26-07595-2		74'14'51.4"	40'33'43.6"	11.25		4"	7'	5'	12'	13.05
Perimeter Well	PER-1	26-63933		74'15'10.0"	40'33'43.9"	19.29		4"	12'	6'	15'	17.61
Perimeter Well	PER-2	26-63924		74'15'.05.0"	40'33'40.2"	12.91		4"	7'	5'	9'	12.10
Perimeter Well	PER-3	26-63925		74'14'56.7"	40'33'34.4"	9.55		4"	7'	5'	9'	12.10

TABLE 1
HESS CORPORATION- PORT READING REFINERY
WELL CONSTRUCTION SURVEY DATA
750 CLIFF ROAD
PORT READING, MIDDLESEX COUNTY, NEW JERSEY

AOC	Well ID	Permit Number	Status	Longitude	Latitude	TOC Elevation (ft)	Ground Elevation	Diameter	Screen Length	Casing Length	Depth Drilled	DTB (ft)
Perimeter Well	PER-4	26-63934		74'14'31.8"	40'33'46.6"	12.78		4"	15'	3'	18'	14.10
Perimeter Well	PER-5	26-63935		74'14'58.3"	40'33'59.4"	20.47		4"	12'	3'	15'	15.00
Perimeter Well	PER-6R	P2000800554		74'15'09.2"	40'33'49.9"	23.76		4"	20'	2.5'	20'	22.00
Perimeter Well	PER-6	26-63936	Sealed	74'15'10.6"	40'33'49.5'	21.93	--	4"	13'	2'	15'	
Perimeter Well/ Railcar Loading Areas (AOC #16)	PER-7	26-63931		74'14'31.8"	40'33'27.0"	11.15		4"	13'	2'	15'	17.04
Perimeter Well/ Railcar Loading Areas (AOC #16)	PER-8	26-63932		74'14'24.8"	40'33'29.8"	10.4		4"	12'	5'	17'	17.55
Colonial Pipeline (AOC #7)	PL-1	26-37760		74'14'51.6"	40'33'42.0"	11.82		4"	15'	5'	18'	19.90
Colonial Pipeline (AOC #7)	PL-2	26-37761		74'14'51.5"	40'33'40.2"	11.78		4"	14'	3'	15'	18.68
Colonial Pipeline (AOC #7)	PL-3R	P200800555		74'14'46.6"	40'33'43.7"	12.27		4"	19'	3'	20'	21.30
Colonial Pipeline (AOC #7)	PL-3	26-37762	Sealed	74'14'48.0"	40'33'43.3"	12.81	--	4"	15'	3'	18'	
Colonial Pipeline (AOC #7)	PL-4R	P200800556		74'14'43.4"	40'33'40.4"	12.4		4"	19'	3'	20'	21.61
Colonial Pipeline (AOC #7)	PL-4	26-37763	Sealed	74'14'45.1"	50'33'39.8"	13.3	--	4"	14'	3'	15'	
Colonial Pipeline (AOC #7)	PL-5	26-37764		74'14'42.8"	40'33'37.3"	9.08		4"	15'	5'	18'	10.17
Colonial Pipeline (AOC #7)	PL-6R	P200800557		74'14'45.2"	40'33'44.4"	11.49		4"	19'	3'	20'	15.29
Colonial Pipeline (AOC #7)	PL-6	26-37765	Sealed	74'14'46.6"	40'33'43.9"	11.95	--	4"	12'	4'	14'	
Colonial Pipeline (AOC #7)	PL-7	26-37766		74'14'41.5"	40'33'40.7"	13.06		4"	15'	5'	18'	15.30
Colonial Pipeline (AOC #7)	PL-8R	P200800558		74'14'40.5"	40'33'39.5"	11.96		4"	19'	3'	20'	21.70
Colonial Pipeline (AOC #7)	PL-8	26-37767	Sealed	74'14'41.9"	40'33'39.0"	12.39		4"	15'	5'	18'	
Colonial Pipeline (AOC #7)	PL-9R	P2008559		74'14'47.2"	40'33'42.4"	11.26		4"	19'	3'	20'	18.65
Colonial Pipeline (AOC #7)	PL-9	26-37768	Sealed	74'14'48.8"	40'33'42.0"	11.95	--	4"	15'	4'	17'	
No. 1 Landfarm (AOC #3)/ Dredge Spoils Area (AOC #4)	SP-1			74'14'31.7"	40'33'41.7"	14.07		2"				14.11
No. 1 Landfarm (AOC #3)/ Dredge Spoils Area (AOC #4)	SP-2			74'4'29.8"	40'33'38.8"	15.24		2"				14.69
No. 1 Landfarm (AOC #3)/ Dredge Spoils Area (AOC #4)	SP-3			74'14'26.9"	40'33'40.2"	14.66		2"				14.90
Former UST Admin Building (AOC#11)/ Perimeter Well	TC-1			74'15'09.8"	40'33'52.8"	20.48		4"				17.70
Former UST Admin Building (AOC#11)	TC-2			74'15'09.1"	40'33'52.9"	19.57		4"				15.14
Former UST Admin Building (AOC#11)	TC-3			74'15'09.3"	40'33'53.2"	19.55		4"				17.31
Waste Oil UST Area (AOC #6)	TF-1			74'14'38.4"	40'33'43.6"	10.82		2"				10.07
Waste Oil UST Area (AOC #6)	TF-2			74'14'38.5"	40'33'43.2"	10.13		4"				11.80
Waste Oil UST Area (AOC #6)	TF-3			74'14'38.0	40'33'43.2"	10.73		4"				11.76
TM Monitoring Wells (AOC #14a)	TM-1					22.36		4"	15'	3'	18'	22.13
TM Monitoring Wells (AOC #14a,b)	TM-2					22.45		4"	15'	4'	19'	20.15
TM Monitoring Wells (AOC #14a)	TM-3					22.5		4"	15'	3'	18'	20.82
TM Monitoring Wells (AOC #14a)	TM-4					21.14		4"	10'	2.5'	12.5'	15.11
TM Monitoring Wells (AOC #14b)	TM-5					18.47		4"	15'	4'	19'	22.16

TABLE 1
HESS CORPORATION- PORT READING REFINERY
WELL CONSTRUCTION SURVEY DATA
750 CLIFF ROAD
PORT READING, MIDDLESEX COUNTY, NEW JERSEY

AOC	Well ID	Permit Number	Status	Longitude	Latitude	TOC Elevation (ft)	Ground Elevation	Diameter	Screen Length	Casing Length	Depth Drilled	DTB (ft)
TM Monitoring Wells (AOC #14b)	TM-6			74'14'52.2"	40'33'46.3"	17.68		4"	15'	2.5'	18'	19.80
TM Monitoring Wells (AOC #14b)	TM-7			74'14'55.3"	40'33'46.5"	17.03		4"	15'	3'	18'	21.40
Truck Loading Rack Area (AOC #10)	TR-1			74'15'05.0"	40'33'45.5"	15.56		4"	15'	6'	22'	20.00
Truck Loading Rack Area (AOC #10)	TR-2R	P200800560		74'15'02.5"	40'33'44.3"	14.66		4"	19'	1'	20'	20.20
Truck Loading Rack Area (AOC #10)	TR-2	--	Sealed	74'15'03.9"	40'33'43.9"	14.7	--	--	--	--	--	--
Truck Loading Rack Area (AOC #10)	TR-3R	P200800561		74'15'01.3"	40'33'43.4"	12.93		4"	19'	1'	20'	19.45
Truck Loading Rack Area (AOC #10)	TR-3	--	Sealed	74'15'02.8"	40'33'42.9"	12.96	--	--	--	--	--	--
Truck Loading Rack Area (AOC #10)	TR-4	26-35173		74'15'04.3"	40'33'43.3"	14.71		4"	15'	6.5'	22'	20.20
Truck Loading Rack Area (AOC #10)	TR-5	installed october 2008										
Truck Loading Rack Area (AOC #10)	TR-6	installed october 2008										

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-1	11/4/1998	19.90	11.82	5.11	5.14	0.03	6.73
	12/2/1998	19.90	11.82	4.88	4.91	0.03	6.96
	12/18/1998	19.90	11.82	4.77	4.80	0.03	7.07
	2/24/1999	19.90	11.82	--	9.50	--	2.32
	3/12/1999	19.90	11.82	3.69	3.70	0.01	8.14
	3/25/1999	19.90	11.82	3.27	3.28	0.01	8.56
	4/7/1999	19.90	11.82	3.21	3.22	0.01	8.62
	4/23/1999	19.90	11.82	NM	NM	NM	NM
	5/21/1999	19.90	11.82	2.44	2.45	0.01	9.39
	6/23/1999	19.90	11.82	2.71	2.85	0.14	9.22
	7/23/1999	19.90	11.82	3.36	3.38	0.02	8.48
	8/30/1999	19.90	11.82	5.02	5.32	0.30	7.03
	9/29/1999	19.90	11.82	6.31	6.43	0.12	5.60
	10/25/1999	19.90	11.82	6.31	6.43	0.12	5.60
	11/23/1999	19.90	11.82	3.18	3.28	0.10	8.72
	12/23/1999	19.90	11.82	1.00	1.10	0.10	10.90
	3/16/2000	19.90	11.82	1.17	1.50	0.33	10.90
	5/30/2000	19.90	11.82	1.32	1.48	0.16	10.62
	7/31/2000	19.90	11.82	1.82	2.50	0.68	10.51
	10/30/2000	19.90	11.82	6.64	6.67	0.03	5.20
	1/3/2001	19.90	11.82	5.40	5.49	0.09	6.49
	4/18/2001	19.90	11.82	1.59	2.24	0.65	10.72
	7/23/2001	19.90	11.82	2.94	2.96	0.02	8.90
	10/8/2001	19.90	11.82	2.20	2.70	0.50	10.00
	11/7/2001	19.90	11.82	5.02	5.21	0.19	6.94
	12/5/2001	19.90	11.82	5.35	5.43	0.08	6.53
	1/9/2002	19.90	11.82	4.51	4.56	0.05	7.35
	2/6/2002	19.90	11.82	4.24	4.34	0.10	7.66
	3/6/2002	19.90	11.82	4.04	4.06	0.02	7.80
	4/3/2002	19.90	11.82	3.15	3.18	0.03	8.69
	5/8/2002	19.90	11.82	3.10	3.12	0.02	8.74
	6/5/2002	19.90	11.82	2.65	2.68	0.03	9.19
	7/10/2002	19.90	11.82	2.69	2.72	0.03	9.15
	8/7/2002	19.90	11.82	3.75	3.80	0.05	8.11
	9/11/2002	19.90	11.82	3.83	3.90	0.07	8.04
	10/9/2002	19.90	11.82	4.76	5.13	0.37	7.34
	11/6/2002	19.90	11.82	5.09	5.41	0.32	6.97
	12/4/2002	19.90	11.82	5.31	5.70	0.39	6.80
	1/8/2003	19.90	11.82	3.38	3.72	0.34	8.70
	2/5/2003	19.90	11.82	4.56	4.62	0.06	7.31
	3/5/2003	19.90	11.82	2.17	2.20	0.03	9.67
	5/22/2003	19.90	11.82	--	2.88	--	8.94
	6/11/2003	19.90	11.82	--	2.27	--	9.55
	7/9/2003	19.90	11.82	0.96	1.01	0.05	10.90
	8/14/2003	19.90	11.82	2.46	2.47	0.01	9.37
	9/12/2003	19.90	11.82	2.52	2.54	0.02	9.32
	10/8/2003	19.90	11.82	4.32	4.35	0.03	7.52
	11/6/2003	19.90	11.82	4.13	4.16	0.03	7.71
	12/3/2003	19.90	11.82	4.22	4.26	0.04	7.63
	1/14/2004	19.90	11.82	4.14	4.18	0.04	7.71
	2/9/2004	19.90	11.82	4.21	4.25	0.04	7.64
	3/10/2004	19.90	11.82	4.08	4.10	0.02	7.76
	4/14/2004	19.90	11.82	4.15	4.21	0.06	7.72
	5/11/2004	19.90	11.82	4.20	4.28	0.08	7.68
	6/9/2004	19.90	11.82	4.17	4.23	0.06	7.70
	7/14/2004	19.90	11.82	4.09	4.17	0.08	7.79
	8/4/2004	19.90	11.82	3.98	4.06	0.08	7.90
	9/8/2004	19.90	11.82	4.08	4.14	0.06	7.79

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-1	10/15/2004	19.90	11.82	4.16	4.21	0.05	7.70
	11/10/2004	19.90	11.82	4.27	4.31	0.04	7.58
	12/8/2004	19.90	11.82	4.23	4.29	0.06	7.64
	1/12/2005	19.90	11.82	4.20	4.26	0.06	7.67
	2/9/2005	19.90	11.82	4.28	4.31	0.03	7.56
	3/9/2005	19.90	11.82	4.24	4.27	0.03	7.60
	4/13/2005	19.90	11.82	4.32	4.34	0.02	7.52
	5/11/2005	19.90	11.82	4.27	4.29	0.02	7.57
	6/8/2005	19.90	11.82	4.22	4.24	0.02	7.62
	7/14/2005	19.90	11.82	4.30	4.32	0.02	7.54
	8/3/2005	19.90	11.82	4.19	4.22	0.03	7.65
	9/7/2005	19.90	11.82	4.26	4.28	0.02	7.58
	10/11/2005	19.90	11.82	5.07	5.60	0.53	7.15
	11/8/2005	19.90	11.82	5.50	5.64	0.14	6.43
	12/14/2005	19.90	11.82	5.48	5.52	0.04	6.37
	1/11/2006	19.90	11.82	--	4.36	--	7.46
	2/14/2006	19.90	11.82	--	4.45	--	7.37
	3/1/2006	19.90	11.82	--	4.41	--	7.41
	4/5/2006	19.90	11.82	--	4.33	--	7.49
	5/3/2006	19.90	11.82	--	4.39	--	7.43
	6/2/2006	19.90	11.82	--	4.42	--	7.40
	7/5/2006	19.90	11.82	--	4.36	--	7.46
	8/8/2006	19.90	11.82	--	4.47	--	7.35
	9/13/2006	19.90	11.82	--	4.42	--	7.40
	1/30/2007	19.90	11.82	--	4.18	--	7.64
	2/7/2007	19.90	11.82	--	4.29	--	7.53
	3/2/2007	19.90	11.82	--	2.80	--	9.02
	4/6/2007	19.90	11.82	--	6.34	--	5.48
	5/4/2007	19.90	11.82	--	2.31	--	9.51
	6/1/2007	19.90	11.82	1.55	1.56	0.01	10.28
	7/6/2007	19.90	11.82	1.68	1.71	0.03	10.16
	8/3/2007	19.90	11.82	--	1.98	--	9.84
	9/6/2007	19.90	11.82	--	2.97	--	8.85
	10/5/2007	19.90	11.82	--	3.60	--	8.22
	11/2/2007	19.90	11.82	--	4.73	--	7.09
	12/6/2007	19.90	11.82	--	5.01	--	6.81
	1/4/2008	19.90	11.82	5.01	5.02	0.01	6.82
	2/8/2008	19.90	11.82	--	3.57	--	8.25
	3/7/2008	19.90	11.82	--	3.24	--	8.58
	4/4/2008	19.90	11.82	--	2.74	--	9.08
	5/2/2008	19.90	11.82	--	2.09	--	9.73
	6/6/2008	19.90	11.82	--	1.92	--	9.90
	7/7/2008	19.90	11.82	--	1.84	--	9.98
	8/6/2008	19.90	11.82	--	2.09	--	9.73
	9/5/2008	19.90	11.82	--	2.91	--	8.91
	10/6/2008	19.90	11.82	--	3.22	--	8.60
	11/5/2008	19.90	11.82	--	4.86	--	6.96
	12/5/2008	19.90	11.82	--	4.88	--	6.94
	1/9/2009	19.90	11.82	--	4.52	--	7.30
	2/3/2009	19.90	11.82	--	4.91	--	6.91
	3/3/2009	19.90	11.82	--	4.88	--	6.94
	4/22/2009	19.90	11.82	--	2.09	--	9.73
	5/19/2009	19.90	11.82	--	2.20	--	9.62
	6/11/2009	19.90	11.82	--	1.98	--	9.84
	7/10/2009	19.90	11.82	--	1.95	--	9.87
	8/14/2009	19.90	11.82	--	1.88	--	9.94
	8/31/2009	19.90	11.82	--	2.15	--	9.67
	4/1/2010	19.90	11.82	--	2.01	--	9.81
	5/14/2010	19.90	11.82	--	2.36	--	9.46
	6/28/2010	19.90	11.82	--	3.21	--	8.61
	7/21/2010	19.90	11.82	--	1.94	--	9.88
	8/9/2010	19.90	11.82	--	2.53	--	9.29
	9/7/2010	19.90	11.82	--	3.50	--	8.32
	10/12/2010	19.90	11.82	4.19	4.20	0.01	7.62
	11/9/2010	19.90	11.82	4.14	4.15	0.01	7.67

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Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-1	12/8/2010	19.90	11.82	4.26	4.27	0.01	7.55
	1/5/2011	19.90	11.82	--	4.34	--	7.48
	2/4/2011	19.90	11.82	--	3.87	--	7.95
	3/1/2011	19.90	11.82	--	3.13	--	8.69
	4/14/2011	19.90	11.82	--	2.34	--	9.48
	5/10/2011	19.90	11.82	--	1.73	--	10.09
	6/2/2011	19.90	11.82	--	1.19	--	10.63
	7/6/2011	19.90	11.82	--	2.08	--	9.74
	8/4/2011	19.90	11.82	--	2.14	--	9.68
	9/19/2011	19.90	11.82	--	3.01	--	8.81
	10/7/2011	19.90	11.82	--	3.23	--	8.59
	11/1/2011	19.90	11.82	SHEEN	2.95	--	8.87
	12/14/2011	19.90	11.82	SHEEN	3.84	--	7.98
PL-2	9/12/2003	18.68	11.78	3.59	3.62	0.03	8.21
	10/8/2003	18.68	11.78	3.02	3.06	0.04	8.79
	11/6/2003	18.68	11.78	2.87	2.91	0.04	8.94
	12/3/2003	18.68	11.78	3.00	3.04	0.04	8.81
	1/14/2004	18.68	11.78	2.89	2.93	0.04	8.92
	2/9/2004	18.68	11.78	2.94	3.00	0.06	8.89
	3/10/2004	18.68	11.78	--	2.37	--	9.41
	4/14/2004	18.68	11.78	--	2.48	--	9.30
	5/11/2004	18.68	11.78	--	2.42	--	9.36
	6/9/2004	18.68	11.78	--	2.36	--	9.42
	7/14/2004	18.68	11.78	--	2.41	--	9.37
	8/4/2004	18.68	11.78	--	2.32	--	9.46
	9/8/2004	18.68	11.78	--	2.34	--	9.44
	10/15/2004	18.68	11.78	--	2.43	--	9.35
	11/10/2004	18.68	11.78	--	2.47	--	9.31
	12/8/2004	18.68	11.78	--	2.51	--	9.27
	1/12/2005	18.68	11.78	--	2.46	--	9.32
	2/9/2005	18.68	11.78	--	2.53	--	9.25
	3/9/2005	18.68	11.78	--	2.49	--	9.29
	4/13/2005	18.68	11.78	--	2.54	--	9.24
	5/11/2005	18.68	11.78	--	2.50	--	9.28
	6/8/2005	18.68	11.78	--	2.47	--	9.31
	7/14/2005	18.68	11.78	--	2.61	--	9.17
	8/3/2005	18.68	11.78	--	2.59	--	9.19
	9/7/2005	18.68	11.78	--	2.53	--	9.25
	10/11/2005	18.68	11.78	2.43	2.59	0.16	9.47
	11/8/2005	18.68	11.78	2.41	2.62	0.21	9.53
	12/14/2005	18.68	11.78	2.39	2.50	0.11	9.47
	1/11/2006	18.68	11.78	--	2.53	--	9.25
	2/14/2006	18.68	11.78	--	2.61	--	9.17
	3/1/2006	18.68	11.78	--	2.55	--	9.23
	4/5/2006	18.68	11.78	--	2.49	--	9.29
	5/3/2006	18.68	11.78	--	2.54	--	9.24
	6/2/2006	18.68	11.78	--	2.59	--	9.19
	7/5/2006	18.68	11.78	--	2.53	--	9.25
	8/8/2006	18.68	11.78	--	2.62	--	9.16
	9/13/2006	18.68	11.78	--	2.57	--	9.21
	1/30/2007	18.68	11.78	2.81	3.62	0.81	9.58
	2/7/2007	18.68	11.78	3.12	3.34	0.22	8.83
	3/2/2007	18.68	11.78	2.04	2.05	0.01	9.75
	4/6/2007	18.68	11.78	2.32	2.34	0.02	9.48
	5/4/2007	18.68	11.78	2.31	2.32	0.01	9.48
	6/1/2007	18.68	11.78	2.59	2.60	0.01	9.20
	7/6/2007	18.68	11.78	2.30	2.33	0.03	9.50
	8/3/2007	18.68	11.78	2.61	2.62	0.01	9.18
	9/6/2007	18.68	11.78	3.12	3.14	0.02	8.68
	10/5/2007	18.68	11.78	3.59	3.62	0.03	8.21
	11/2/2007	18.68	11.78	2.92	2.93	0.01	8.87
	12/6/2007	18.68	11.78	3.10	3.11	0.01	8.69
	1/4/2008	18.68	11.78	2.81	2.83	0.02	8.99
	2/8/2008	18.68	11.78	2.28	2.29	0.01	9.51
	3/7/2008	18.68	11.78	2.18	2.19	0.01	9.61
	4/4/2008	18.68	11.78	--	1.89	--	9.89
	5/2/2008	18.68	11.78	--	2.11	--	9.67
	6/6/2008	18.68	11.78	--	2.21	--	9.57

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Hess- Corporation - Port Reading Refinery
750 Cliff Road
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GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-2	7/7/2008	18.68	11.78	--	2.09	--	9.69
	8/6/2008	18.68	11.78	--	1.82	--	9.96
	9/5/2008	18.68	11.78	--	3.94	--	7.84
	10/6/2008	18.68	11.78	NM	NM	NM	NM
	11/5/2008	18.68	11.78	2.09	2.36	0.27	9.42
	12/5/2008	18.68	11.78	2.76	2.77	0.01	9.01
	1/9/2009	18.68	11.78	2.56	2.57	0.01	9.21
	2/3/2009	18.68	11.78	3.01	3.02	0.01	8.76
	3/3/2009	18.68	11.78	--	3.42	--	8.36
	4/22/2009	18.68	11.78	2.08	2.09	0.01	9.69
	5/19/2009	18.68	11.78	2.40	2.41	0.01	9.37
	6/11/2009	18.68	11.78	2.21	2.23	0.02	9.55
	7/10/2009	18.68	11.78	2.31	2.34	0.03	9.44
	8/14/2009	18.68	11.78	2.98	3.00	0.02	8.78
	9/23/2009	18.68	11.78	1.98	2.00	0.02	9.78
	10/28/2009	18.68	11.78	--	3.34	--	8.44
	11/25/2009	18.68	11.78	--	2.76	--	9.02
	12/14/2009	18.68	11.78	2.08	2.10	0.02	9.68
	1/11/2010	18.68	11.78	--	2.61	--	9.17
	2/12/2010	18.68	11.78	--	3.09	--	8.69
	3/12/2010	18.68	11.78	--	2.13	--	9.65
	4/1/2010	18.68	11.78	--	2.04	--	9.74
	5/14/2010	18.68	11.78	--	2.14	--	9.64
	6/28/2010	18.68	11.78	--	3.41	--	8.37
	7/21/2010	18.68	11.78	--	2.51	--	9.27
	8/9/2010	18.68	11.78	2.73	2.74	0.01	9.04
	9/7/2010	18.68	11.78	--	2.92	--	8.86
	10/12/2010	18.68	11.78	2.23	2.24	0.01	9.54
	11/9/2010	18.68	11.78	--	2.39	--	9.39
	12/8/2010	18.68	11.78	--	2.55	--	9.23
	1/5/2011	18.68	11.78	--	2.17	--	9.61
	2/4/2011	18.68	11.78	--	2.02	--	9.76
	3/1/2011	18.68	11.78	--	2.23	--	9.55
	4/14/2011	18.68	11.78	--	2.05	--	9.73
	5/10/2011	18.68	11.78	2.15	2.16	0.01	9.62
	6/2/2011	18.68	11.78	1.85	1.99	0.14	9.79
	7/6/2011	18.68	11.78	2.41	2.42	0.01	9.36
	8/4/2011	18.68	11.78	3.30	3.42	0.12	8.36
	9/19/2011	18.68	11.78	2.15	2.18	0.03	9.60
	10/7/2011	18.68	11.78	2.40	2.60	0.20	9.33
	11/1/2011	18.68	11.78	2.22	2.23	0.01	9.56
	12/14/2011	18.68	11.78	2.08	2.09	0.01	9.70
PL-3R	11/25/2009	21.30	12.27	--	3.60	--	8.67
	12/14/2009	21.30	12.27	--	3.49	--	8.78
	1/11/2010	21.30	12.27	--	3.96	--	8.31
	2/12/2010	21.30	12.27	--	2.62	--	9.65
	3/12/2010	21.30	12.27	--	2.68	--	9.59
	4/1/2010	21.30	12.27	--	1.98	--	10.29
	7/21/2010	21.30	12.27	2.46	2.47	0.01	9.80
	8/9/2010	21.30	12.27	--	2.73	--	9.54
	9/7/2010	21.30	12.27	--	2.74	--	9.53
	10/12/2010	21.30	12.27	--	2.43	--	9.84
	11/9/2010	21.30	12.27	--	2.91	--	9.36
	12/8/2010	21.30	12.27	--	3.31	--	8.96
	1/5/2011	21.30	12.27	--	2.82	--	9.45
	2/4/2011	21.30	12.27	--	2.33	--	9.94
	3/1/2011	21.30	12.27	--	2.73	--	9.54
	4/14/2011	21.30	12.27	2.43	2.44	0.01	9.83
	5/10/2011	21.30	12.27	2.39	2.40	0.01	9.87
	6/2/2011	21.30	12.27	--	2.18	--	10.09
	7/6/2011	21.30	12.27	--	2.38	--	9.89
	8/4/2011	21.30	12.27	--	6.08	--	6.19
	9/19/2011	21.30	12.27	5.62	5.63	0.01	6.64
	10/7/2011	21.30	12.27	SHEEN	2.92	--	9.35
	11/1/2011	21.30	12.27	SHEEN	2.70	--	9.57
	12/14/2011	21.30	12.27	--	2.92	--	9.35

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GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-5	11/4/1998	10.17	9.10	1.88	4.80	2.92	9.41
	12/2/1998	10.17	9.10	2.50	3.23	0.73	7.15
	12/18/1998	10.17	9.10	3.40	3.46	0.06	5.75
	2/24/1999	10.17	9.10	--	0.90	--	8.20
	3/12/1999	10.17	9.10	NM	NM	NM	NM
	3/25/1999	10.17	9.10	0.62	0.63	0.01	8.49
	4/7/1999	10.17	9.10	NM	NM	NM	NM
	4/23/1999	10.17	9.10	NM	NM	NM	NM
	5/21/1999	10.17	9.10	1.16	1.41	0.25	8.13
	6/23/1999	10.17	9.10	2.30	2.57	0.27	7.00
	7/23/1999	10.17	9.10	2.71	2.89	0.18	6.53
	8/30/1999	10.17	9.10	1.65	2.08	0.43	7.77
	9/29/1999	10.17	9.10	1.16	3.46	2.30	9.67
	10/25/1999	10.17	9.10	1.25	1.31	0.06	7.90
	11/23/1999	10.17	9.10	1.95	2.05	0.10	7.23
	12/23/1999	10.17	9.10	4.22	6.10	1.88	6.29
	3/16/2000	10.17	9.10	3.20	4.60	1.40	6.95
	5/30/2000	10.17	9.10	2.70	3.25	0.55	6.81
	7/31/2000	10.17	9.10	0.32	0.92	0.60	9.23
	10/30/2000	10.17	9.10	2.66	2.75	0.09	6.51
	1/3/2001	10.17	9.10	2.45	2.63	0.18	6.79
	4/18/2001	10.17	9.10	1.58	1.82	0.24	7.70
	7/23/2001	10.17	9.10	2.17	2.95	0.78	7.52
	10/8/2001	10.17	9.10	4.30	4.50	0.20	4.95
	11/7/2001	10.17	9.10	2.81	3.31	0.50	6.67
	12/5/2001	10.17	9.10	3.36	3.45	0.09	5.81
	1/9/2002	10.17	9.10	--	2.51	--	6.59
	2/6/2002	10.17	9.10	2.24	2.25	0.01	6.87
	3/6/2002	10.17	9.10	1.95	2.00	0.05	7.19
	4/3/2002	10.17	9.10	1.75	1.78	0.03	7.37
	5/8/2002	10.17	9.10	2.05	2.08	0.03	7.07
	6/5/2002	10.17	9.10	2.16	2.40	0.24	7.12
	7/10/2002	10.17	9.10	2.96	3.47	0.51	6.52
	8/7/2002	10.17	9.10	2.58	3.31	0.73	7.07
	9/11/2002	10.17	9.10	1.83	1.87	0.04	7.30
	10/9/2002	10.17	9.10	1.80	2.34	0.54	7.71
	11/6/2002	10.17	9.10	2.30	2.53	0.23	6.97
	12/4/2002	10.17	9.10	1.97	2.23	0.26	7.33
	1/8/2003	10.17	9.10	1.16	1.33	0.17	8.07
	2/5/2003	10.17	9.10	1.41	1.62	0.21	7.85
	3/5/2003	10.17	9.10	1.03	1.16	0.13	8.17
	5/22/2003	10.17	9.10	1.67	1.69	0.02	7.45
	6/11/2003	10.17	9.10	NA	0.90	NA	8.20
	7/9/2003	10.17	9.10	1.63	1.71	0.08	7.53
	8/14/2003	10.17	9.10	1.01	1.69	0.68	8.60
	9/12/2003	10.17	9.10	1.65	2.07	0.42	7.77
	10/8/2003	10.17	9.10	1.63	2.01	0.38	7.76
	11/6/2003	10.17	9.10	1.46	1.82	0.36	7.91
	12/3/2003	10.17	9.10	1.58	1.96	0.38	7.81
	1/14/2004	10.17	9.10	1.49	1.86	0.37	7.89
	2/9/2004	10.17	9.10	1.55	1.92	0.37	7.83
	3/10/2004	10.17	9.10	1.64	1.94	0.30	7.69
	4/14/2004	10.17	9.10	1.69	1.98	0.29	7.63
	5/11/2004	10.17	9.10	1.72	1.93	0.21	7.54
	6/9/2004	10.17	9.10	1.74	2.03	0.29	7.58
	7/14/2004	10.17	9.10	1.70	1.96	0.26	7.60
	8/4/2004	10.17	9.10	1.62	1.83	0.21	7.64
	9/8/2004	10.17	9.10	1.65	1.87	0.22	7.62
	10/15/2004	10.17	9.10	1.76	1.94	0.18	7.48
	11/10/2004	10.17	9.10	1.81	2.04	0.23	7.46
	12/8/2004	10.17	9.10	1.84	2.09	0.25	7.45
	1/12/2005	10.17	9.10	1.80	2.02	0.22	7.47
	2/9/2005	10.17	9.10	1.83	2.07	0.24	7.45
	3/9/2005	10.17	9.10	1.81	2.05	0.24	7.47
	4/13/2005	10.17	9.10	1.96	2.11	0.15	7.25
	5/11/2005	10.17	9.10	1.90	2.09	0.19	7.34
	6/8/2005	10.17	9.10	1.84	2.01	0.17	7.39
	7/14/2005	10.17	9.10	1.99	2.16	0.17	7.24
	8/3/2005	10.17	9.10	1.90	2.06	0.16	7.32
	8/11/2005	10.17	9.10	0.05	1.91	1.86	10.45

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-5	9/7/2005	10.17	9.10	1.85	2.01	0.16	7.37
	11/10/2005	10.17	9.10	1.52	1.87	0.35	7.84
	12/15/2005	10.17	9.10	1.17	1.82	0.65	8.42
	1/11/2006	10.17	9.10	1.87	2.09	0.22	7.40
	2/14/2006	10.17	9.10	1.94	2.14	0.20	7.31
	3/1/2006	10.17	9.10	1.92	2.11	0.19	7.32
	4/5/2006	10.17	9.10	1.85	2.07	0.22	7.42
	5/3/2006	10.17	9.10	1.88	2.10	0.22	7.39
	6/2/2006	10.17	9.10	1.93	2.16	0.23	7.34
	7/5/2006	10.17	9.10	1.86	2.09	0.23	7.41
	8/8/2006	10.17	9.10	1.97	2.19	0.22	7.30
	9/13/2006	10.17	9.10	1.93	2.11	0.18	7.31
	1/30/2007	10.17	9.10	Sheen	1.29	--	7.81
	2/7/2007	10.17	9.10	1.62	1.64	0.02	7.50
	3/2/2007	10.17	9.10	0.50	0.56	0.06	8.65
	4/6/2007	10.17	9.10	0.69	0.70	0.01	8.42
	5/4/2007	10.17	9.10	0.78	0.79	0.01	8.33
	6/1/2007	10.17	9.10	1.53	1.57	0.04	7.60
	7/6/2007	10.17	9.10	1.61	1.63	0.02	7.51
	8/3/2007	10.17	9.10	1.29	2.10	0.81	8.42
	9/6/2007	10.17	9.10	2.14	3.20	1.06	7.76
	10/5/2007	10.17	9.10	2.71	3.40	0.69	6.91
	11/2/2007	10.17	9.10	2.14	2.80	0.66	7.46
	12/6/2007	10.17	9.10	1.76	2.25	0.49	7.71
	1/4/2008	10.17	9.10	1.08	1.70	0.62	8.49
	2/8/2008	10.17	9.10	0.94	2.05	1.11	8.99
	3/7/2008	10.17	9.10	1.05	1.80	0.75	8.61
	4/4/2008	10.17	9.10	0.91	1.75	0.84	8.82
	5/2/2008	10.17	9.10	1.09	1.90	0.81	8.62
	6/6/2008	10.17	9.10	1.17	2.21	1.04	8.71
	7/7/2008	10.17	9.10	1.04	2.50	1.46	9.16
	8/6/2008	10.17	9.10	1.94	2.97	1.03	7.93
	9/5/2008	10.17	9.10	2.67	3.17	0.50	6.81
	10/6/2008	10.17	9.10	1.82	2.12	0.30	7.51
	11/5/2008	10.17	9.10	2.23	2.62	0.39	7.16
	12/5/2008	10.17	9.10	2.14	2.56	0.42	7.28
	1/9/2009	10.17	9.10	0.81	2.81	2.00	6.29
	2/3/2009	10.17	9.10	0.81	1.37	0.56	7.73
	3/3/2009	10.17	9.10	0.87	0.97	0.10	8.13
	4/22/2009	10.17	9.10	0.71	1.19	0.48	7.91
	5/19/2009	10.17	9.10	1.09	1.32	0.23	7.78
	6/11/2009	10.17	9.10	0.82	1.21	0.39	7.89
	7/10/2009	10.17	9.10	1.52	1.77	0.25	7.33
	8/14/2009	10.17	9.10	1.59	1.65	0.06	7.45
	9/23/2009	10.17	9.10	0.98	1.09	0.11	8.01
	10/28/2009	10.17	9.10	1.87	1.90	0.03	7.20
	11/25/2009	10.17	9.10	1.54	1.58	0.04	7.52
	12/14/2009	10.17	9.10	1.09	1.11	0.02	7.99
	1/11/2010	10.17	9.10	1.25	1.98	0.73	7.12
	2/12/2010	10.17	9.10	1.14	1.68	0.54	7.42
	3/12/2010	10.17	9.10	0.81	4.37	0.56	4.73
	4/1/2010	10.17	9.10	0.25	3.68	0.43	5.42
	5/14/2010	10.17	9.10	1.08	3.15	2.07	5.95
	6/28/2010	NM	NM	NM	NM	NM	NM
	7/21/2010	NM	NM	NM	NM	NM	NM
	8/9/2010	10.17	9.10	--	8.05	--	1.05
	9/7/2010	10.17	9.10	7.74	7.76	0.02	1.34
	10/12/2010	10.17	9.10	6.60	6.62	0.02	2.48
	11/9/2010	10.17	9.10	6.90	6.92	0.02	2.18
	12/8/2010	10.17	9.10	7.02	7.04	0.02	2.06
	1/5/2011	10.17	9.10	0.90	0.93	0.03	8.17
	2/4/2011	10.17	9.10	0.59	0.61	0.02	8.49
	3/1/2011	10.17	9.10	0.84	0.85	0.01	8.25
	4/14/2011	10.17	9.10	0.78	0.80	0.02	8.30
	5/10/2011	10.17	9.10	0.98	1.10	0.12	8.00
	6/2/2011	10.17	9.10	0.98	1.08	0.10	8.02
	7/6/2011	10.17	9.10	2.08	2.28	0.20	6.82
	8/4/2011	10.17	9.10	2.57	2.61	0.04	6.49
	9/19/2011	10.17	9.10	0.84	1.90	1.06	7.20
	10/7/2011	10.17	*9.08	1.38	1.40	0.02	7.70
	11/1/2011	10.17	9.08	0.97	0.98	0.01	8.11
	12/14/2011	10.17	9.08	1.13	1.14	0.01	7.95

Table 2
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Hess- Corporation - Port Reading Refinery
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GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
PL-7	2/7/2007	15.30	13.06	4.78	4.80	0.02	8.30
	3/2/2007	15.30	13.06	3.89	3.90	0.01	9.18
	8/3/2007	15.30	13.06	4.50	4.52	0.02	8.58
	9/6/2007	15.30	13.06	--	4.97	--	8.09
	10/5/2007	15.30	13.06	5.33	5.38	0.05	7.77
	11/2/2007	15.30	13.06	4.94	4.95	0.01	8.13
	12/6/2007	15.30	13.06	--	5.06	--	8.00
	1/4/2008	15.30	13.06	--	4.68	--	8.38
	2/8/2008	15.30	13.06	4.52	4.54	0.02	8.56
	3/7/2008	15.30	13.06	--	4.33	--	8.73
	4/4/2008	15.30	13.06	3.93	3.95	0.02	9.11
	5/2/2008	15.30	13.06	4.51	4.53	0.02	8.53
	6/6/2008	15.30	13.06	--	4.36	--	8.70
	7/7/2008	15.30	13.06	--	4.53	--	8.53
	8/6/2008	15.30	13.06	--	3.79	--	9.27
	9/5/2008	15.30	13.06	--	4.53	--	8.53
	10/6/2008	15.30	13.06	--	4.19	--	8.87
	11/5/2008	15.30	13.06	--	4.83	--	8.23
	12/5/2008	15.30	13.06	--	4.87	--	8.19
	1/9/2009	15.30	13.06	--	4.68	--	8.38
	2/3/2009	15.30	13.06	--	4.24	--	8.82
	3/3/2009	15.30	13.06	--	4.82	--	8.24
	4/22/2009	15.30	13.06	--	4.03	--	9.03
	5/19/2009	15.30	13.06	--	4.80	--	8.26
	6/11/2009	15.30	13.06	--	4.21	--	8.85
	7/10/2009	15.30	13.06	--	4.63	--	8.43
	8/14/2009	15.30	13.06	--	4.67	--	8.39
	8/31/2009	15.30	13.06	--	4.45	--	8.61
	1/11/2010	15.30	13.06	--	4.86	--	8.20
	2/12/2010	15.30	13.06	--	4.42	--	8.64
	3/12/2010	15.30	13.06	--	4.41	--	8.65
	4/1/2010	15.30	13.06	--	3.21	--	9.85
	5/14/2010	15.30	13.06	--	4.56	--	8.50
	6/28/2010	15.30	13.06	--	4.93	--	8.13
	7/21/2010	15.30	13.06	--	4.76	--	8.30
	8/9/2010	15.30	13.06	--	5.08	--	7.98
	9/7/2010	15.30	13.06	--	5.27	--	7.79
	10/12/2010	15.30	13.06	--	4.32	--	8.74
	11/9/2010	15.30	13.06	--	5.07	--	7.99
	12/8/2010	15.30	13.06	7.90	7.91	0.01	5.15
	1/5/2011	15.30	13.06	--	4.56	--	8.50
	2/4/2011	Could Not Locate Due To Heavy Snow					
	3/1/2011	15.30	13.06	--	4.34	--	8.72
	4/14/2011	15.30	13.06	--	4.28	--	8.78
	5/10/2011	15.30	13.06	--	4.53	--	8.53
	6/2/2011	15.30	13.06	--	4.35	--	8.71
	7/6/2011	10.17	9.10	--	4.56	--	4.54
	8/4/2011	10.17	9.10	2.57	2.61	0.04	6.49
	9/19/2011	10.17	9.10	--	3.19	--	5.91
	10/7/2011	10.17	*13.06	--	4.48	--	8.58
	11/1/2011	10.17	13.06	--	3.99	--	9.07
	12/14/2011	10.17	13.06	SHEEN	4.52	--	8.54
TF-1	9/12/2003	10.07	10.82	2.98	3.05	0.07	7.89
	10/8/2003	10.07	10.82	3.92	3.98	0.06	6.95
	11/6/2003	10.07	10.82	3.60	3.66	0.06	7.27
	12/3/2003	10.07	10.82	3.67	3.72	0.05	7.19
	1/14/2004	10.07	10.82	3.68	3.74	0.06	7.19
	2/9/2004	10.07	10.82	3.73	3.81	0.08	7.15
	3/10/2004	10.07	10.82	--	2.57	--	8.25
	4/14/2004	10.07	10.82	--	2.65	--	8.17
	5/11/2004	10.07	10.82	--	2.61	--	8.21
	6/9/2004	10.07	10.82	--	2.66	--	8.16
	7/14/2004	10.07	10.82	--	2.51	--	8.31
	8/4/2004	10.07	10.82	--	2.43	--	8.39
	9/8/2004	10.07	10.82	--	2.47	--	8.35
	10/15/2004	10.07	10.82	--	2.51	--	8.31
	11/10/2004	10.07	10.82	--	2.58	--	8.24
	12/8/2004	10.07	10.82	--	2.61	--	8.21
	1/12/2005	10.07	10.82	--	2.54	--	8.28
	2/9/2005	10.07	10.82	--	2.58	--	8.24
	3/9/2005	10.07	10.82	--	2.56	--	8.26
	4/13/2005	10.07	10.82	--	2.61	--	8.21

Table 2
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GROUND WATER GAUGING DATA							
Well I.D.	**Date**	**DTB from TOC (ft)**	**TOC Elevation (ft)**	**Depth to LNAPL (ft)**	**Depth to Water (ft)**	**LNAPL Thickness (ft)**	**Water Elevation (ft)**
	5/11/2005	10.07	10.82	--	2.57	--	8.25
	6/8/2005	10.07	10.82	--	2.53	--	8.29
	7/14/2005	10.07	10.82	--	2.78	--	8.04
	8/3/2005	10.07	10.82	--	2.71	--	8.11
	8/11/2005	10.07	10.82	2.87	3.02	0.15	8.06
	9/7/2005	10.07	10.82	--	2.63	--	8.19
	11/10/2005	10.07	10.82	2.51	2.96	0.45	8.65
	12/13/2005	10.07	10.82	2.74	2.93	0.19	8.22
	1/11/2006	10.07	10.82	--	2.61	--	8.21
	2/14/2006	10.07	10.82	--	2.66	--	8.16
	3/1/2006	10.07	10.82	--	2.62	--	8.20
	4/5/2006	10.07	10.82	--	2.56	--	8.26
	5/3/2006	10.07	10.82	--	2.59	--	8.23
	6/2/2006	10.07	10.82	--	2.64	--	8.18
	7/5/2006	10.07	10.82	--	2.49	--	8.33
	8/8/2006	10.07	10.82	--	2.61	--	8.21
	9/13/2006	10.07	10.82	--	2.54	--	8.28
	1/30/2007	10.07	10.82	--	2.93	--	7.89
	2/7/2007	10.07	10.82	--	2.90	--	7.92
	3/2/2007	10.07	10.82	1.04	1.08	0.04	9.81
	4/6/2007	10.07	10.82	--	2.43	--	8.39
	5/4/2007	10.07	10.82	2.56	2.58	0.02	8.28
	6/1/2007	10.07	10.82	2.81	2.86	0.05	8.05
	7/6/2007	10.07	10.82	--	2.12	--	8.70
	8/3/2007	10.07	10.82	--	2.66	--	8.16
	9/6/2007	10.07	10.82	--	2.90	--	7.92
	10/5/2007	10.07	10.82	--	3.21	--	7.61
	11/2/2007	10.07	10.82	--	2.86	--	7.96
	12/6/2007	10.07	10.82	--	2.90	--	7.92
	1/4/2008	10.07	10.82	--	2.77	--	8.05
	2/8/2008	10.07	10.82	--	2.69	--	8.13
	3/7/2008	10.07	10.82	--	2.58	--	8.24
	4/4/2008	10.07	10.82	--	1.94	--	8.88
	5/2/2008	10.07	10.82	--	2.73	--	8.09
TF-1	6/6/2008	10.07	10.82	--	2.44	--	8.38
	7/7/2008	10.07	10.82	--	2.62	--	8.20
	8/6/2008	10.07	10.82	--	2.43	--	8.39
	9/5/2008	10.07	10.82	--	3.42	--	7.40
	10/6/2008	10.07	10.82	--	2.54	--	8.28
	11/5/2008	10.07	10.82	--	2.88	--	7.94
	12/5/2008	10.07	10.82	--	2.83	--	7.99
	1/9/2009	10.07	10.82	--	2.61	--	8.21
	2/3/2009	10.07	10.82	--	2.52	--	8.30
	3/3/2009	10.07	10.82	--	2.15	--	8.67
	4/22/2009	10.07	10.82	--	2.12	--	8.70
	5/19/2009	10.07	10.82	--	2.61	--	8.21
	6/11/2009	10.07	10.82	--	2.32	--	8.50
	7/10/2009	10.07	10.82	--	2.54	--	8.28
	8/14/2009	10.07	10.82	--	2.59	--	8.23
	8/31/2009	10.07	10.82	--	2.45	--	8.37
	9/18/2009	10.07	10.82	--	2.69	--	8.13
	8/9/2010	10.07	10.82	--	3.11	--	7.71
	9/7/2010	10.07	10.82	--	3.36	--	7.46
	10/12/2010	10.07	10.82	2.35	2.36	--	8.46
	11/9/2010	10.07	10.82	3.05	3.06	--	7.76
	12/8/2010	10.07	10.82	3.25	3.26	--	7.56
	1/5/2011	10.07	10.82	--	2.59	--	8.23
	2/4/2011	Could Not Locate Due To Heavy Snow			NM	NM	NM
	3/1/2011	10.07	10.82	--	1.99	--	8.83
	4/14/2011	10.07	10.82	2.39	2.40	0.01	8.42
	5/10/2011	10.07	10.82	2.75	2.79	0.04	8.03
	6/2/2011	10.07	10.82	2.55	2.65	0.10	8.17
	7/6/2011	10.07	10.82	2.68	2.69	0.01	8.13
	8/4/2011	10.07	10.82	2.89	2.90	0.01	7.92
	9/19/2011	10.07	10.82	5.62	5.63	0.01	5.19
	10/7/2011	10.07	10.82	SHEEN	2.51	--	8.31
	11/1/2011	10.07	10.82	SHEEN	1.96	--	8.86
	12/14/2011	10.07	10.82	2.58	2.59	0.01	8.24

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Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	**Date**	**DTB from TOC (ft)**	**TOC Elevation (ft)**	**Depth to LNAPL (ft)**	**Depth to Water (ft)**	**LNAPL Thickness (ft)**	**Water Elevation (ft)**
TF-2	11/25/2009	11.80	10.13	1.85	3.15	1.30	6.98
	12/14/2009	11.80	10.13	1.78	2.79	1.01	7.34
	1/11/2010	11.80	10.13	2.22	3.65	1.43	6.48
	2/12/2010	11.80	10.13	1.78	2.46	0.68	7.67
	3/12/2010	11.80	10.13	1.72	2.36	0.64	7.77
	4/1/2010	11.80	10.13	0.89	2.17	1.28	7.96
	5/14/2010	11.80	10.13	1.04	2.17	1.13	7.96
	6/28/2010	11.80	10.13	1.59	2.38	0.79	7.75
	7/21/2010	11.80	10.13	2.11	2.56	0.45	7.57
	8/9/2010	11.80	10.13	2.50	3.58	1.08	6.55
	9/7/2010	11.80	10.13	2.10	3.34	1.24	6.79
	10/12/2010	11.80	10.13	1.74	3.20	1.46	6.93
	11/9/2010	11.80	10.13	2.49	3.50	1.01	6.63
	12/8/2010	11.80	10.13	2.80	3.65	0.85	6.48
	1/5/2011	11.80	10.13	2.11	3.20	1.09	6.93
	2/4/2011	Could Not Locate Due To Heavy Snow			NM	NM	NM
	3/1/2011	11.80	10.13	1.61	1.94	0.33	8.19
	4/14/2011	11.80	10.13	1.78	2.52	0.74	7.61
	5/10/2011	11.80	10.13	2.09	2.79	0.70	7.34
	6/2/2011	11.80	10.13	1.85	1.99	0.14	8.14
	7/6/2011	11.80	10.13	6.01	6.04	0.03	4.09
	8/4/2011	11.80	10.13	--	6.08	--	4.05
	9/19/2011	11.80	10.13	5.62	5.63	0.01	4.50
	10/7/2011	11.80	10.13	6.06	6.07	0.01	4.07
	11/1/2011	11.80	10.13	5.50	5.52	0.02	4.63
	12/14/2011	11.80	10.13	1.60	1.95	0.35	8.44
TM-6	4/23/1999	19.80	17.68	6.13	6.22	0.09	11.46
	5/21/1999	19.80	17.68	6.56	6.68	0.12	11.00
	6/23/1999	19.80	17.68	6.65	6.76	0.11	10.92
	7/23/1999	19.80	17.68	7.15	7.35	0.20	10.33
	8/30/1999	19.80	17.68	6.37	6.68	0.31	11.00
	9/29/1999	19.80	17.68	6.42	6.45	0.03	11.23
	10/25/1999	19.80	17.68	6.87	7.25	0.38	10.43
	11/23/1999	19.80	17.68	7.45	7.80	0.35	9.88
	12/23/1999	19.80	17.68	6.62	6.99	0.37	10.69
	3/16/2000	19.80	17.68	7.53	7.99	0.46	9.69
	7/31/2000	19.80	17.68	8.20	8.35	0.15	9.33
	10/30/2000	19.80	17.68	7.43	7.89	0.46	9.79
	1/3/2001	19.80	17.68	7.35	7.68	0.33	10.00
	4/18/2001	19.80	17.68	6.22	6.52	0.30	11.16
	7/23/2001	19.80	17.68	7.65	7.80	0.15	9.88
	10/8/2001	19.80	17.68	8.07	8.25	0.18	9.43
	11/7/2001	19.80	17.68	--	8.28	--	9.40
	12/5/2001	19.80	17.68	7.73	8.30	0.57	9.38
	1/9/2002	19.80	17.68	7.09	7.33	0.24	10.35
	2/6/2002	19.80	17.68	7.27	7.68	0.41	10.00
	3/6/2002	19.80	17.68	7.22	7.33	0.11	10.35
	4/3/2002	19.80	17.68	6.54	6.89	0.35	10.79
	5/8/2002	19.80	17.68	6.68	6.79	0.11	10.89
	6/5/2002	19.80	17.68	6.71	6.73	0.02	10.95
	7/10/2002	19.80	17.68	6.68	6.76	0.08	10.92
	8/7/2002	19.80	17.68	6.73	6.80	0.07	10.88
	9/11/2002	19.80	17.68	Sheen	6.33	--	11.35
	10/9/2002	19.80	17.68	7.03	7.08	0.05	10.60
	11/6/2002	19.80	17.68	6.13	6.17	0.04	11.51
	12/4/2002	19.80	17.68	6.94	6.98	0.04	10.70
	1/8/2003	19.80	17.68	5.76	5.78	0.02	11.90
	2/5/2003	19.80	17.68	7.44	7.49	0.05	10.19
	3/5/2003	19.80	17.68	--	6.05	--	11.63
	5/22/2003	19.80	17.68	6.44	6.47	0.03	11.21
	6/11/2003	19.80	17.68	--	5.76	--	11.92
	7/9/2003	19.80	17.68	--	6.14	--	11.54
	8/14/2003	19.80	17.68	6.05	6.08	0.03	11.60
	9/12/2003	19.80	17.68	6.12	6.15	0.03	11.53
	10/8/2003	19.80	17.68	6.21	6.24	0.03	11.44
	11/6/2003	19.80	17.68	6.07	6.11	0.04	11.57
	12/3/2003	19.80	17.68	6.18	6.21	0.03	11.47
	1/14/2004	19.80	17.68	6.11	6.18	0.07	11.50
	2/9/2004	19.80	17.68	6.17	6.21	0.04	11.47
	3/10/2004	19.80	17.68	--	6.72	--	10.96
	4/14/2004	19.80	17.68	--	6.56	--	11.12

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
TM-6	5/11/2004	19.80	17.68	--	6.62	--	11.06
	6/9/2004	19.80	17.68	--	6.51	--	11.17
	7/14/2004	19.80	17.68	--	6.48	--	11.20
	8/4/2004	19.80	17.68	--	6.30	--	11.38
	9/8/2004	19.80	17.68	--	6.36	--	11.32
	10/15/2004	19.80	17.68	--	6.40	--	11.28
	11/10/2004	19.80	17.68	--	6.49	--	11.19
	12/8/2004	19.80	17.68	--	6.53	--	11.15
	1/12/2005	19.80	17.68	--	6.45	--	11.23
	2/9/2005	19.80	17.68	--	6.49	--	11.19
	3/9/2005	19.80	17.68	--	6.47	--	11.21
	4/13/2005	19.80	17.68	--	6.51	--	11.17
	5/11/2005	19.80	17.68	--	6.48	--	11.20
	6/8/2005	19.80	17.68	--	6.46	--	11.22
	7/14/2005	19.80	17.68	--	6.54	--	11.14
	8/3/2005	19.80	17.68	--	6.49	--	11.19
	8/11/2005	19.80	17.68	6.81	6.90	0.09	10.78
	9/7/2005	19.80	17.68	--	6.44	--	11.24
	11/10/2005	19.80	17.68	--	2.96	--	14.72
	12/12/2005	19.80	17.68	--	6.84	--	10.84
	1/11/2006	19.80	17.68	--	6.52	--	11.16
	2/14/2006	19.80	17.68	--	6.58	--	11.10
	3/1/2006	19.80	17.68	--	6.53	--	11.15
	4/5/2006	19.80	17.68	--	6.46	--	11.22
	5/3/2006	19.80	17.68	--	6.49	--	11.19
	6/2/2006	19.80	17.68	--	6.63	--	11.05
	7/5/2006	19.80	17.68	--	6.56	--	11.12
	8/8/2006	19.80	17.68	--	6.68	--	11.00
	9/13/2006	19.80	17.68	--	6.59	--	11.09
	1/30/2007	19.80	17.68	7.21	7.26	0.05	10.42
	2/7/2007	19.80	17.68	7.28	7.31	0.03	10.37
	3/2/2007	19.80	17.68	--	6.54	--	11.14
	4/6/2007	19.80	17.68	6.33	6.34	0.01	11.34
	5/4/2007	19.80	17.68	6.28	6.29	0.01	11.39
	6/1/2007	19.80	17.68	6.44	6.45	0.01	11.23
	7/6/2007	19.80	17.68	6.14	6.15	0.01	11.53
	8/3/2007	19.80	17.68	6.39	6.40	0.01	11.28
	9/6/2007	19.80	17.68	6.97	6.99	0.02	10.69
	10/5/2007	19.80	17.68	7.42	7.44	0.02	10.24
	11/2/2007	19.80	17.68	7.09	7.11	0.02	10.57
	12/6/2007	19.80	17.68	7.34	7.35	0.01	10.33
	1/4/2008	19.80	17.68	6.88	6.89	0.01	10.79
	2/8/2008	19.80	17.68	6.58	6.59	0.01	11.09
	3/7/2008	19.80	17.68	6.19	6.21	0.02	11.47
	4/4/2008	19.80	17.68	5.88	5.89	0.01	11.79
	5/2/2008	19.80	17.68	5.96	5.99	0.03	11.69
	6/6/2008	19.80	17.68	--	6.16	--	11.52
	7/7/2008	19.80	17.68	--	6.32	--	11.36
	8/6/2008	19.80	17.68	--	5.91	--	11.77
	9/5/2008	19.80	17.68	--	6.93	--	10.75
	10/6/2008	19.80	17.68	--	7.11	--	10.57
	11/5/2008	19.80	17.68	7.03	7.07	0.04	10.61
	12/5/2008	19.80	17.68	--	6.73	--	10.95
	1/9/2009	19.80	17.68	--	4.72	--	12.96
	2/3/2009	19.80	17.68	--	3.98	--	13.70
	3/3/2009	19.80	17.68	--	4.52	--	13.16
	4/22/2009	19.80	17.68	--	5.88	--	11.80
	5/19/2009	19.80	17.68	--	6.16	--	11.52
	6/11/2009	19.80	17.68	--	5.80	--	11.88
	7/10/2009	19.80	17.68	--	6.27	--	11.41
	8/14/2009	19.80	17.68	--	6.36	--	11.32
	9/23/2009	19.80	17.86	--	6.55	--	11.31
	10/28/2009	19.80	17.86	--	6.15	--	11.71
	11/25/2009	19.80	17.86	--	6.55	--	11.31
	12/14/2009	19.80	17.86	--	6.03	--	11.83
	1/11/2010	19.80	17.86	--	6.83	--	11.03
	2/12/2010	19.80	17.86	--	6.46	--	11.40
	3/12/2010	19.80	17.86	--	6.36	--	11.50
	4/1/2010	19.80	17.86	--	5.91	--	11.95
	5/14/2010	19.80	17.86	--	6.21	--	11.65
	6/28/2010	19.80	17.86	--	6.40	--	11.46
	7/21/2010	19.80	17.86	--	6.69	--	11.17
	8/9/2010	19.80	17.86	6.95	6.96	0.01	10.92

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
TM-6	9/7/2010	19.80	17.86	--	7.25	--	10.61
	10/12/2010	19.80	17.86	--	6.69	--	11.17
	11/9/2010	19.80	17.86	--	7.10	--	10.76
	12/8/2010	19.80	17.86	7.40	7.42	0.02	10.48
	1/5/2011	19.80	17.86	6.93	6.94	0.01	10.94
	2/4/2011	19.80	17.86	6.63	6.64	0.01	11.24
	3/1/2011	19.80	17.86	6.21	6.22	0.01	11.66
	4/14/2011	19.80	17.86	6.30	6.31	0.01	11.57
	5/10/2011	19.80	17.86	6.32	6.33	0.01	11.55
	6/2/2011	19.80	17.86	6.23	6.24	0.01	11.64
	7/6/2011	19.80	17.86	6.49	6.50	0.01	11.36
	8/4/2011	19.80	17.86	6.73	6.74	0.01	11.12
	9/19/2011	19.80	17.86	6.98	6.98	0.00	10.88
	10/7/2011	19.80	17.86	6.83	6.84	0.01	11.03
	11/1/2011	19.80	17.86	6.58	6.59	0.01	11.28
	12/14/2011	Could not gauge- Well Damaged					
TM-7	11/23/1999	21.40	17.03	8.20	8.21	0.01	8.82
	12/23/1999	21.40	17.03	8.28	8.38	0.10	8.65
	3/16/2000	21.40	17.03	7.13	7.68	0.55	9.35
	5/30/2000	21.40	17.03	6.35	7.11	0.76	9.92
	7/31/2000	21.40	17.03	6.20	6.45	0.25	10.58
	10/30/2000	21.40	17.03	8.22	8.34	0.12	8.69
	1/3/2001	21.40	17.03	8.15	8.20	0.05	8.83
	4/18/2001	21.40	17.03	7.69	7.84	0.15	9.19
	7/23/2001	21.40	17.03	6.27	6.74	0.47	10.29
	10/8/2001	21.40	17.03	6.72	7.31	0.59	9.72
	11/7/2001	21.40	17.03	--	7.34	--	9.69
	12/5/2001	21.40	17.03	--	8.38	--	8.65
	1/9/2002	21.40	17.03	--	8.25	--	8.78
	2/6/2002	21.40	17.03	--	8.15	--	8.88
	3/6/2002	21.40	17.03	--	8.34	--	8.69
	4/3/2002	21.40	17.03	--	8.59	--	8.44
	5/8/2002	21.40	17.03	--	8.64	--	8.39
	6/5/2002	21.40	17.03	--	7.95	--	9.08
	7/10/2002	21.40	17.03	--	7.84	--	9.19
	8/7/2002	21.40	17.03	--	8.01	--	9.02
	9/11/2002	21.40	17.03	8.37	8.41	0.04	8.62
	10/9/2002	21.40	17.03	Sheen	8.07	--	8.96
	11/6/2002	21.40	17.03	Sheen	7.44	--	9.59
	12/4/2002	21.40	17.03	Sheen	8.07	--	8.96
	1/8/2003	21.40	17.03	Sheen	7.01	--	10.02
	2/5/2003	21.40	17.03	--	8.14	--	8.89
	3/5/2003	21.40	17.03	Sheen	7.24	--	9.79
	5/22/2003	21.40	17.03	--	7.77	--	9.26
	6/11/2003	21.40	17.03	--	7.19	--	9.84
	7/9/2003	21.40	17.03	--	7.51	--	9.52
	8/14/2003	21.40	17.03	--	7.45	--	9.58
	9/12/2003	21.40	17.03	--	7.56	--	9.47
	10/8/2003	21.40	17.03	--	7.63	--	9.40
	11/6/2003	21.40	17.03	--	7.28	--	9.75
	12/3/2003	21.40	17.03	--	7.36	--	9.67
	1/14/2004	21.40	17.03	--	7.32	--	9.71
	2/9/2004	21.40	17.03	--	7.41	--	9.62
	3/10/2004	21.40	17.03	--	7.56	--	9.47
	4/14/2004	21.40	17.03	--	7.43	--	9.60
	5/11/2004	21.40	17.03	--	7.58	--	9.45
	6/9/2004	21.40	17.03	--	7.62	--	9.41
	7/14/2004	21.40	17.03	--	7.47	--	9.56
	8/4/2004	21.40	17.03	--	7.31	--	9.72
	9/8/2004	21.40	17.03	--	7.38	--	9.65
	10/15/2004	21.40	17.03	--	7.41	--	9.62
	11/10/2004	21.40	17.03	--	7.48	--	9.55
	12/8/2004	21.40	17.03	--	7.51	--	9.52
	1/12/2005	21.40	17.03	--	7.46	--	9.57
	2/9/2005	21.40	17.03	--	7.51	--	9.52
	3/9/2005	21.40	17.03	--	7.48	--	9.55
	4/13/2005	21.40	17.03	--	7.54	--	9.49
	5/11/2005	21.40	17.03	--	7.49	--	9.54
	6/8/2005	21.40	17.03	--	7.46	--	9.57
	7/14/2005	21.40	17.03	--	7.52	--	9.51
	8/3/2005	21.40	17.03	--	7.48	--	9.55
	8/11/2005	21.40	17.03	7.84	7.85	0.01	9.18

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
	9/7/2005	21.40	17.03	--	7.42	--	9.61
	11/10/2005	21.40	17.03	--	7.74	--	9.29
	12/13/2005	21.40	17.03	--	7.72	--	9.31
	1/11/2006	21.40	17.03	--	7.54	--	9.49
	2/14/2006	21.40	17.03	--	7.59	--	9.44
	3/1/2006	21.40	17.03	--	7.53	--	9.50
	4/5/2006	21.40	17.03	--	7.49	--	9.54
	5/3/2006	21.40	17.03	--	7.55	--	9.48
	6/2/2006	21.40	17.03	--	7.59	--	9.44
	7/5/2006	21.40	17.03	--	7.51	--	9.52
	8/8/2006	21.40	17.03	--	7.62	--	9.41
	9/13/2006	21.40	17.03	--	7.55	--	9.48
	1/30/2007	21.40	17.03	--	7.95	--	9.08
	2/7/2007	21.40	17.03	--	7.94	--	9.09
	3/2/2007	21.40	17.03	--	7.34	--	9.69
	4/6/2007	21.40	17.03	--	7.32	--	9.71
	5/4/2007	21.40	17.03	--	7.19	--	9.84
	6/1/2007	21.40	17.03	--	7.47	--	9.56
	7/6/2007	21.40	17.03	--	7.28	--	9.75
	8/3/2007	21.40	17.03	--	7.35	--	9.68
	9/6/2007	21.40	17.03	7.80	7.84	0.04	9.19
	10/5/2007	21.40	17.03	8.05	8.14	0.09	8.89
	11/2/2007	21.40	17.03	7.99	8.01	0.02	9.02
	12/6/2007	21.40	17.03	8.21	8.22	0.01	8.81
	1/4/2008	21.40	17.03	--	7.80	--	9.23
	2/8/2008	21.40	17.03	7.35	7.36	0.01	9.67
	3/7/2008	21.40	17.03	--	7.04	--	9.99
	4/4/2008	21.40	17.03	--	7.25	--	9.78
	5/2/2008	21.40	17.03	--	7.36	--	9.67
	6/6/2008	21.40	17.03	--	7.38	--	9.65
	7/7/2008	21.40	17.03	--	7.18	--	9.85
	8/6/2008	21.40	17.03	--	7.08	--	9.95
	9/5/2008	21.40	17.03	7.64	7.65	0.01	9.38
	10/6/2008	21.40	17.03	--	7.38	--	9.65
	11/5/2008	21.40	17.03	--	7.75	--	9.28
	12/5/2008	21.40	17.03	--	7.72	--	9.31
TM-7	1/9/2009	21.40	17.03	--	4.89	--	12.14
	2/3/2009	21.40	17.03	--	3.71	--	13.32
	3/3/2009	21.40	17.03	--	4.47	--	12.56
	4/22/2009	21.40	17.03	--	7.71	--	9.32
	5/19/2009	21.40	17.03	--	7.15	--	9.88
	6/11/2009	21.40	17.03	--	7.05	--	9.98
	7/10/2009	21.40	17.03	--	7.11	--	9.92
	8/14/2009	21.40	17.03	--	7.52	--	9.51
	9/23/2009	21.40	17.52	--	7.01	--	10.51
	10/28/2009	21.40	17.52	--	7.46	--	10.06
	11/25/2009	21.40	17.52	--	7.82	--	9.70
	12/14/2009	21.40	17.52	--	7.39	--	10.13
	1/11/2010	21.40	17.52	--	6.74	--	10.78
	2/12/2010	21.40	17.52	--	7.27	--	10.25
	3/12/2010	21.40	17.52	--	7.04	--	10.48
	4/1/2010	21.40	17.52	--	3.32	--	14.20
	5/14/2010	21.40	17.52	--	7.08	--	10.44
	6/28/2010	21.40	17.52	--	4.93	--	12.59
	7/21/2010	21.40	17.52	--	7.02	--	10.50
	8/9/2010	21.40	17.52	7.54	7.55	0.01	9.99
	9/7/2010	21.40	17.52	--	7.70	--	9.82
	10/12/2010	21.40	17.52	7.31	7.32	0.01	10.22
	11/9/2010	21.40	17.52	7.68	7.69	0.01	9.85
	12/8/2010	21.40	17.52	7.90	7.91	0.01	9.63
	1/5/2011	21.40	17.52	7.58	7.59	0.01	9.95
	2/4/2011	21.40	17.52	7.24	7.25	0.01	10.29
	3/1/2011	21.40	17.52	7.36	7.37	0.01	10.17
	4/14/2011	21.40	17.52	7.08	7.09	0.01	10.45
	5/10/2011	21.40	17.52	7.52	7.53	0.01	10.01
	6/2/2011	21.40	17.52	6.95	6.96	0.01	10.58
	7/6/2011	21.40	17.52	7.22	7.24	0.02	10.28
	8/4/2011	21.40	17.52	7.43	7.48	0.05	10.04
	9/19/2011	21.40	17.52	--	7.59	--	9.93
	10/7/2011	21.40	*17.03	--	7.89	--	9.14
	11/1/2011	21.40	17.03	7.19	7.20	0.01	9.84
	12/14/2011	21.40	17.03	--	7.37	--	9.66

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
TR-2	11/4/1998	21.30	14.62	4.88	7.41	2.53	11.64
	12/2/1998	21.30	14.62	5.93	6.64	0.71	9.22
	12/18/1998	21.30	14.62	6.26	6.38	0.12	8.45
	2/24/1999	21.30	14.62	--	5.35	--	9.27
	3/12/1999	21.30	14.62	5.02	5.63	0.61	10.06
	3/25/1999	21.30	14.62	4.66	6.01	1.35	10.97
	4/7/1999	21.30	14.62	4.61	6.44	1.83	11.38
	4/23/1999	21.30	14.62	NM	NM	NM	NM
	5/21/1999	21.30	14.62	5.19	6.31	1.12	10.27
	6/23/1999	21.30	14.62	5.07	6.79	1.72	10.84
	7/23/1999	21.30	14.62	--	5.21	--	9.41
	8/30/1999	21.30	14.62	5.43	8.58	3.15	11.55
	9/29/1999	21.30	14.62	6.45	7.05	0.60	8.62
	10/25/1999	21.30	14.62	5.50	5.70	0.20	9.27
	11/23/1999	21.30	14.62	5.75	5.88	0.13	8.97
	12/23/1999	21.30	14.62	5.18	5.48	0.30	9.67
	3/16/2000	21.30	14.62	4.20	6.91	2.71	12.45
	5/30/2000	21.30	14.62	4.39	5.28	0.89	10.90
	7/31/2000	21.30	14.62	3.37	4.74	1.37	12.28
	10/30/2000	21.30	14.62	5.66	5.69	0.03	8.98
	1/3/2001	21.30	14.62	5.77	6.39	0.62	9.32
	4/18/2001	21.30	14.62	6.32	6.82	0.50	8.68
	7/23/2001	21.30	14.62	4.12	7.44	3.32	12.99
	10/8/2001	21.30	14.62	5.65	6.06	0.41	9.28
	11/7/2001	21.30	14.62	6.03	6.05	0.02	8.61
	12/5/2001	21.30	14.62	6.30	6.32	0.02	8.34
	1/2/2002	21.30	14.62	6.39	6.50	0.11	8.31
	2/6/2002	21.30	14.62	6.42	6.49	0.07	8.25
	3/6/2002	21.30	14.62	6.38	6.99	0.61	8.70
	4/3/2002	21.30	14.62	6.17	6.94	0.77	9.03
	5/8/2002	21.30	14.62	6.13	6.83	0.70	9.02
	6/5/2002	21.30	14.62	4.21	4.67	0.46	10.76
	7/10/2002	21.30	14.70	6.31	6.69	0.38	8.68
	8/7/2002	21.30	14.70	6.23	6.91	0.68	8.98
	9/11/2002	21.30	14.70	6.41	6.83	0.42	8.61
	10/9/2002	21.30	14.70	6.13	6.51	0.38	8.86
	11/6/2002	21.30	14.70	Sheen	6.14	--	8.56
	12/4/2002	21.30	14.70	4.83	4.97	0.14	9.98
	1/8/2003	21.30	14.70	6.28	6.40	0.12	8.51
	2/5/2003	21.30	14.70	5.67	5.73	0.06	9.08
	3/5/2003	21.30	14.70	4.98	5.02	0.04	9.75
	5/22/2003	21.30	14.70	Sheen	6.02	--	8.68
	6/11/2003	21.30	14.70	5.73	5.76	0.03	8.99
	7/9/2003	21.30	14.70	Sheen	5.56	--	9.14
	8/14/2003	21.30	14.70	--	5.31	--	9.39
	9/12/2003	21.30	14.70	--	5.42	--	9.28
	10/8/2003	21.30	14.70	--	5.48	--	9.22
	11/6/2003	21.30	14.70	--	5.71	--	8.99
	12/3/2003	21.30	14.70	--	5.56	--	9.14
	1/14/2004	21.30	14.70	--	5.68	--	9.02
	2/9/2004	21.30	14.70	--	5.53	--	9.17
	3/10/2004	21.30	14.70	--	5.57	--	9.13
	4/14/2004	21.30	14.70	--	5.61	--	9.09
	5/11/2004	21.30	14.70	--	5.63	--	9.07
	6/9/2004	21.30	14.70	--	5.59	--	9.11
	7/14/2004	21.30	14.70	--	5.50	--	9.20
	8/4/2004	21.30	14.70	--	5.40	--	9.30
	9/8/2004	21.30	14.70	--	5.44	--	9.26
	10/15/2004	21.30	14.70	--	5.49	--	9.21
	11/10/2004	21.30	14.70	--	5.30	--	9.40
	12/8/2004	21.30	14.70	--	5.34	--	9.36
	1/12/2005	21.30	14.70	--	5.31	--	9.39
	2/9/2005	21.30	14.70	--	5.39	--	9.31
	3/9/2005	21.30	14.70	--	5.34	--	9.36
	4/13/2005	21.30	14.70	--	5.41	--	9.29
	5/11/2005	21.30	14.70	--	5.38	--	9.32
	6/8/2005	21.30	14.70	--	5.36	--	9.34
	7/14/2005	21.30	14.70	--	5.39	--	9.31
	8/3/2005	21.30	14.70	--	5.35	--	9.35
	8/11/2005	21.30	14.70	--	5.23	--	9.47
	9/7/2005	21.30	14.70	--	5.42	--	9.28
	11/10/2005	21.30	14.70	--	5.18	--	9.52
	12/13/2005	21.30	14.70	--	5.16	--	9.54

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

GROUND WATER GAUGING DATA							
Well I.D.	Date	DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)
TR-2	1/11/2006	21.30	14.70	--	5.36	--	9.34
	2/14/2006	21.30	14.70	--	5.42	--	9.28
	3/1/2006	21.30	14.70	--	5.34	--	9.36
	4/5/2006	21.30	14.70	--	5.31	--	9.39
	5/3/2006	21.30	14.70	--	5.36	--	9.34
	6/2/2006	21.30	14.70	--	5.39	--	9.31
	7/5/2006	21.30	14.70	--	5.32	--	9.38
	8/8/2006	21.30	14.70	--	5.41	--	9.29
	9/13/2006	21.30	14.70	--	5.36	--	9.34
	1/30/2007	21.30	14.70	--	4.71	--	9.99
	2/7/2007	21.30	14.70	--	4.68	--	10.02
	3/2/2007	21.30	14.70	1.04	1.08	0.04	13.69
	4/6/2007	21.30	14.70	3.50	3.60	0.10	11.28
	5/4/2007	21.30	14.70	3.80	3.86	0.06	10.95
	6/1/2007	21.30	14.70	3.90	4.04	0.14	10.91
	7/6/2007	21.30	14.70	6.22	6.38	0.16	8.60
	8/3/2007	21.30	14.70	4.31	4.33	0.02	10.41
	9/6/2007	21.30	14.70	4.78	4.86	0.08	9.98
	10/5/2007	21.30	14.70	5.16	5.39	0.23	9.71
	11/2/2007	21.30	14.70	5.30	5.65	0.35	9.66
	12/6/2007	21.30	14.70	5.48	5.61	0.13	9.32
	1/4/2008	21.30	14.70	5.19	5.30	0.11	9.59
	2/8/2008	21.30	14.70	4.26	4.29	0.03	10.46
	3/7/2008	21.30	14.70	3.62	3.71	0.09	11.15
	4/4/2008	21.30	14.70	NM	NM	NM	NM
	5/2/2008	21.30	14.70	4.29	4.31	0.02	10.39
	6/6/2008	21.30	14.70	--	3.54	--	11.16
	7/7/2008	21.30	14.70	--	2.99	--	11.71
	8/6/2008	21.30	14.70	--	2.87	--	11.83
	9/5/2008	21.30	14.70	--	3.77	--	10.93
	10/6/2008	21.30	14.70	4.65	4.81	0.16	9.89
	Well Abandoned						
TR-2R	11/5/2008	20.20	14.66	--	5.38	--	9.28
	12/5/2008	20.20	14.66	--	5.27	--	9.39
	1/9/2009	20.20	14.66	--	1.76	--	12.90
	2/3/2009	20.20	14.66	--	2.13	--	12.53
	3/3/2009	20.20	14.66	--	3.08	--	11.58
	4/22/2009	20.20	14.66	--	4.16	--	10.50
	5/19/2009	20.20	14.66	--	4.29	--	10.37
	6/11/2009	20.20	14.66	--	4.19	--	10.47
	7/10/2009	Could Not Locate			NM	NM	NM
	8/14/2009	Could Not Locate			NM	NM	NM
	9/23/2009	20.20	14.66	4.53	4.55	0.02	10.11
	10/28/2009	20.20	14.66	--	4.01	--	10.65
	11/25/2009	20.20	14.66	--	4.48	--	10.18
	12/14/2009	20.20	14.66	--	4.34	--	10.32
	1/11/2010	20.20	14.66	--	5.41	--	9.25
	2/12/2010	Could Not Locate Due To Heavy Snow			NM	NM	NM
	3/12/2010	20.20	14.66	--	4.42	--	10.24
	4/1/2010	20.20	14.66	--	3.21	--	11.45
	5/14/2010	20.20	14.66	--	3.75	--	10.91
	6/28/2010	20.20	14.66	--	3.98	--	10.68
	7/21/2010	20.20	14.66	--	3.54	--	11.12
	8/9/2010	20.20	14.66	4.76	5.03	0.27	9.63
	9/7/2010	20.20	14.66	NP	5.04	--	9.62
	10/12/2010	20.20	14.66	5.10	5.41	--	9.25
	11/9/2010	20.20	14.66	5.42	5.66	--	9.00
	12/8/2010	20.20	14.66	4.97	5.07	--	9.59
	1/5/2011	Could Not Locate Due To Heavy Snow			NM	NM	NM
	2/4/2011	20.20	14.66	4.80	4.92	0.12	9.74
	3/1/2011	20.20	14.66	4.58	4.69	0.11	9.97
	4/14/2011	20.20	14.66	4.11	4.20	0.09	10.46
	5/10/2011	20.20	14.66	3.60	3.72	0.12	10.94
	6/2/2011	20.20	14.66	3.17	3.25	0.08	11.41
	7/6/2011	20.20	14.66	4.45	4.51	0.06	10.15
	8/4/2011	20.20	14.66	--	2.56	--	12.10
	9/19/2011	20.20	14.66	--	4.13	--	10.53
	10/7/2011	20.20	14.66	4.53	4.60	0.07	10.11
	11/1/2011	20.20	14.66	4.02	4.03	0.01	10.64
	12/14/2011	20.20	14.66	4.32	4.34	0.02	10.34

Table 2
Monthly Groundwater Gauging Data Summary Table
Hess- Corporation - Port Reading Refinery
750 Cliff Road
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GROUND WATER GAUGING DATA							
Well I.D.	**Date**	**DTB from TOC (ft)**	**TOC Elevation (ft)**	**Depth to LNAPL (ft)**	**Depth to Water (ft)**	**LNAPL Thickness (ft)**	**Water Elevation (ft)**
TR-4	10/28/2009	20.20	14.71	--	4.33	--	10.38
	11/25/2009	20.20	14.71	--	5.01	--	9.70
	12/14/2009	20.20	14.71	--	4.76	--	9.95
	1/11/2010	Could Not Open Due To Ice			NM	NM	NM
	2/12/2010	Could Not Locate Due To Heavy Snow			NM	NM	NM
	3/12/2010	20.20	14.71	--	3.63	--	11.08
	4/1/2010	20.20	14.71	--	4.05	--	10.66
	5/14/2010	20.20	14.71	--	4.20	--	10.51
	6/28/2010	20.20	14.71	--	4.37	--	10.34
	7/21/2010	20.20	14.71	--	4.73	--	9.98
	8/9/2010	Could Not Gauge Due To Area Flooding			NM	NM	NM
	9/7/2010	20.20	14.71	--	5.00	--	9.71
	10/12/2010	20.20	14.71	--	5.21	--	9.50
	11/9/2010	20.20	14.71	--	5.15	--	9.56
	12/8/2010	20.20	14.71	--	4.89	--	9.82
	1/5/2011	Could Not Locate Due To Heavy Snow			NM	NM	NM
	2/4/2011	Could Not Locate Due To Heavy Snow			NM	NM	NM
	3/1/2011	Could Not Access Due To Flooding			NM	NM	NM
	4/14/2011	Could Not Access Due To Flooding			NM	NM	NM
	5/10/2011	20.20	14.71	4.01	4.02	0.01	10.69
	6/2/2011	20.20	14.71	3.60	3.61	0.01	11.10
	7/6/2011	20.20	14.71	--	4.00	--	10.71
	8/4/2011	Could Not Gauge Due To Area Flooding			NM	NM	NM
	9/19/2011	Could Not Gauge Due To Area Flooding			NM	NM	NM
	10/7/2011	20.20	14.71	--	4.40	--	10.31
	11/1/2011	20.20	14.71	--	4.74	--	9.97
	12/14/2011	20.20	14.71	--	4.61	--	10.10

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Gauging Data					Metals																						
Sample ID	Date	TOC Elevation (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
NJDEP GWQS		-	-	-	-	-	200	6	3	6000	NA	4	NA	70	100	1,300	300	5	NA	50	2	100	NA	40	40	50,000	2	60	2,000
AB-1	5/13/02	13.85	5.68	NP	NP	8.17	2,050	<5.0	7.7	<200	NA	NA	78,300	<10	NA	<25	6,430	3.9	25,100	205	<0.20	NA	115,000	<5.0	NA	321,000	NA	<50	30.2
	09/01/09	13.85	5.25	NP	NP	8.6	11,700	<6.0	14.6	<200	<1.0	<3.0	22,300	11.9	<50	34	5,830	21	<5000	24	<0.20	<10	17,500	<10	<10	15,400	<2.0	<50	61.8
	09/08/10	13.85	8.51	NP	NP	5.34	43,500	<12	70.2	<400	2.8	<6.0	45,000	98.4	<100	92.4	30,600	66	13,800	119	<0.20	51.2	39,000	<20	<20	31,600	<4.0	103	248
	09/20/11	13.85	5.35	NP	NP	8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AB-2	5/13/02	12.03	5.3	NP	NP	6.73	4,850	<5.0	8.4	<200	NA	NA	61,100	<10	NA	<25	16,900	11.7	58,900	725	<0.20	NA	21,000	<5.0	NA	431,000	NA	<50	50.8
AB-2R	09/01/09	10.81	4.04	NP	NP	6.77	921	<6.0	14.3	226	<1.0	<3.0	25,200	<10	<50	21.3	30,600	4.5	19,700	141	<0.20	<10	13,700	<10	<10	292,000	<2.0	<50	25.5
	09/08/10	10.81	5.46	NP	NP	5.35	5,990	<6.0	5.9	<200	<1.0	<3.0	11,800	11.7	<50	30.8	24,400	11.2	10,700	454	<0.20	<10	11,600	<10	<10	115,000	<2.0	<50	29.9
	09/20/11	10.81	4.10	NP	NP	6.71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AB-3	5/13/02	7.09	7.35	NP	NP	-0.26	7,490	<5.0	20.3	<200	NA	NA	43,300	16.9	NA	<25	100,000	10.7	57,700	479	<0.20	NA	26,900	<5.0	NA	340,000	NA	<50	35.8
	09/01/09	7.09	3.63	NP	NP	3.46	561	8.5	32.3	216	<1.0	4.7	109,000	<10	<50	10.7	114,000	4.4	183,000	364	<0.20	<10	81,100	<10	<10	1,070,000	<4.0	<50	<20
	09/08/10	7.09	5.77	NP	NP	1.32	303	<6.0	5.1	<200	<1.0	<3.0	122,000	<10	<50	17.5	81,700	<3.0	72,000	3,590	<0.20	<10	154,000	<10	<10	1,150,000	<2.0	<50	37.5
	09/20/11	7.09	4.49	NP	NP	2.60	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AB-4	5/13/02	14.24	6.86	NP	NP	7.38	7,360	<5.0	17	597	NA	NA	52,700	10.3	NA	<25	16,200	10.2	98,100	212	0.2	NA	25,400	<5.0	NA	409,000	NA	<50	26.2
	09/01/09	14.24	3.71	NP	NP	10.53	5,200	<6.0	<3.0	<200	<1.0	<3.0	85,900	<10	<50	10.4	2,370	8.3	6,600	362	<0.20	115	68,000	<10	<10	296,000	<2.0	<50	528
	09/08/10	Well Dry					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	14.24	3.92	NP	NP	10.32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AB-5	5/13/02	13.24	5.58	NP	NP	7.66	2,880	<5.0	10.4	<200	NA	NA	146,000	<10	NA	<25	39,700	4.9	49,800	879	<0.20	NA	188,000	<5.0	NA	822,000	NA	<50	28.2
	09/01/09	13.24	4.72	NP	NP	8.52	283	<6.0	<3.0	<200	<1.0	<3.0	23,800	<10	<50	<10	4,600	4.1	<5,000	39	<0.20	<10	<10,000	<10	<10	<10000	<2.0	<50	<20
	09/08/10	13.24	8.03	NP	NP	5.21	1,300	<6.0	8.2	<200	<1.0	<3.0	34,800	<10	<50	53.9	7,540	6	<5,000	36	<0.20	<10	<10,000	<10	<10	12,700	<2.0	<50	26.6
	09/20/11	13.24	4.42	NP	NP	8.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-1	5/13/02	18.25	6	NP	NP	12.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	14,300	NA	NA	2,760	NA	NA	NA	NA	NA	81,400	NA	NA	NA
	08/31/09	18.25	3.71	NP	NP	14.54	<200	<6.0	<3.0	<200	<1.0	<3.0	75,600	<10	<50	35.6	1,390	<3.0	6,060	1,710	<0.20	14.1	<10,000	<10	<10	156,000	<2.0	<50	43.3
	09/10/10	18.25	5.79	NP	NP	12.46	504	<6.0	<3.0	<200	<1.0	<3.0	44,400	<10	<50	50.5	1,260	<3.0	5,720	1,210	<0.20	<10	<10,000	<10	<10	145,000	<2.0	<50	<20
	09/19/11	18.25	4.74	NP	NP	13.51	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-2	5/13/02	18.95	6.85	NP	NP	12.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	21,600	NA	NA	10,300	NA	NA	NA	NA	NA	91,300	NA	NA	NA
	08/31/09	18.95	6.75	NP	NP	12.2	445	<6.0	8.6	296	<1.0	<3.0	292,000	<10	<50	39.2	22,100	<3.0	65,300	14,100	<0.20	24	<10,000	<10	<10	239,000	<2.0	<50	<20
	09/07/10	18.95	7.76	NP	NP	11.19	<200	<6.0	6.8	259	<1.0	<3.0	322,000	<10	<50	<10	15,000	<3.0	78,100	16,700	<0.20	20.4	<10,000	<20	<10	304,000	<4.0	<50	<20
	09/19/11	18.95	6.54	NP	NP	12.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-3	5/13/02	22.00	8.60	NP	NP	13.40	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,370	NA	NA	3,470	NA	NA	NA	NA	NA	97,200	NA	NA	NA
	08/31/09	22.00	9.35	NP	NP	12.65	<200	<6.0	<3.0	<200	<1.0	<3.0	41,200	<10	<50	<10	<100	<3.0	17,000	24	<0.20	<10	<10,000	<10	<10	44,000	<2.0	<50	<20
	09/08/10	22.00	10.40	NP	NP	11.60	2,410	<6.0	<3.0	<200	<1.0	<3.0	30,600	<10	<50	26.2	2,800	<3.0	16,400	373	<0.20	<10	<10,000	<10	<10	42,900	<2.0	<50	<20
	09/21/11	22.00	9.61	NP	NP	12.39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-4	5/13/02	17.55	7.14	NP	NP	10.41	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9,510	NA	NA	6,280	NA	NA	NA	NA	NA	270,000	NA	NA	NA
	08/31/09	17.55	5.03	NP	NP	12.52	394	<6.0	<3.0	<200	<1.0	<3.0	39,800	<10	<50	42.8	6,540	5.1	12,400	547	<0.20	<10	<10,000	<10	<10	245,000	<2.0	<50	27.5
	09/07/10	17.55	6.97	NP	NP	10.58	772	<6.0	19.2	231	<1.0	<3.0	66,800	<10	<50	54.5	25,100	7.2	27,600	2,430	<0.20	<10	<10,000	<10	<10	369,000	<2.0	<50	22.5
	09/19/11	17.55	5.79	NP	NP	11.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-5	5/13/02	17.73	6.71	NP	NP	11.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	16,900	NA	NA	3,250	NA	NA	NA	NA	NA	48,000	NA	NA	NA
	08/31/09	17.73	5.18	NP	NP	12.55	1,530	<6.0	<3.0	263	<1.0	<3.0	103,000	<10	<50	23.3	2,010	<3.0	36,700	3,220	<0.20	11.3	<10,000	<10	<10	190,000	<2.0	<50	<20
	09/07/10	17.73	6.85	NP	NP	10.88	363	<6.0	<3.0	292	<1.0	<3.0	102,000	<10	<50	35.2	525	<3.0	35,000	3,830	<0.20	12.7	<10,000	<10	<10	126,000	<2.0	<50	<20
	09/19/11	17.73	5.54	NP	NP	12.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AD-6	5/13/02	19.18	5.51	NP	NP	13.67	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,580	NA	NA	4,810	NA	NA	NA	NA	NA	88,200	NA	NA	NA
	08/31/09	19.18	6.38	NP	NP	12.8	2,310	<6.0	<3.0	<200	<1.0	5	31,700	<10	<50	39.7	3,510	5.2	<5,000	142	<0.20	<10	<10,000	<10	<10	20,600	<2.0	<50	40.5
	09/07/10	19.18	7.65	NP	NP	11.53	746	<6.0	<3.0	<200	<1.0	3.6	77,500	<10	<50	13.9	1,280	<3.0	8,450	52.2	<0.20	<10	<10,000	<10	<10	30,000	<2.0	<50	42.4
	09/19/11	19.18	6.82	NP	NP	12.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LPG-1	5/13/02	13.74	5.02	NP	NP	8.72	15,100	<5.0	13.2	<200	NA	NA	84,500	16.5	NA	49.7	44,500	22.3	47,600	8,380	<0.20	NA	7,090	<5.0	NA	112,000	NA	<50	87.7
	09/01/09	13.74	2.90	NP	NP	10.84	652	<6.0	<3.0	<200	<1.0	<3.0	<5000	<10	<50	26.9	1,920	3.6	<5,000	440	<0.20	<10	<10,000	<10	<10	19,900	<2.0	<50	41.6
	09/08/10	13.74	5.35	NP	NP	8.39	2,340	<6.0	20.5	<200	<1.0	<3.0	6,230	<10	<50	36.7	19,100	18.4	<5,000	757	<0.20	<10	<10,000	<10	<10	21,800	<2.0	<50	26.4
	09/21/11	13.74	4.75	NP	NP	8.99	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LPG-2	5/13/02	9.30	3.50	NP	NP	5.80	5,490	<5.0	5.8	<200	NA	NA	28,600	11.9	NA	<25	40,500	14.8	17,700	8,550	<0.20	NA	16,600	<5.0	NA	141,000	NA	<50	54.4
	09/01/09	9.30	3.02	NP	NP	6.28	<200	<6.0	<3.0	<200	<1.0	<3.0	16,700	<10	<50	22	15,500	<3.0	9,200	382	<0.20	<10	10,300	<10	<10	72,000	<2.0	<50	29.3
	09/08/10	9.30	3.13	NP	NP	6.17	278	<6.0	5	<200	<1.0	<3.0	17,800	<10	<50	21.8	41,400	<3.0	9,690	459	<0.20	<10	10,600	<10	<10	50,000	<2.0	<50	<20
	09/21/11	9.30	2.97	NP	NP	6.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds																													
Sample ID	Date	Acetone	Benzene	2-Butanone (MEK)	Carbon disulfide	Chlorobenzene	Chloroethane	Chloroform	Cyclohexane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Dichlorodifluoromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,2-Dichloropropane	1,4-Dioxane	Ethylbenzene	Freon 113	Isopropylbenzene	Methylcyclohexane	Methyl Tert Butyl Ether (MTBE)	Methylene chloride	Tert Butyl Alcohol	Tetrachloroethene	Toluene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene
NJDEP GWQS		**6,000**	**1**	**300**	**700**	**50**	**5**	**70**	**NA**	**600**	**600**	**75**	**1,000**	**50**	**2**	**1**	**70**	**100**	**1**	**10**	**700**	**NA**	**NA**	**NA**	**70**	**3**	**100**	**1**	**600**	**NA**	**9**
AB-1	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	44.8	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-2	5/13/02	5.1	0.51	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
AB-2R	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-3	5/13/02	ND	**75.9**	ND	NR	5.4	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	7.7	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	**15.1**	ND	NR	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.31	ND	2.2	ND	2.6	ND	25.4	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-4	5/13/02	ND	0.71	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	1.6	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-5	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	8.8	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-1	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	5.7	ND	**5.2**	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	0.45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	**2,040**	ND	**23,000**	ND	ND	**171**	NA	ND	NA	NA	NA	NA	ND	NA	**368**	178	NA	NA
	08/31/09	ND	**10.3**	ND	NR	1.9	ND	9.1	6.4	2.3	1.7	4.5	12.3	**1,230**	**19.1**	**5,300**	13.6	2.2	**60.1**	**28,400**	5.2	ND	5.5	6.6	0.36	**17**	ND	**183**	44.7	0.94	3.4
	09/07/10	ND	ND	ND	NR	**58.8**	ND	ND	ND	ND	ND	46.9	ND	**1,950**	ND	**11,100**	ND	ND	ND	**38,900**	ND	ND	ND	ND	ND	ND	ND	**263**	88.2	ND	ND
	09/19/11	ND	**7.7J**	ND	ND	ND	39.5	7.2J	ND	ND	ND	ND	ND	**1,060**	**14.5**	**8,670**[a]	27.4	ND	**47.6**	**28,500**	8.8J	ND	6.9J	ND	ND	**10.4**	ND	**329**	92.6	ND	ND
AD-3	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	0.98	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-4	5/13/02	ND	**6.8**	ND	NR	**304**	ND	**171**	NA	NA	NA	NA	NA	**161**	**500**	**941**	23.6	ND	**38.1**	NA	2	NA	NA	NA	NA	ND	NA	**151**	ND	NA	NA
	08/31/09	ND	**1.9**	ND	NR	**125**	ND	ND	ND	25.5	34.7	47.6	ND	0.43	1.8	**1**	0.49	ND	0.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	**12.4**	ND	NR	**938**	ND	ND	ND	59.2	107	**284**	ND	0.68	**7.5**	ND	2.2	ND	**1.2**	ND	1.3	ND	0.69	ND	ND	ND	ND	ND	ND	ND	4.5
	09/19/11	ND	ND	ND	ND	**66.0**	ND	ND	ND	6.0	11.4	19.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-5	5/13/02	ND	ND	ND	NR	13.6	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	**17.8**	NA	**6.7**	ND	NA	NA
	08/31/09	ND	**1.2**	ND	NR	44.9	ND	0.39	ND	362	8.9	**113**	ND	4	ND	**8.8**	**6,580**	36.3	ND	ND	ND	30.5	2.9	ND	4	ND	ND	**3,260**	1.1	23	**95.7**
	09/07/10	ND	ND	ND	NR	3.1	ND	ND	ND	9.4	ND	5.6	ND	ND	ND	ND	**644**	2.1	ND	ND	ND	8.1	ND	ND	ND	ND	ND	**450**	ND	4.4	3.5
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**110**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**106**	ND	ND	ND
AD-6	5/13/02	ND	ND	ND	NR	47.3	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	**2,340**	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	**4,420**	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	0.94	ND	ND	ND	ND	ND	ND	ND	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	NR	ND	ND	0.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LPG-1	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	4.5	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	3.1	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	23.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.56J	ND	ND
LPG-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds						Semi-volatile Organic Compounds																								
Sample ID	**Date**	**1,1,1-Trichloroethane**	**1,1,2-Trichloroethane**	**Trichloroethene**	**Vinyl chloride**	**Xylene (total)**	**Total TIC, Volatile**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**	**Fluoranthene**	**Fluorene**	**Hexachlorobenzene**	**Indeno(1,2,3-cd)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**	**Acetophenone**	**Benzaldehyde**	**Butyl benzyl phthalate**	**1,1'-Biphenyl**	**4-Chloroaniline**	**Carbazole**	**3,3'-Dichlorobenzidine**	**Dibenzofuran**
NJDEP GWQS		**30**	**3**	**1**	**1**	**1,000**	**500**	**400**	**100**	**2,000**	**0.1**	**0.1**	**0.2**	**100**	**0.5**	**5**	**0.3**	**300**	**300**	**0.02**	**0.2**	**300**	**100**	**200**	**700**	**NA**	**100**	**400**	**30**	**NA**	**30**	**NA**
AB-1	5/13/02	ND	ND	ND	ND	ND	6.3	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	73	0.165	ND	0.265	**0.295**	ND	ND	ND	ND	0.103	NR	0.389	0.354	ND	ND	ND	1.54	0.375	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-2	5/13/02	ND	ND	ND	ND	ND	11	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
AB-2R	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	0.0	0.175	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-3	5/13/02	ND	ND	ND	ND	11.9	**531**	13	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	6.7	NA	NA	52.7	5.4	ND	ND	NA	ND	ND	ND	2.7	NA	ND
	09/01/09	ND	ND	ND	ND	0.87	12.8	0.436	0.429	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.503	0.316	ND	ND	0.287	ND	ND	6.1	ND	11.4	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	4.59	ND	0.221	ND	ND	ND	ND	ND	ND	NR	0.18	2.01	ND	ND	ND	0.223	0.188	ND	ND	ND	ND	ND	ND	ND	1.7
	09/20/11	ND	ND	ND	ND	ND	0.0	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.716	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9J
AB-4	5/13/02	ND	ND	ND	ND	6	92.8	49	NA	0.64	NA	NA	NA	NA	NA	NA	NR	ND	16.9	NA	NA	141	8	ND	ND	NA	ND	ND	ND	10.7	NA	7.6
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AB-5	5/13/02	ND	ND	ND	ND	ND	100	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	1.2	ND	ND	NA	ND	ND	ND	ND	NA	22.8
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	0.193	**0.304**	ND	ND	ND	ND	0.113	NR	0.269	0.172	ND	ND	ND	0.726	0.302	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-1	5/13/02	ND	ND	0.47	ND	ND	4.42	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	0.116	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	0.91J	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-2	5/13/02	**9,960**	ND	**139**	ND	ND	0.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	28.2	ND	ND	ND	NA	1.9	ND	ND	ND	NA	ND
	08/31/09	**1,870**	**21.5**	**69.6**	**235**	46	88.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	2.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	**6,800**	ND	**88.4**	**374**	27.1	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.298	ND	ND	10	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND
	09/19/11	**4,220**[a]	18.7J	**82.8**	**227**	67.3	250(1)J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.4	ND	ND	ND	ND	ND	1.0	ND	0.49J	ND	ND
AD-3	5/13/02	ND	ND	ND	ND	ND	33	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-4	5/13/02	**84.9**	**5.4**	**11.6**	**10.3**	18.7	**2,592.40**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	1.6	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	0.58	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.153	ND	ND	ND	ND	ND	0.167	ND	ND	ND	ND	ND	ND	ND	ND
AD-5	5/13/02	ND	ND	ND	ND	ND	167.1	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	1.8	ND	ND	ND	NA	ND
	08/31/09	0.83	ND	**1,430**	**49.1**	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	**183**	ND	2.5	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	**33.4**	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AD-6	5/13/02	ND	ND	**873**	**207**	ND	**528**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	1.8	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	0.257	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	0.42J	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.383	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LPG-1	5/13/02	ND	ND	ND	ND	ND	**2,631**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	1.4	ND	ND	NA	2	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	26(1)J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LPG-2	5/13/02	ND	ND	ND	ND	ND	7.1	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	1.9	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	0.133	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.804	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Semi- Volatile Organic Compounds																					
Sample ID	**Date**	**Di-n-butyl phthalate**	**Di-n-octyl phthalate**	**Diethyl phthalate**	**Dimethyl phthalate**	**bis(2-Ethylhexyl)phthalate**	**Isophorone**	**2-Methylnaphthalene**	**4-Nitroaniline**	**1,2,4,5 Tetrachlorobenzene**	**Total TIC, Semi-Volatile**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**1,2,4-Trichlorobenzene**	**Pentachlorophenol**	**4-Chloro-3-methyl phenol**	**2,4-Dimethylphenol**	**2-Methylphenol**	**3&4-Methylphenol**	**Phenol**	**2,4,5-Trichlorophenol**	**2,4,6-Trichlorophenol**
NJDEP GWQS		**NA**	**100**	**6,000**	**NA**	**3**	**40**	**30**	**NA**	**NA**	**500**	**600**	**600**	**75**	**9**	**0.3**	**NA**	**100**	**NA**	**NA**	**2,000**	**700**	**20**
AB-1	5/13/02	ND	ND	ND	NA	1	NA	ND	NA	NR	35.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	**165**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	**5.2**	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AB-2	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	0.0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
AB-2R	09/01/09	ND	ND	ND	ND	1.1	ND	ND	ND	NR	6	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AB-3	5/13/02	1	ND	ND	NA	ND	NA	50.1	NA	NR	367.3	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	45.6	**10.7**	ND	ND	ND	NR	212.8	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.591	ND	**21.2**
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	50.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.6(4)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AB-4	5/13/02	ND	ND	ND	NA	ND	NA	67.5	NA	NR	278.1	ND	ND	ND	ND	NA	NA	2	ND	0.84	ND	NA	NA
	09/01/09	ND	ND	ND	ND	**8.9**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AB-5	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	65.8	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	**94.3**	ND	ND	ND	NR	39	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	**6.0**	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-1	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	158	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	**53.5**	ND	ND	ND	NR	0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-2	5/13/02	ND	ND	ND	NA	**5.1**	NA	9.8	NA	NR	**840.2**	3.6	1.6	3.6	2.5	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	**21.1**	ND	ND	ND	NR	440.1	NA	NA	NA	NA	**0.677**	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	5	ND	NR	71.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	1.5	ND	ND	145.2(14)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-3	5/13/02	ND	ND	ND	NA	1.4	NA	ND	NA	NR	0.0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	**273**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-4	5/13/02	ND	ND	ND	NA	2.4	NA	ND	NA	NR	20.7	290	111	**192**	**80.5**	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	2.4	ND	ND	ND	NR	13	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	18.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	**20.6**	ND	ND	ND	ND	22.6(4)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-5	5/13/02	1.9	ND	ND	NA	**3.8**	NA	ND	NA	NR	19.4	13.5	0.59	8.4	**19.1**	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	2.3	ND	ND	ND	NR	52.3	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	342.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	2.9	ND	ND	ND	0.89J	77.2(3)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
AD-6	5/13/02	ND	ND	ND	NA	2.4	NA	ND	NA	NR	205	172	3.8	68.6	**49.2**	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	**25.7**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	1.1J	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
LPG-1	5/13/02	ND	ND	ND	NA	1	NA	ND	NA	NR	351.3	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	1.4	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
LPG-2	5/13/02	ND	ND	ND	NA	1.6	NA	ND	NA	NR	0.0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.2(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Gauging Data					Metals																						
Sample ID	Date	TOC Elevation (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
NJDEP GWQS		-	-	-	-	-	200	6	3	6000	NA	4	NA	70	100	1,300	300	5	NA	50	2	100	NA	40	40	50,000	2	60	2,000
PER-1	5/13/02	19.29	10.34	NP	NP	8.95	1,660	<5.0	5.5	<200	NA	NA	56,200	<10	NA	<25	1,240	3.9	6,330	153	<0.20	NA	<5,000	<5.0	NA	15,100	NA	<50	<20
	08/31/09	19.29	8.81	NP	NP	10.48	3,710	<6.0	<3.0	<200	<1.0	<3.0	33,800	<10	<50	29.2	3,530	7.9	5,290	1,000	<0.20	<10	<10,000	<10	<10	11,300	<2.0	<50	30.5
	09/07/10	19.29	10.17	NP	NP	9.12	677	<6.0	<3.0	<200	<1.0	<3.0	50,600	<10	<50	33.3	873	<3.0	6,720	1,740	<0.20	<10	<10,000	<10	<10	15,800	<2.0	<50	28
	09/19/11	19.29	8.96	NP	NP	10.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-2	5/13/02	12.91	6.22	NP	NP	6.69	17,100	<5.0	29.9	<200	NA	NA	24,400	31	NA	63.6	30,700	51.4	5,330	263	<0.20	NA	21,100	5	NA	22,700	NA	100	101
	09/02/09	12.91	6.27	NP	NP	6.64	509	<6.0	<3.0	<200	<1.0	<3.0	22,800	<10	<50	17.4	3,240	3.1	<5,000	43	<0.20	<10	<10,000	<10	<10	<10,000	<2.0	<50	22.5
	09/09/10	12.91	8.59	NP	NP	4.32	15,000	<6.0	18	<200	3.9	<3.0	29,800	26	<50	288	16,800	65	<5,000	175	0.41	45.6	<10,000	<10	<10	<10,000	<2.0	<50	735
	09/20/11	12.91	4.23	NP	NP	8.68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-3	5/13/02	9.55	4.91	NP	NP	4.64	2,360	<5.0	13.6	<200	NA	NA	40,700	<10	NA	<25	54,000	12.2	60,100	513	0.25	NA	32,000	5	NA	599,000	NA	<50	40.2
	09/02/09	9.55	5.11	NP	NP	4.44	238	<6.0	8.9	<200	<1.0	<3.0	18,000	<10	<50	<10	7,940	<3.0	9,010	535	<0.20	<10	<10,000	<10	<10	104,000	<2.0	<50	<20
	09/09/10	9.55	5.19	NP	NP	4.36	1,630	<6.0	9.3	<200	<1.0	<3.0	102,000	<10	<50	36.3	11,200	4.9	65,300	1,670	0.29	<10	15,600	<10	<10	596,000	<2.0	<50	29.4
	09/22/11	9.55	4.45	NP	NP	5.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-4	5/13/02	12.78	7.6	NP	NP	5.18	460	<5.0	25.5	327	NA	NA	91,300	<10	NA	<25	51,400	<3.0	125,000	707	<0.20	NA	49,600	<5.0	NA	1,190,000	NA	<50	<20
	08/31/09	12.78	6.2	NP	NP	6.58	271	<6.0	3.6	<200	<1.0	7.8	13,100	<10	<50	19.1	7,990	3.8	<5,000	123	<0.20	<10	<10000	<10	<10	81,600	<2.0	<50	<20
	09/07/10	12.78	7.02	NP	NP	5.76	1,930	<6.0	16.2	<200	<1.0	3.1	25,800	<10	<50	61.1	16,300	15.6	22,400	368	<0.20	10	15,800	<10	<10	278,000	<2.0	<50	45.6
	09/21/11	12.78	6.55	NP	NP	6.23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-5	5/13/02	20.47	10.22	NP	NP	10.25	10,300	<5.0	<5.0	<200	NA	NA	83,000	14.7	NA	29.3	15,500	10.4	17,800	372	<0.20	NA	<5,000	6.5	NA	24,500	NA	<50	49.7
	08/31/09	20.47	10.91	NP	NP	9.56	462	<6.0	<3.0	<200	<1.0	<3.0	20,800	<10	<50	25.9	580	<3.0	<5,000	21	<0.20	<10	<10,000	<10	<10	30,900	<2.0	<50	<20
	09/08/10	20.47	11.41	NP	NP	9.06	2,610	<6.0	3.4	<200	<1.0	<3.0	40,200	<10	<50	54.7	4,090	6.5	6,680	101	0.22	<10	<10,000	<10	<10	38,000	<2.0	<50	48.5
	09/21/11	20.47	9.39	NP	NP	11.08	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-6	5/13/02	21.93	8.85	NP	NP	13.08	3,540	<5.0	<5.0	<200	NA	NA	26,300	<10	NA	42.9	5,150	9.5	5,270	313	<0.20	NA	<5000	5	NA	25,800	NA	<50	34.2
PER-6R	08/31/09	23.79	2.82	NP	NP	20.97	2,190	<6.0	<3.0	<200	<1.0	<3.0	20,700	<10	<50	41.3	2,570	6	<5,000	479	<0.20	<10	12,800	<10	<10	32,400	<2.0	<50	31.5
	09/10/10	23.79	2.13	NP	NP	21.66	1,160	<6.0	<3.0	<200	<1.0	<3.0	33,800	<10	<50	52	1,880	4	7,280	288	<0.20	<10	<10,000	<10	<10	26,600	<2.0	<50	30.7
	09/19/11	23.79	10.84	NP	NP	12.95	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-7	5/13/02	11.15	8.21	NP	NP	2.94	17,200	<5.0	9.7	<200	NA	NA	19,000	36.7	NA	55.7	45,600	34.1	18,000	537	0.2	NA	15,800	<5.0	NA	288,000	NA	<50	98.8
	09/01/09	11.15	6.60	NP	NP	4.55	3,230	<6.0	3.9	<200	<1.0	<3.0	20,200	<10	<50	28.7	7,650	9.4	5,590	71	<0.20	10	<10000	<10	<10	166,000	<2.0	<50	42.1
	09/08/10	11.15	7.21	NP	NP	3.94	10,400	<6.0	11.1	<200	<1.0	<3.0	10,100	21.3	<50	40.8	25,800	33.9	8,900	142	0.21	13.2	<10,000	<10	<10	152,000	<2.0	<50	54.1
	09/21/11	11.15	5.70	NP	NP	5.45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PER-8	5/13/02	10.40	-	-	-	-	3,930	<5.0	7.9	<200	NA	NA	14,600	<10	NA	<25	12,100	14.8	<5,000	121	<0.20	NA	8,920	<5.0	NA	30,200	NA	<50	56.8
	09/01/09	10.40	4.10	NP	NP	6.30	417	<6.0	<3.0	<200	<1.0	5.8	16,700	<10	<50	24.1	3,260	10.1	<5,000	420	<0.20	12.4	<10,000	<10	<10	37,300	<2.0	<50	725
	09/08/10	10.40	6.50	NP	NP	3.90	1,050	<6.0	4.2	<200	<1.0	<3.0	17,100	<10	<50	26.7	9,010	11.6	5,890	197	<0.20	<10	<10,000	<10	<10	46,500	<2.0	<50	202
	09/21/11	10.40	4.12	NP	NP	6.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-1	5/13/02	11.82	3.07	3.05	0.02	8.75	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	11.82	2.38	NP	NP	9.44	<200	<6.0	8	1,850	<1.0	<3.0	353,000	<10	<50	<10	18,600	<3.0	199,000	720	<0.20	<10	70,200	<10	<10	1,540,000	<2.0	<50	<20
	09/09/10	11.82	3.50	3.48	0.01	8.32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	11.82	3.01	NP	NP	8.81	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-2	5/13/02	11.78	2.7	2.68	0.02	9.09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	11.78	2.1	2.11	0.01	9.69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	11.78	2.92	2.9	0.01	8.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	11.78	2.18	2.15	0.03	9.62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NN	NA	NA	NA
PL-3	5/13/02	12.81	3.01	NP	NP	9.8	2,910	<5.0	39.1	553	NA	NA	57,500	31.4	NA	<25	84,700	7.8	199,000	209	<0.20	NA	87,100	9.3	NA	1,510,000	NA	<50	37.4
PL-3R	08/31/09	12.27	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	12.27	2.74	NP	NP	9.53	268	<6.0	10.2	<200	<1.0	<3.0	72,700	<10	<50	42	35,200	<3.0	238,000	277	<0.20	<10	104,000	<10	<10	1,870,000	<2.0	<50	<20
	09/20/11	12.27	2.51	NP	NP	9.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-4	5/13/02	13.30	3.12	NP	NP	10.18	563	10.6	233	<200	NA	NA	22,600	22.3	NA	<25	7,450	4.9	9,430	174	0.26	NA	38,100	<5.0	NA	4,460,000	NA	334	<20
PL-4R	09/01/09	12.40	2.71	NP	NP	9.69	812	<6.0	15	<200	<1.0	<3.0	131,000	10.5	<50	31.8	3,380	<3.0	364,000	321	<0.20	<10	164,000	<10	<10	3,240,000	<2.0	<50	<20
	09/09/10	12.40	3.05	NP	NP	9.35	2,050	<6.0	21.6	<200	<1.0	<3.0	134,000	10.6	<50	51.9	3,350	4.8	408,000	424	<0.20	<10	154,000	<10	<10	2,770,000	<2.0	<50	<20
	09/20/11	12.40	2.90	NP	NP	9.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-5	5/13/02	9.08	1.82	1.8	0.02	7.26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	9.08	1.03	1.23	0.2	8.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	Mobile LNAPL Recovery System In Place					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	9.08	1.90	0.84	1.06	7.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-6	5/13/02	11.95	2.87	NP	NP	9.08	428	<5.0	<5.0	<200	NA	NA	73,100	<10	NA	<25	15,700	<3.0	85,700	696	<0.20	NA	34,500	<5.0	NA	973,000	NA	<50	<20
PL-6R	09/02/09	11.49	2.1	NP	NP	9.39	552	<6.0	18.7	<200	<1.0	<3.0	59,100	<10	<50	13.3	47,400	<3.0	95,900	369	<0.20	<10	42,300	<10	<10	1,010,000	<2.0	<50	<20
	09/09/10	11.49	2.36	NP	NP	9.13	3,700	<6.0	11.6	<200	<1.0	<3.0	162,000	1,720	<50	53.1	206,000	<15	526,000	662	<0.20	58.6	196,000	<10	<10	3,870,000	<10	<50	35.1
	09/20/11	11.49	2.13	NP	NP	9.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds																													
Sample ID	**Date**	**Acetone**	**Benzene**	**2-Butanone (MEK)**	**Carbon disulfide**	**Chlorobenzene**	**Chloroethane**	**Chloroform**	**Cyclohexane**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**Dichlorodifluoromethane**	**1,1-Dichloroethane**	**1,2-Dichloroethane**	**1,1-Dichloroethene**	**cis-1,2-Dichloroethene**	**trans-1,2-Dichloroethene**	**1,2-Dichloropropane**	**1,4-Dioxane**	**Ethylbenzene**	**Freon 113**	**Isopropylbenzene**	**Methylcyclohexane**	**Methyl Tert Butyl Ether (MTBE)**	**Methylene chloride**	**Tert Butyl Alcohol**	**Tetrachloroethene**	**Toluene**	**1,2,3-Trichlorobenzene**	**1,2,4-Trichlorobenzene**
NJDEP GWQS		**6,000**	**1**	**300**	**700**	**50**	**5**	**70**	**NA**	**600**	**600**	**75**	**1,000**	**50**	**2**	**1**	**70**	**100**	**1**	**10**	**700**	**NA**	**NA**	**NA**	**70**	**3**	**100**	**1**	**600**	**NA**	**9**
PER-1	5/13/02	ND	0.48	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	**1.5**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28	ND	ND	ND	56.8	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
			ND																												
PER-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/02/09	9	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	15.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-3	5/13/02	4.1	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-4	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	43.9	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.78	ND	27.7	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.49J	ND	ND	ND	ND	ND	ND
PER-5	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-6	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
PER-6R	08/31/09	ND	ND	ND	NR	ND	ND	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-7	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-8	5/13/02	ND	ND	**14,300**	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	16.5	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PL-1	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	11	**29.1**	ND	NR	**667**	ND	ND	ND	6.5	9	33.1	ND	ND	ND	ND	0.71	0.75	ND	ND	2.2	ND	1.1	1.4	4.7	ND	**2,280**	ND	0.68	ND	ND
	09/09/10	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	ND	**28.2**	ND	ND	**405[a]**	ND	ND	0.67J	2.1	4.3	13.9	ND	ND	ND	ND	ND	ND	ND	ND	0.54J	ND	1.1J	0.32J	9.9	ND	**1,170[a]**	ND	0.64J	ND	ND
PL-2	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-3	5/13/02	ND	**109**	ND	NR	0.7	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	1	NA	NA	NA	NA	ND	NA	ND	1.5	NA	NA
PL-3R	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	ND	**63.5**	ND	NR	0.56	ND	ND	7.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	ND	1.7	5	**111**	ND	98	ND	1.1	ND	ND
	09/20/11	ND	**1.8**	ND	ND	0.23J	ND	ND	3.2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8J	1.9J	31.5	ND	**184**	ND	0.46J	ND	ND
PL-4	5/13/02	ND	**5.7**	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	14	NA	NA	NA	NA	ND	NA	ND	0.92	NA	NA
PL-4R	09/01/09	ND	0.79	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	**3.6**	ND	NR	0.56	ND	ND	ND	0.3	ND	0.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.57	ND	1.5	ND	ND	ND	ND	ND	ND
	09/20/11	ND	**2.8**	ND	0.99J	0.53	ND	ND	ND	ND	ND	0.68J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22J	ND	1.2	ND	17.5J	ND	ND	ND	ND
PL-5	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-6	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
PL-6R	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.3	ND	**206**	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.7	ND	**103**	ND	ND	ND	ND
	09/20/11	ND	ND	ND	0.78J	ND	ND	ND	0.50J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.28J	2.1J	3.1	ND	27.7	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds						Semi-volatile Organic Compounds																								
Sample ID	**Date**	**1,1,1-Trichloroethane**	**1,1,2-Trichloroethane**	**Trichloroethene**	**Vinyl chloride**	**Xylene (total)**	**Total TIC, Volatile**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**	**Fluoranthene**	**Fluorene**	**Hexachlorobenzene**	**Indeno(1,2,3-cd)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**	**Acetophenone**	**Benzaldehyde**	**Butyl benzyl phthalate**	**1,1'-Biphenyl**	**4-Chloroaniline**	**Carbazole**	**3,3'-Dichlorobenzidine**	**Dibenzofuran**
NJDEP GWQS		**30**	**3**	**1**	**1**	**1,000**	**500**	**400**	**100**	**2,000**	**0.1**	**0.1**	**0.2**	**100**	**0.5**	**5**	**0.3**	**300**	**300**	**0.02**	**0.2**	**300**	**100**	**200**	**700**	**NA**	**100**	**400**	**30**	**NA**	**30**	**NA**
PER-1	5/13/02	ND	ND	ND	ND	ND	3.3	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-2	5/13/02	ND	ND	ND	ND	ND	490	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2.9	ND	ND	ND	NA	ND
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-3	5/13/02	ND	ND	ND	ND	ND	**1,800**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	1.9	ND	ND	ND	NA	ND
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	0.125	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-4	5/13/02	ND	ND	ND	ND	ND	6.4	2.8	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	0.258	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	24	1.84	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.111	ND	ND	0.138	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	1.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-5	5/13/02	1.1	ND	ND	ND	ND	**1,900**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2	ND	ND	ND	NA	ND
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-6	5/13/02	ND	ND	ND	ND	ND	7.3	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	1.9	ND	ND	ND	NA	ND
PER-6R	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-7	5/13/02	ND	ND	ND	ND	ND	**1,012**	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2.1	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-8	5/13/02	ND	ND	ND	ND	ND	0.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	**0.154**	**0.222**	**0.659**	0.338	0.187	0.405	NR	0.558	ND	ND	**0.291**	ND	0.162	0.452	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	**0.503**	**0.544**	**1.09**	0.973	**0.639**	0.707	NR	1.42	ND	ND	**0.75**	ND	0.504	0.975	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	**1.11**	**2.30**	**3.64**	2.81	**3.88**	3.34	**0.997**	4.58	ND	ND	**2.96**	ND	1.47	3.69	ND	ND	ND	ND	ND	0.49J	ND	ND
PL-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	0.74	1.5	201.4	1.68	ND	0.589	**0.279**	ND	ND	ND	ND	0.256	NR	0.62	1.97	ND	ND	0.646	2.1	0.813	ND	ND	ND	ND	ND	0.96	ND	0.81
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/20/11	ND	ND	ND	ND	ND	5.9(1)J	0.921	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.153	0.641	ND	ND	0.681	ND	0.261	ND	ND	ND	ND	ND	ND	ND	ND
PL-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-3	5/13/02	ND	ND	ND	ND	14.2	450	1.2	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	1.5	NA	NA	ND	1.1	ND	ND	NA	ND	ND	ND	ND	NA	0.56
PL-3R	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/09/10	ND	ND	ND	ND	21.2	421	0.396	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.391	ND	ND	0.442	0.62	ND	0.74	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	1.5J	50.1(6)J	0.231	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.416	ND	ND	0.187	0.420	0.166	ND	ND	ND	ND	ND	ND	ND	ND
PL-4	5/13/02	ND	ND	ND	ND	42.3	**524.5**	26	NA	1.5	NA	NA	NA	NA	NA	NA	NR	0.92	12.5	NA	NA	98.8	8.3	ND	ND	NA	ND	ND	ND	25.6	NA	11
PL-4R	09/01/09	ND	ND	ND	ND	ND	0	0.921	ND	0.385	ND	ND	ND	ND	ND	ND	NR	0.37	0.817	ND	ND	ND	1.92	0.278	ND	ND	ND	ND	ND	0.45	ND	0.56
	09/09/10	ND	ND	ND	ND	ND	16.5	1.03	ND	0.255	ND	ND	ND	ND	ND	ND	NR	0.579	0.19	ND	ND	ND	ND	0.455	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	70(2)J	2.64	ND	0.216	ND	ND	ND	ND	ND	ND	ND	0.384	ND	ND	ND	ND	0.179	0.272	ND	ND	ND	ND	ND	ND	ND	ND
PL-5	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-6	5/13/02	ND	ND	ND	ND	ND	36.1	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	0.64	ND	NA	ND
PL-6R	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	0.0	0.314	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.246	ND	ND	0.602	0.485	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	**527.7(5)J**	0.270	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.636	0.445	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Semi- Volatile Organic Compounds																					
Sample ID	**Date**	**Di-n-butyl phthalate**	**Di-n-octyl phthalate**	**Diethyl phthalate**	**Dimethyl phthalate**	**bis(2-Ethylhexyl)phthalate**	**Isophorone**	**2-Methylnaphthalene**	**4-Nitroaniline**	**1,2,4,5 Tetrachlorobenzene**	**Total TIC, Semi-Volatile**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**1,2,4-Trichlorobenzene**	**Pentachlorophenol**	**4-Chloro-3-methyl phenol**	**2,4-Dimethylphenol**	**2-Methylphenol**	**3&4-Methylphenol**	**Phenol**	**2,4,5-Trichlorophenol**	**2,4,6-Trichlorophenol**
NJDEP GWQS		**NA**	**100**	**6,000**	**NA**	**3**	**40**	**30**	**NA**	**NA**	**500**	**600**	**600**	**75**	**9**	**0.3**	**NA**	**100**	**NA**	**NA**	**2,000**	**700**	**20**
PER-1	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	8.4	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-2	5/13/02	ND	ND	ND	NA	1.7	NA	ND	NA	NR	0.0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/02/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	21.7	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	**3.6**	ND	ND	ND	NR	400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	**9.2**	ND	ND	ND	ND	9.9(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-3	5/13/02	ND	ND	ND	NA	1.1	NA	ND	NA	NR	117.4	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/02/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	22	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	**7.2**	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PER-4	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	0.0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	1.1	ND	ND	ND	NR	251.5	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-5	5/13/02	ND	ND	1.1	NA	2.2	NA	ND	NA	NR	8.9	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	ND	ND	ND	ND	2	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-6	5/13/02	ND	ND	ND	NA	1	NA	ND	NA	NR	11.2	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
PER-6R	08/31/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-7	5/13/02	ND	ND	ND	NA	2.8	NA	ND	NA	NR	9.4	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	1.4	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PER-8	5/13/02	ND	ND	ND	NA	2.9	NA	ND	NA	NR	275	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	1.3	ND	ND	ND	NR	**529.4**	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	1.6J	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	2.6	ND	ND	ND	NR	314.2	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	126.9(12)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-3	5/13/02	ND	3.8	ND	NA	2	NA	5.7	NA	NR	243.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	1.8	NA	NA
PL-3R	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	ND	ND	ND	ND	ND	ND	2.1	ND	NR	61.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	0.48J	ND	ND	77.9(9)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-4	5/13/02	ND	ND	ND	NA	ND	NA	10.1	NA	NR	120.8	ND	ND	ND	ND	NA	NA	6.3	8.6	ND	ND	NA	NA
PL-4R	09/01/09	ND	ND	ND	ND	**177**	ND	ND	ND	NR	26.5	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	**985**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	1.5J	ND	ND	ND	ND	**1,473.2(7)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-5	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/20/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-6	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	243.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
PL-6R	09/02/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	12.1	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	**3,131.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	459.7(5)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Gauging Data					Metals																						
Sample ID	Date	TOC Elevation (ft)	Depth to Water (ft)	Depth to LNAPL (ft)	LNAPL Thickness (ft)	GW Elevation (ft)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
NJDEP GWQS		-	-	-	-	-	200	6	3	6000	NA	4	NA	70	100	1,300	300	5	NA	50	2	100	NA	40	40	50,000	2	60	2,000
PL-7	5/13/02	13.06	4.61	NP	NP	8.45	**1,650**	<5.0	**7.5**	<200	NA	NA	12,400	<10	NA	<25	**8,280**	<3.0	<5,000	**200**	<0.20	NA	<5,000	<5.0	NA	7,980	NA	<50	25.7
	09/01/09	13.06	4.52	NP	NP	8.54	**274**	<6.0	**12.1**	<200	<1.0	<3.0	7,390	<10	<50	<10	**14,600**	<3.0	<5,000	**123**	<0.20	<10	<10,000	<10	<10	<10,000	<2.0	<50	21.9
	09/09/10	13.06	5.27	NP	NP	7.79	**1,510**	<6.0	**36.1**	<200	<1.0	<3.0	8,050	<10	<50	39.8	**52,600**	3.9	<5,000	**151**	0.32	<10	<10,000	<10	<10	<10,000	<2.0	<50	65
	09/22/11	13.06	3.19	NP	NP	9.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-8	5/13/02	12.39	4.02	NP	NP	8.37	<200	<5.0	<5.0	<200	NA	NA	11,800	<10	NA	<25	192	<3.0	<5,000	<15	<0.20	NA	<5,000	<5.0	NA	10,100	NA	<50	<20
PL-8R	09/01/09	11.96	3.42	NP	NP	8.54	**1,730**	<6.0	**18.6**	341	<1.0	<3.0	47,600	11.7	<50	51.9	**70,400**	4.5	83,000	**140**	<0.20	<10	58,300	<10	<10	**1,350,000**	<2.0	<50	34.4
	09/09/10	11.96	4.43	NP	NP	7.53	**1,340**	<6.0	**19.3**	243	<1.0	<3.0	30,800	10.5	<50	42.6	**64,700**	3.6	73,300	**98**	1.3	13.8	50,400	<10	<10	**1,390,000**	<2.0	<50	31.8
	09/22/11	11.96	3.30	NP	NP	8.66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PL-9	5/13/02	11.95	2.18	NP	NP	9.77	**3,600**	<5.0	**28.2**	1,050	NA	NA	182,000	<10	NA	<25	**117,000**	**16.9**	151,000	**1,010**	<0.20	NA	68,500	<5.0	NA	**1,900,000**	NA	<50	27
PL-9R	09/02/09	11.26	1.70	NP	NP	9.56	**407**	<6.0	**36.2**	658	<1.0	<3.0	88,500	<10	<50	<10	**44,000**	<3.0	98,400	**405**	<0.20	<10	60,000	<10	<10	**1,440,000**	<2.0	<50	<20
	09/09/10	11.26	1.90	NP	NP	9.36	**3,240**	<6.0	**16.8**	218	<1.0	<3.0	155,000	20.7	<50	36.9	**9,320**	<15	435,000	**114**	<0.20	<50	194,000	<10	<10	**3,290,000**	<10	<50	<20
	09/20/11	11.26	1.70	NP	NP	9.56	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TC-1	5/13/02	20.48	10.48	NP	NP	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**7,430**	NA	NA	**1,150**	NA	NA	NA	NA	NA	42,000	NA	NA	NA
	08/31/09	20.48	8.29	NP	NP	12.19	**5,220**	<6.0	<3.0	<200	5.6	3.6	89,700	<10	<50	<10	**385**	<3.0	25,500	**2,040**	<0.20	68.1	<10,000	<10	<10	**157,000**	<2.0	<50	327
	09/07/10	20.48	9.84	NP	NP	10.64	**2,960**	<6.0	<3.0	<200	2.3	<3.0	69,500	<10	<50	38.1	**574**	<3.0	23,400	**1,630**	<0.20	50.5	<10,000	<10	<10	**136,000**	<2.0	<50	184
	09/19/11	20.48	8.68	NP	NP	11.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TC-2	5/13/02	19.57	9.7	NP	NP	9.87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**26,100**	NA	NA	**412**	NA	NA	NA	NA	NA	9,430	NA	NA	NA
	08/31/09	19.57	7.38	NP	NP	12.19	**334**	<6.0	**22.1**	207	<1.0	<3.0	14,300	<10	<50	<10	**46,700**	<3.0	<5,000	**431**	<0.20	<10	<10,000	<10	<10	11,600	<2.0	<50	<20
	09/07/10	19.57	8.83	NP	NP	10.74	**2,280**	<12	**78.7**	3,650	7.6	<6.0	35,100	<50	<100	57.3	**246,000**	**14.2**	<25,000	**1,560**	<0.80	29.8	<50,000	<20	<50	<50,000	<10	<250	50.9
	09/19/11	19.57	7.53	NP	NP	12.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TC-3	5/13/02	19.55	9.48	NP	NP	10.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**15,800**	NA	NA	**2,580**	NA	NA	NA	NA	NA	23,600	NA	NA	NA
	08/31/09	19.55	7.26	NP	NP	12.29	**676**	<6.0	**3.7**	<200	<1.0	**26**	61,400	<10	<50	156	**21,300**	**42.5**	10,400	**270**	<0.20	<10	<10,000	<10	<10	16,800	<2.0	<50	77.2
	09/07/10	19.55	8.6	NP	NP	10.95	**1,840**	<6.0	**7.4**	<200	<1.0	**37.5**	30,000	<10	<50	148	**9,190**	**40.5**	9,140	**1,310**	<0.20	28.1	<10,000	<10	<10	18,600	<2.0	<50	89
	09/19/11	19.55	7.63	NP	NP	11.92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-1	5/13/02	10.82	2.81	2.78	0.03	8.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/01/09	10.82	2.44	NP	NP	8.38	**893**	<6.0	**8.7**	<200	<1.0	<3.0	11,800	<10	<50	22.3	**5,050**	**5.4**	<5,000	47	<0.20	<10	<10,000	<10	<10	28,900	<2.0	<50	<20
	09/09/10	10.82	3.36	NP	NP	7.46	**591**	<6.0	**20.3**	<200	<1.0	<3.0	28,800	<10	<50	34.7	**27,100**	**6**	<5,000	**202**	<0.20	<10	<10,000	<10	<10	23,500	<2.0	<50	29.9
	09/22/11	10.82	1.89	NP	NP	8.93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-2	5/13/02	10.13	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	10.13	-	1.81	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NM	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NM	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-3	5/13/02	10.73	2.02	NP	NP	8.71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**5,810**	NA	NA	**52**	NA	NA	NA	NA	NA	10,900	NA	NA	NA
	09/01/09	10.73	2.16	NP	NP	8.57	<200	<6.0	**9.3**	<200	<1.0	<3.0	9,890	<10	<50	<10	**4,800**	<3.0	5,220	25	<0.20	<10	<10,000	<10	<10	**65,900**	<2.0	<50	<20
	09/09/10	10.73	3.06	NP	NP	7.67	**857**	<6.0	**22.2**	<200	<1.0	<3.0	17,800	27.3	<50	103	**18,400**	**12.5**	6,060	80	<0.20	18.6	<10,000	<10	<10	**47,300**	<2.0	<50	97.4
	09/22/11	10.73	1.83	NP	NP	8.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-1	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	22.36	10.98	NP	NP	11.38	**1,120**	<30	<15	<200	2.8	3.5	194,000	<50	76.3	13.3	**2,290**	<15	106,000	**33,400**	<0.20	**223**	<10,000	<50	<10	**491,000**	<10	<50	144
	09/08/10	22.36	10.70	NP	NP	11.66	**1,230**	<6.0	<3.0	<200	5	<3.0	188,000	<10	67.6	<10	**1,760**	<9.0	101,000	**32,400**	<0.20	**206**	<10,000	<30	<10	**479,000**	<10	<50	142
	09/21/11	22.36	9.89	NP	NP	12.47	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-2	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	22.45	10.16	NP	NP	12.29	**1,850**	<6.0	**11.8**	<200	<1.0	<3.0	90,900	<10	<50	<10	**101,000**	<3.0	47,600	**5,890**	<0.20	<10	11,600	<10	<10	**118,000**	<2.0	<50	33.4
	09/08/10	22.45	11.24	NP	NP	11.21	<400	<12	<6.0	<400	<2.0	<6.0	<10,000	<20	<100	<20	<200	<6.0	<10,000	<30	<0.20	<20	<20,000	<20	<20	<20,000	<4.0	<100	<40
	09/21/11	22.45	10.71	NP	NP	11.74	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-3	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	22.50	10.35	NP	NP	12.15	**225**	<6.0	**38.3**	<200	<1.0	<3.0	48,900	<10	<50	11.1	**163,000**	<3.0	19,300	**4,920**	<0.20	<10	18,100	<10	<10	**58,100**	<2.0	<50	<20
	09/08/10	22.50	11.47	NP	NP	11.03	<200	<6.0	**48.8**	<200	<1.0	<3.0	56,500	<10	<50	<10	**194,000**	<3.0	22,400	**5,220**	<0.20	<10	20,000	<10	<10	**76,500**	<2.0	<50	<20
	09/21/11	22.50	10.78	NP	NP	11.72	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-4	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	21.14	8.36	NP	NP	12.78	<200	<6.0	**26.2**	<200	<1.0	<3.0	12,900	<10	<50	<10	**63,500**	<3.0	5,240	**1,370**	<0.20	<10	<10,000	<10	<10	16,800	<2.0	<50	<20
	09/08/10	21.14	9.68	NP	NP	11.46	**913**	<6.0	**47.5**	<200	<1.0	<3.0	10,500	<10	<50	27.7	**93,800**	5	<5,000	**1,180**	<0.20	<10	<10,000	<10	<10	<10,000	<2.0	<50	43.3
	09/21/11	21.14	8.89	NP	NP	12.25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds																													
Sample ID	**Date**	**Acetone**	**Benzene**	**2-Butanone (MEK)**	**Carbon disulfide**	**Chlorobenzene**	**Chloroethane**	**Chloroform**	**Cyclohexane**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**Dichlorodifluoromethane**	**1,1-Dichloroethane**	**1,2-Dichloroethane**	**1,1-Dichloroethene**	**cis-1,2-Dichloroethene**	**trans-1,2-Dichloroethene**	**1,2-Dichloropropane**	**1,4-Dioxane**	**Ethylbenzene**	**Freon 113**	**Isopropylbenzene**	**Methylcyclohexane**	**Methyl Tert Butyl Ether (MTBE)**	**Methylene chloride**	**Tert Butyl Alcohol**	**Tetrachloroethene**	**Toluene**	**1,2,3-Trichlorobenzene**	**1,2,4-Trichlorobenzene**
NJDEP GWQS		**6,000**	**1**	**300**	**700**	**50**	**5**	**70**	**NA**	**600**	**600**	**75**	**1,000**	**50**	**2**	**1**	**70**	**100**	**1**	**10**	**700**	**NA**	**NA**	**NA**	**70**	**3**	**100**	**1**	**600**	**NA**	**9**
PL-7	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PL-8	5/13/02	24.3	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
PL-8R	09/01/09	ND	**11**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	ND	10.2	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	ND	ND	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.4	1.1	0.94	ND	ND	ND	ND	ND	ND
	09/22/11	ND	**22.3**	ND	ND	ND	ND	ND	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.40J	ND	10.6	3.2J	2.5	ND	ND	ND	0.33J	ND	ND
PL-9	5/13/02	14.8	**1.1**	ND	NR	1.2	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
PL-9R	09/02/09	12.2	**3**	ND	NR	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	2.6	0.53	39.9	ND	**174**	ND	ND	ND	ND
	09/09/10	ND	**1.7**	ND	NR	0.97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	39.1	ND	**136**	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30J	ND	18.7	ND	90.5	ND	ND	ND	ND
TC-1	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	0.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TC-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TC-3	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TF-1	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	29.5	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	NR	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.4	0.4	ND	ND	13.2	ND	ND	ND	ND
	09/22/11	20.9	**18.7**	7.3J	ND	0.27J	ND	ND	1.9J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.23J	ND	7.3	1.3J	3.9	ND	**167**	ND	0.99J	ND	ND
TF-2	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-3	5/13/02	12.5	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	**6.2**	ND	NR	0.68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	**170**	ND	ND	ND	ND
	09/22/11	ND	**2.4**	ND	ND	1.1	ND	ND	1.2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	0.40J	3.0	ND	**235**	ND	0.45J	ND	ND
TM-1	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.5	0.52J	10.3J	ND	ND	ND	ND
TM-2	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	**1.6**	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	0.6	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	0.67J	ND	ND	ND
TM-3	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.0	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND
	09/21/11	8.7J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0	ND	ND	ND	ND	ND	ND
TM-4	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.68	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.48J	ND	ND	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds						Semi-volatile Organic Compounds																								
Sample ID	**Date**	**1,1,1-Trichloroethane**	**1,1,2-Trichloroethane**	**Trichloroethene**	**Vinyl chloride**	**Xylene (total)**	**Total TIC, Volatile**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**	**Fluoranthene**	**Fluorene**	**Hexachlorobenzene**	**Indeno(1,2,3-cd)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**	**Acetophenone**	**Benzaldehyde**	**Butyl benzyl phthalate**	**1,1'-Biphenyl**	**4-Chloroaniline**	**Carbazole**	**3,3'-Dichlorobenzidine**	**Dibenzofuran**
NJDEP GWQS		**30**	**3**	**1**	**1**	**1,000**	**500**	**400**	**100**	**2,000**	**0.1**	**0.1**	**0.2**	**100**	**0.5**	**5**	**0.3**	**300**	**300**	**0.02**	**0.2**	**300**	**100**	**200**	**700**	**NA**	**100**	**400**	**30**	**NA**	**30**	**NA**
PL-7	5/13/02	ND	ND	ND	ND	ND	0.0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PL-8	5/13/02	ND	ND	ND	ND	ND	13.9	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
PL-8R	09/01/09	ND	ND	ND	ND	ND	122.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.997	ND	ND	1.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	216.9	0.401	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	1.8	ND	ND	15	2.1	ND	ND	ND	ND	ND	ND	0.4	ND	0.72
	09/22/11	ND	ND	ND	ND	0.82J	114.3(10)J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.795	ND	ND	0.952	0.811	ND	3.9	ND	ND	ND	ND	ND	ND	ND
PL-9	5/13/02	ND	ND	ND	ND	ND	226.9	10.2	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	2.8	NA	NA	7.7	1.1	ND	ND	NA	ND	ND	1.4	6.5	NA	0.92
PL-9R	09/02/09	ND	ND	ND	ND	4	66.3	ND	0.804	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	**6.3**	ND	2.9	2.38	ND	ND	ND	ND	ND	ND	3.2	ND	1.4
	09/09/10	ND	ND	ND	ND	0.61	35.1	1.45	ND	0.339	ND	ND	ND	ND	ND	ND	NR	0.256	1	ND	ND	ND	0.262	0.2	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	34(2)J	0.763	ND	0.164	ND	ND	ND	ND	ND	ND	ND	0.199	0.321	ND	ND	ND	0.192	0.141	ND	ND	ND	ND	ND	ND	ND	ND
TC-1	5/13/02	ND	ND	ND	ND	ND	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TC-2	5/13/02	ND	ND	ND	ND	ND	35.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	30.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.566	ND	ND	ND	0.105	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	31.3(4)J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TC-3	5/13/02	ND	ND	ND	ND	ND	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TF-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/01/09	ND	ND	ND	ND	ND	**668**	ND	ND	ND	ND	ND	ND	ND	ND	1.45	NR	ND	ND	ND	ND	ND	ND	1.31	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	**738**	3.45	ND	ND	**1.4**	**0.518**	ND	ND	ND	3.03	NR	0.878	8.7	ND	ND	ND	8.6	2.81	ND	ND	ND	ND	ND	ND	ND	1.5
	09/22/11	ND	ND	ND	ND	6.0	**7,398.9(10)J**	22.2	ND	0.274	**0.188**	ND	ND	ND	ND	0.338	ND	ND	10.5	ND	ND	ND	3.38	0.313	ND	ND	ND	ND	ND	0.49J	ND	ND
TF-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-3	5/13/02	ND	ND	ND	ND	ND	25.5	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	2.6	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0.0	0.622	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.131	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	1.6	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	1.3J	10(1)J	3.83	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.59	ND	ND	0.168	0.649	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	0.108	**0.208**	ND	ND	ND	ND	0.0913	NR	ND	ND	ND	ND	ND	0.126	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	0.164	0.22	ND	ND	ND	ND	0.0774	NR	0.208	0.194	ND	ND	ND	0.768	0.183	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-3	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-4	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Semi- Volatile Organic Compounds																					
Sample ID	**Date**	**Di-n-butyl phthalate**	**Di-n-octyl phthalate**	**Diethyl phthalate**	**Dimethyl phthalate**	**bis(2-Ethylhexyl)phthalate**	**Isophorone**	**2-Methylnaphthalene**	**4-Nitroaniline**	**1,2,4,5 Tetrachlorobenzene**	**Total TIC, Semi-Volatile**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**1,2,4-Trichlorobenzene**	**Pentachlorophenol**	**4-Chloro-3-methyl phenol**	**2,4-Dimethylphenol**	**2-Methylphenol**	**3&4-Methylphenol**	**Phenol**	**2,4,5-Trichlorophenol**	**2,4,6-Trichlorophenol**
NJDEP GWQS		**NA**	**100**	**6,000**	**NA**	**3**	**40**	**30**	**NA**	**NA**	**500**	**600**	**600**	**75**	**9**	**0.3**	**NA**	**100**	**NA**	**NA**	**2,000**	**700**	**20**
PL-7	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	4.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	**204**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-8	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
PL-8R	09/01/09	ND	ND	ND	61.3	ND	27.5	ND	24.2	NR	**848.0**	NA	NA	NA	NA	ND	ND	ND	ND	ND	4.5	ND	ND
	09/09/10	ND	ND	ND	ND	ND	ND	**30.6**	ND	NR	250.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	ND	ND	**6.5**	ND	ND	183.3 (15)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PL-9	5/13/02	ND	ND	ND	NA	ND	NA	1.2	NA	NR	268.8	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
PL-9R	09/02/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	55.4	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	2.57	ND
	09/09/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/20/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TC-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TC-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0	NA	NA	NA	NA	ND	0.54	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	8.2	ND	ND	ND	ND	4.3(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TC-3	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	1.9	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/07/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.9(3)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TF-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/01/09	ND	ND	ND	ND	**3.7**	ND	ND	ND	NR	**616**	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	**15.3**	ND	24.6	ND	NR	**1,078**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	2.4	ND	5.2	ND	ND	**1,473.6(15)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TF-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TF-3	5/13/02	ND	ND	ND	NA	**4.9**	NA	ND	NA	NR	32.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	2.9	ND	ND	ND	NR	21	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	ND	ND	ND	ND	**46.1**	ND	ND	ND	NR	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	ND	ND	ND	ND	**6.9**	ND	2.2	ND	ND	37.4(4)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	24.2	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.7(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	**94.9**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1(1)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-3	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	**4.1**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	25.5(2)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-4	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	**4.3**	ND	ND	ND	NR	72.5	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/08/10	ND	ND	ND	ND	**5.2**	ND	ND	ND	NR	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Gauging Data					Metals																						
Sample ID	**Date**	**TOC Elevation (ft)**	**Depth to Water (ft)**	**Depth to LNAPL (ft)**	**LNAPL Thickness (ft)**	**GW Elevation (ft)**	**Aluminum**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Calcium**	**Chromium**	**Cobalt**	**Copper**	**Iron**	**Lead**	**Magnesium**	**Manganese**	**Mercury**	**Nickel**	**Potassium**	**Selenium**	**Silver**	**Sodium**	**Thallium**	**Vanadium**	**Zinc**
NJDEP GWQS		**-**	**-**	**-**	**-**	**-**	**200**	**6**	**3**	**6000**	**NA**	**4**	**NA**	**70**	**100**	**1,300**	**300**	**5**	**NA**	**50**	**2**	**100**	**NA**	**40**	**40**	**50,000**	**2**	**60**	**2,000**
TM-5	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	18.47	8.28	NP	NP	10.19	**1,210**	<6.0	<3.0	<200	<1.0	<3.0	18,500	<10	<50	21.9	**2,520**	4.4	8,010	**5,610**	<0.20	<10	<10,000	<10	<10	48,900	<2.0	<50	<20
	09/10/10	18.47	8.26	NP	NP	10.21	**1,010**	<6.0	<3.0	<200	<5.0	<15	383,000	<50	<50	36.4	**1,180**	<15	259,000	**61,900**	<0.20	35.6	<10,000	<50	<10	**1,400,000**	<10	<50	<20
	09/21/11	18.47	8.18	NP	NP	10.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-6	5/13/02	17.68	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	17.68	6.18	6.20	0.02	11.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	17.68	7.25	7.20	0.02	10.43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/21/11	17.68	6.98	NP	NP	10.70	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TM-7	5/13/02	-	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	17.03	7.00	NP	NP	10.03	<200	<6.0	**5.2**	<200	<1.0	<3.0	121,000	<10	<50	<10	**18,600**	<3.0	46,500	**11,900**	<0.20	20	<10,000	<20	<10	**137,000**	<4.0	<50	<20
	09/10/10	17.03	7.70	NP	NP	9.33	<200	<6.0	**3.1**	<200	<2.0	<3.0	276,000	<10	<50	<10	**8,510**	<3.0	88,300	**16,000**	<0.20	44.5	<10,000	<10	<10	**201,000**	<4.0	<50	33.5
	09/21/11	17.03	7.59	NP	NP	9.44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-1	5/13/02	15.56	6.46	NP	NP	9.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**16,000**	3.7	NA	**156**	NA	NA	NA	NA	NA	27,100	NA	NA	NA
	08/31/09	Well Paved Over					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2	5/13/02	14.66	5.70	5.41	0.29	8.96	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2R	08/31/09	14.66	4.12	4.14	0.02	10.54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/07/10	14.66	5.04	NP	NP	9.62	**323**	<6.0	**9.2**	1,400	<1.0	<3.0	214,000	<10	<50	<10	**10,000**	<3.0	77,500	**8,530**	<0.20	<10	30,900	<10	<10	**324,000**	<2.0	<50	<20
	09/19/11	14.66	4.23	NP	NP	10.43	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-3	5/13/02	12.96	4.48	NP	NP	8.48	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**8,810**	NA	NA	**52**	NA	NA	NA	NA	NA	10,900	NA	NA	NA
TR-3R	09/02/09	12.93	3.34	NP	NP	9.59	**13,000**	<6.0	**9.8**	361	<1.0	<3.0	96,000	39.9	<50	46.3	**26,200**	**13.5**	18,100	**2,390**	<0.20	25.3	<10,000	<10	<10	**61,200**	<2.0	<50	57.4
	09/10/10	Could Not Locate					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	Could Not Locate					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-4	5/13/02	14.71	5.00	NP	NP	9.71	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**21,600**	**30.1**	NA	**11,200**	NA	NA	NA	NA	NA	**163,000**	NA	NA	NA
	08/31/09	14.71	4.73	NP	NP	9.98	**1,010**	<6.0	**4.5**	890	<1.0	<3.0	391,000	<10	<50	28.9	**4,100**	3.8	129,000	**20,000**	<0.20	<10	<10,000	<10	<10	**298,000**	<2.0	<50	30.8
	09/10/10	14.71	5.00	NP	NP	9.71	**18,700**	<6.0	**73.2**	568	<3.0	**6.5**	340,000	18.2	<50	54	**11,200**	**81.8**	104,000	**20,100**	<0.20	55.8	<10,000	<10	<10	**246,000**	<6.0	**95.5**	207
	09/22/11	14.71	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-5	09/22/11	14.09	3.86	NP	NP	10.23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-6	09/22/11	12.90	3.59	NP	NP	9.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG-2	5/13/02	11.13	4.63	NP	NP	6.5	NA	<10	**130**	<200	NA	NA	NA	23.9	NA	81.6	**413,000**	**51.5**	NA	**1,760**	0.93	NA	NA	16.4	NA	**981,000**	NA	NA	277
	09/01/09	11.13	4.18	NP	NP	6.95	<200	<6.0	**5.5**	<200	<1.0	<3.0	24,100	<10	<50	<10	**11,100**	<3.0	10,600	**400**	<0.20	<10	<10,000	<10	<10	**109,000**	<2.0	<50	<20
	09/10/10	11.13	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	11.13	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG-3	5/13/02	12.54	3.07	NP	NP	9.47	<200	<5.0	**31.7**	<200	NA	NA	24,500	<10	NA	<25	**25,800**	<3.0	5,490	**407**	<0.20	NA	<5,000	<5.0	NA	26,700	NA	<50	<20
	08/31/09	12.54	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	12.54	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	12.54	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-1	5/13/02	14.07	8.72	NP	NP	5.35	**10,900**	<5.0	**13.3**	<200	NA	NA	7,840	23.7	NA	53	**20,500**	**58.1**	5,640	**100**	0.37	NA	<5,000	<5.0	NA	35,100	NA	<50	94.6
	08/31/09	14.07	-	-	-	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	14.07	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	14.07	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-2	5/13/02	15.24	8.03	NP	NP	7.21	**9,140**	<5.0	**6.8**	<200	NA	NA	<5,000	18.1	NA	**16,800**	**16,800**	**26.2**	<5,000	**83**	0.25	NA	<5,000	<5.0	NA	16,600	NA	<50	62.7
	09/01/09	15.24	7.12	NP	NP	8.12	**2,050**	<6.0	<3.0	<200	<1.0	<3.0	<5,000	<10	<50	27.8	**4,370**	**8.3**	<5,000	27	<0.20	<10	<10,000	<10	<10	10,700	<2.0	<50	28.1
	09/10/10	15.24	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	15.24	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-3	5/13/02	14.66	6.40	NP	NP	8.26	**6,200**	<5.0	**85.9**	<200	NA	NA	34,900	12.4	NA	**59,300**	**59,300**	**10.2**	7,160	**145**	0.28	NA	<5,000	<5.0	NA	19,000	NA	<50	48.8
	09/01/09	14.66	6.40	NP	NP	8.26	**4,020**	<6.0	**41.4**	<200	<1.0	<3.0	12,900	11.8	<50	60.6	**37,900**	**15.3**	<5000	**284**	<0.20	<10	<10,000	<10	<10	<10000	<2.0	<50	45.1
	09/09/10	14.66	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	14.66	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds																													
Sample ID	**Date**	**Acetone**	**Benzene**	**2-Butanone (MEK)**	**Carbon disulfide**	**Chlorobenzene**	**Chloroethane**	**Chloroform**	**Cyclohexane**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**Dichlorodifluoromethane**	**1,1-Dichloroethane**	**1,2-Dichloroethane**	**1,1-Dichloroethene**	**cis-1,2-Dichloroethene**	**trans-1,2-Dichloroethene**	**1,2-Dichloropropane**	**1,4-Dioxane**	**Ethylbenzene**	**Freon 113**	**Isopropylbenzene**	**Methylcyclohexane**	**Methyl Tert Butyl Ether (MTBE)**	**Methylene chloride**	**Tert Butyl Alcohol**	**Tetrachloroethene**	**Toluene**	**1,2,3-Trichlorobenzene**	**1,2,4-Trichlorobenzene**
NJDEP GWQS		**6,000**	**1**	**300**	**700**	**50**	**5**	**70**	**NA**	**600**	**600**	**75**	**1,000**	**50**	**2**	**1**	**70**	**100**	**1**	**10**	**700**	**NA**	**NA**	**NA**	**70**	**3**	**100**	**1**	**600**	**NA**	**9**
TM-5	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-6	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/21/11	ND	**398**	ND	ND	ND	ND	ND	254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	308	ND	24.0	186	1.1J	ND	ND	ND	17.4	ND	ND
TM-7	5/13/02	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	**35.1**	ND	NR	1.1	ND	ND	17.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	5.5	16	34.3	ND	**180**	ND	ND	ND	ND
	09/10/10	ND	**87.2**	ND	NR	1.6	ND	ND	70.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26.5	ND	18.9	71.8	21.9	ND	ND	ND	ND	ND	ND
	09/21/11	11.0	**50.7**	ND	ND	1.7	ND	ND	36.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.5	ND	16.7	39.9	50.2	ND	159	ND	0.29J	ND	ND
TR-1	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	1.6	ND	**5.8**	ND	ND	ND	NA	ND	NA	NA	NA	ND	ND	NA	ND	ND	NA	NA
	08/31/09	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2	5/13/02	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2R	08/31/09	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/07/10	ND	**38,000**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**418,000**	ND	42,800	8,540	**1,540,000**	ND	ND	ND	**405,000**	ND	ND
	09/19/11	ND	**326**	ND	ND	ND	ND	ND	53.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	454	ND	18.4	59.5	**9,050[a]**	ND	**1,160**	ND	546	ND	ND
TR-3	5/13/02	ND	**2,120**	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	**7,980**	ND	NA	ND	ND	NA	NA
TR-3R	09/02/09	ND	**1,400**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	180	ND	14.3	7.4	**6,470**	ND	**50,500**	ND	30.9	ND	ND
	09/10/10	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-4	5/13/02	ND	**1,630**	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	**1,280,000**	ND	NA	ND	ND	NA	NA
	08/31/09	ND	**8,750**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,070,000**	ND	**295,000**	ND	ND	ND	ND
	09/10/10	ND	**2,260**	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,580,000**	ND	ND	ND	ND	ND	ND
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-5	09/22/11	ND	**14,100**	ND	ND	ND	ND	ND	99.2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,070**	ND	70.3J	56.0J	**51,200[b]**	ND	**35,200**	ND	91.6J	ND	ND
TR-6	09/22/11	ND	**657**	ND	ND	ND	ND	ND	11.7J	ND	ND	ND	ND	ND	ND	ND	3.8J	ND	ND	ND	109	ND	4.2J	8.8J	**16,200[a]**	ND	**206J**	ND	200	ND	ND
BG-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.88	ND	27.8	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG-3	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-1	5/13/02	ND	ND	ND	NR	1.7	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	08/31/09	NA	NA	NA	NR	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-2	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	**2.6**	ND	NA	NA
	09/01/09	44.8	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.7**	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-3	5/13/02	ND	ND	ND	NR	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	NA	NA	NA	NA	ND	NA	ND	ND	NA	NA
	09/01/09	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Volatile Organic Compounds						Semi-volatile Organic Compounds																								
Sample ID	**Date**	**1,1,1-Trichloroethane**	**1,1,2-Trichloroethane**	**Trichlorothene**	**Vinyl chloride**	**Xylene (total)**	**Total TIC, Volatile**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Benzo(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Dibenzo(a,h)anthracene**	**Fluoranthene**	**Fluorene**	**Hexachlorobenzene**	**Indeno(1,2,3-cd)pyrene**	**Naphthalene**	**Phenanthrene**	**Pyrene**	**Acetophenone**	**Benzaldehyde**	**Butyl benzyl phthalate**	**1,1'-Biphenyl**	**4-Chloroaniline**	**Carbazole**	**3,3'-Dichlorobenzidine**	**Dibenzofuran**
NJDEP GWQS		**30**	**3**	**1**	**1**	**1,000**	**500**	**400**	**100**	**2,000**	**0.1**	**0.1**	**0.2**	**100**	**0.5**	**5**	**0.3**	**300**	**300**	**0.02**	**0.2**	**300**	**100**	**200**	**700**	**NA**	**100**	**400**	**30**	**NA**	**30**	**NA**
TM-5	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TM-6	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/21/11	ND	ND	ND	ND	146	**1,339(10)J**	2.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.179	2.79	ND	ND	ND	1.15	0.315	ND	ND	ND	ND	ND	ND	ND	0.72J
TM-7	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	9	227.8	1.1	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	1.26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.56	ND	ND
	09/10/10	ND	ND	ND	ND	17.2	**649**	0.222	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.423	ND	ND	1.25	0.209	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	6.4	407(10)J	2.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.88	ND	ND	ND	2.86	0.353	ND	ND	ND	ND	ND	0.61J	ND	1.8J
TR-1	5/13/02	1.3	ND	ND	ND	ND	0.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
TR-2R	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/07/10	ND	ND	ND	ND	**2,390,000**	**3,960,000**	6.8	ND	3.39	**1.07**	**0.437**	**0.497**	0.184	0.413	0.653	NR	3.6	9.3	ND	0.165	**321**	ND	2.86	ND	ND	ND	13	ND	14.9	ND	4.4
	09/19/11	ND	ND	ND	ND	**946**	**3,210(10)J**	8.7	ND	2.18	**0.618**	**0.292**	**0.399**	0.152	0.219	0.428	ND	2.69	10.0	ND	0.169	**274[a]**	17.7	2.15	ND	ND	ND	10.8	ND	8.0	ND	4.6J
TR-3	5/13/02	ND	ND	**8.4**	ND	ND	157	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
TR-3R	09/02/09	ND	ND	ND	ND	61	**2,557**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	0.112	ND	ND	0.139	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-4	5/13/02	ND	ND	ND	ND	ND	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	ND	**16,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	3.42	ND	ND	ND	ND	ND	ND	ND	0.67	ND	ND
	09/10/10	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	33.7	0.14	ND	ND	ND	ND	0.49	ND	ND	ND	ND
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-5	09/22/11	ND	ND	ND	ND	70.7J	**2,900(2)J**	0.905	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.14	ND	ND	92.0	1.10	ND	ND	ND	ND	4.3	ND	1.2	ND	ND
TR-6	09/22/11	ND	ND	ND	ND	169	**763(10)J**	0.317	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31.7	ND	ND	ND	ND	ND	ND	ND	0.88J	ND	ND
BG-2	5/13/02	ND	ND	ND	ND	ND	3.1	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG-3	5/13/02	ND	ND	ND	ND	ND	0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-1	5/13/02	ND	ND	ND	ND	ND	0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	ND	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-2	5/13/02	ND	ND	0.58	ND	ND	0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	09/01/09	ND	ND	0.32	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-3	5/13/02	ND	ND	ND	ND	ND	0	ND	NA	ND	NA	NA	NA	NA	NA	NA	NR	ND	ND	NA	NA	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	ND
	09/01/09	ND	ND	ND	ND	ND	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	NR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 3
Annual Groundwater Summary Data Table
Hess Corporation - Port Reading
750 Cliff Road
Port Reading, Middlesex County, New Jersey

		Semi- Volatile Organic Compounds																					
Sample ID	**Date**	**Di-n-butyl phthalate**	**Di-n-octyl phthalate**	**Diethyl phthalate**	**Dimethyl phthalate**	**bis(2-Ethylhexyl)phthalate**	**Isophorone**	**2-Methylnaphthalene**	**4-Nitroaniline**	**1,2,4,5 Tetrachlorobenzene**	**Total TIC, Semi-Volatile**	**1,2-Dichlorobenzene**	**1,3-Dichlorobenzene**	**1,4-Dichlorobenzene**	**1,2,4-Trichlorobenzene**	**Pentachlorophenol**	**4-Chloro-3-methyl phenol**	**2,4-Dimethylphenol**	**2-Methylphenol**	**3&4-Methylphenol**	**Phenol**	**2,4,5-Trichlorophenol**	**2,4,6-Trichlorophenol**
NJDEP GWQS		**NA**	**100**	**6,000**	**NA**	**3**	**40**	**30**	**NA**	**NA**	**500**	**600**	**600**	**75**	**9**	**0.3**	**NA**	**100**	**NA**	**NA**	**2,000**	**700**	**20**
TM-5	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	**3.7**	ND	ND	ND	NR	0.0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	ND	ND	ND	NR	24.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	1.3J	ND	ND	ND	ND	0.0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-6	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/21/11	ND	ND	ND	ND	**15.6**	ND	1.1	ND	ND	**514(15)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TM-7	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/02/09	ND	ND	ND	ND	1.1	ND	ND	ND	NR	151.3	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	1.1	ND	ND	ND	NR	42.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/11	ND	ND	ND	ND	**11.7**	ND	2.3	ND	ND	453(15)J	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TR-1	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-2R	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/07/10	ND	ND	ND	ND	2.1	ND	**211**	ND	NR	**5,274**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/11	ND	ND	ND	ND	2.7	ND	**237[a]**	ND	ND	**2,263(15)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TR-3	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-3R	09/02/09	ND	ND	ND	ND	ND	ND	ND	8.2	NR	174.3	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-4	5/13/02	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/31/09	ND	ND	ND	ND	1.2	ND	ND	ND	NR	757	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	ND	ND	ND	ND	ND	ND	1.9	ND	NR	**4,206**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TR-5	09/22/11	ND	ND	ND	ND	ND	ND	5.9	ND	ND	**1,599(15)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TR-6	09/22/11	ND	ND	ND	ND	**4.3**	ND	4.1	ND	ND	**714(11)J**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BG-2	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	7.1	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	20	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BG-3	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	0	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-1	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	53	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	08/31/09	NA	NA	NA	NA	NA	NA	NA	NA	NR	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-2	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	63	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	ND	ND	ND	ND	NR	0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/10/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SP-3	5/13/02	ND	ND	ND	NA	ND	NA	ND	NA	NR	80	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	NA	NA
	09/01/09	ND	ND	ND	ND	1.1	ND	ND	ND	NR	0	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
	09/09/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/22/11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

NA- Not Analyzed/Not Available
NM - Not Monitored
ND- Not Detected
NR- Not Reported

All Data in ug/L unless otherwise noted
[a]- Results are from second run
J- Estimated Value

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Base Neutrals																															
Sample ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Acetophenone	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-Ethylhexyl) phthalate	Chrysene	Carbazole	Caprolactam	2-Chloronaphthalene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Butyl benzyl phthalate	1,1'-Biphenyl	4-Chloroaniline	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	bis(2-Ethylhexyl)phthalate	Isophorone	2-Methylnaphthalene	N-Nitroso-di-n-propylamine	Total Semi-Volatile (TIC)
NJDEP GWQS		400	100	2,000	700	0.1	0.1	0.2	100	0.5	2	5	NA	5000	600	0.3	NA	300	300	0.2	300	100	200	100	400	30	700	100	6,000	3	40	30	10	500
TR-TW-1	10/13/2009	0.994	ND	1.23	ND	6.2	4.03	9.4	2.83	4	NA	4.22	NA	ND	ND	0.555	NA	14.7	1.15	2.7	15.3	10.7	12.2	ND	ND	ND	ND	ND	ND	7.5	ND	19.1	ND	286 J
TR-TW-2	10/14/2009	41.4	ND	ND	ND	13.9	5.55	9.22	10.7	4.54	NA	8.65	NA	ND	ND	3.11	NA	33	97.6	6.74	134	91.5	68.1	ND	ND	ND	ND	ND	ND	1,080	ND	685	ND	5,660 J
TR-TW-3	10/14/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	175	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	225	ND	5,473 J
TR-TW-4	10/14/2009	20.8	ND	ND	ND	7.14	ND	ND	ND	ND	NA	5.35	NA	ND	ND	ND	NA	6.28	69.2	ND	15.7	36.8	11.6	ND	ND	ND	ND	ND	ND	15.4	ND	75.3	ND	7,520
TR-TW-5	10/14/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	341	ND	ND	ND	8.8 J	ND	ND	ND	ND	ND	ND	111	ND	6,580 J
TR-TW-6	10/14/2009	5.25	ND	1.48	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	2.64	5.29	ND	437	4.62	2.48	ND	10.4 J	ND	ND	ND	ND	ND	ND	281	ND	7,490 J
TR-TW-7	10/14/2009	3.37	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	1.79	3.55	ND	357	5.24	1.67	ND	5.4 J	ND	ND	ND	ND	ND	ND	242	ND	3,339 J
TR-TW-8	10/14/2009	567	ND	330	ND	24.5	34.6	48.4	25.3	22.3	NA	18.9	NA	ND	ND	11.8	NA	279	839	21.7	23,500	2,270	293	ND	1,070	ND	ND	ND	ND	ND	ND	33,600	ND	106,000 J
TR-TW-9	10/14/2009	25.4	ND	5.13	ND	10.6	3.04	4.62	1.76 J	2.09	NA	6.11	NA	ND	ND	ND	NA	24.2	33.9	3.42	1,550	82.9	21.5	ND	45.4	ND	ND	ND	ND	ND	ND	1,950	ND	20,520 J
TR-TW-10	10/14/2009	34.2	ND	9.9	ND	5.49	1.49	1.95	ND	0.922 J	NA	2.54	NA	ND	ND	ND	NA	8.38	39.1	ND	1,350	33	8.34	ND	70.1	ND	ND	ND	ND	20.2	ND	1,360	ND	16,120 J
TR-TW-11	10/21/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TR-TW-12	10/21/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TR-TW-13	10/22/2009	19.8	ND	4.53	ND	1.7	0.76	1.44	0.429	0.287	NA	1.41	NA	ND	ND	0.23	NA	4.04	21.8	0.445	728	51.5	5.9	ND	29.1	ND	ND	ND	ND	10.6	ND	632	ND	7,570 J
*TR-TW-14	10/22/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TR-TW-15	10/22/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	3.51	ND	0.185	ND	ND	ND	ND	ND	ND	ND	ND	3.7	ND	241.1 J
TR-TW-16	10/22/2009	ND	ND	0.125	ND	0.436	0.336	0.555	0.683	0.285	NA	0.463	NA	ND	ND	ND	NA	0.432	0.129	1.28	0.946	0.271	0.493	ND	ND	ND	ND	ND	ND	5.4	ND	ND	ND	11.1 J
TR-TW-17	10/22/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	2.04	0.126	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	21.8 J
AD-TW-1	10/15/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AD-TW-2	10/16/2009	ND	0.305	0.458	ND	0.807	0.796	1.54	0.848	0.601	NA	1.07	NA	ND	ND	0.246	NA	1.21	ND	0.758	ND	0.513	1.25	ND	ND	ND	1.7 J	ND	ND	8.9	ND	ND	ND	5.9 J
AD-TW-3	10/15/2009	ND	ND	ND	ND	0.221	ND	0.139	ND	ND	NA	ND	NA	ND	ND	0.134	NA	0.186	0.16	0.139	2.29	0.159	0.173	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	642 J
AD-TW-4	10/16/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	ND	ND	13 J
AD-TW-5	10/15/2009	ND	ND	ND	ND	0.175	ND	ND	ND	ND	NA	0.0914 J	NA	ND	ND	ND	NA	0.143	ND	ND	0.983	0.155	0.137	ND	ND	ND	ND	ND	ND	2 J	ND	ND	ND	189.7 J
AD-TW-6	10/15/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	0.634	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AD-TW-7	10/15/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	1.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	0
AD-TW-8	10/16/2009	0.375	ND	0.455	ND	0.379	0.363	ND	0.624	ND	NA	0.801	NA	ND	ND	ND	NA	0.759	0.536	0.251	1.08	1.31	1	ND	ND	ND	ND	15.5	ND	132	ND	2.6	ND	296 J
AD-TW-9	10/15/2009	0.572	ND	0.188	ND	0.226	ND	ND	ND	ND	NA	0.226	NA	ND	ND	ND	NA	0.312	0.312	ND	ND	0.743	0.323	ND	ND	ND	ND	ND	3.3	3.7	ND	13.4	ND	2,810.9 J
AD-TW-10	10/16/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	ND	ND	ND	67 J
TM-TW-1	10/16/2009	ND	0.548	1.01	ND	1.28	1.01	1.69	0.799	0.974	NA	1.76	NA	ND	ND	0.396	NA	2.14	ND	0.834	0.364	1.01	2.13	1.6 J	1.6 J	ND	ND	ND	ND	162	ND	ND	ND	134.1 J
TM-TW-2	10/16/2009	ND	ND	0.164	ND	0.306	ND	ND	0.162	ND	NA	0.318	NA	ND	ND	ND	NA	0.467	ND	0.165	ND	0.279	0.514	ND	ND	ND	ND	ND	ND	156	ND	ND	ND	17 J
TM-TW-3	10/15/2009	15.2	ND	1.19	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	16.5	ND	306	10.5	ND	ND	ND	ND	ND	ND	ND	197	ND	668	ND	4,960 J
TM-TW-4	10/15/2009	ND	ND	ND	ND	0.238	ND	ND	ND	ND	NA	0.254	NA	ND	ND	ND	NA	0.268	ND	ND	0.84	0.228	0.275	ND	ND	ND	ND	ND	ND	11.8	ND	1.8 J	ND	124.3 J
TM-TW-5	10/19/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	0
TM-TW-6	10/19/2009	0.117	ND	ND	ND	0.2	ND	ND	ND	ND	NA	0.082 J	NA	ND	ND	ND	NA	0.227	0.114	ND	ND	0.331	0.221	ND	0.44 J	ND	ND	ND	ND	1.6 J	ND	97.5	3,260	1,703 J
TM-TW-7	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	3.59	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	302.7 J
TM-TW-8	10/20/2009	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.253	ND	25.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.8	ND	257.5 J
TM-TW-9	10/20/2009	1.21	ND	0.185	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.184	0.617	ND	14.9	1.36	0.117	ND	ND	ND	ND	ND	ND	ND	ND	15.1	ND	450 J
TM-TW-10	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	0.354	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TM-TW-11	10/20/2009	3.08	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	2.98	ND	ND	0.353	0.227	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	166.9 J
TM-TW-12	10/20/2009	0.528	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.132	0.693	ND	8.4	1.19	0.157	ND	0.65 J	ND	ND	ND	ND	ND	ND	13.6	ND	189.6 J
TM-TW-13	10/20/2009	0.462	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.491	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.7 J
TM-TW-14	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.121	ND	1.44	ND	ND	ND	ND	ND	ND	3.1	ND	1.6 J	ND	0.99 J	ND	233.8 J
TF-TW-1	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	0.128	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TF-TW-2	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TF-TW-3	10/21/2009	0.605	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.144	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
TF-TW-4	10/21/2009	3.68	ND	0.388	ND	0.162	ND	ND	ND	ND	NA	0.312	NA	ND	ND	ND	NA	0.455	3.33	ND	50.4	4.32	0.354	ND	ND	ND	ND	ND	ND	ND	ND	30.6	ND	572 J
TF-TW-5	10/21/2009	2.47	0.460	0.580	ND	ND	ND	ND	ND	ND	ND	ND	0.52J	ND	ND	ND	0.70J	0.356	1.58	ND	6.31	1.80	0.276	ND	ND	ND	ND	ND	ND	ND	ND	6.9	ND	72.4J(8)
TF-TW-6	10/24/2011	1.76	ND	1.80	ND	0.65	0.410	ND	ND	ND	ND	0.982J	ND	ND	ND	ND	ND	0.683J	5.81	ND	4.05	9.64	1.18	ND	ND	ND	ND	ND	ND	ND	ND	57.3	ND	694
TF-TW-7	10/24/2011	ND	ND	ND	ND	0.142	ND	ND	ND	ND	0.433J	0.360J	ND	ND	ND	ND	ND	ND	ND	ND	0.493J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.302J	ND	189
PL-TW-1	10/19/2009	0.489	ND	0.224	ND	0.255	ND	ND	ND	ND	NA	0.0777 J	NA	ND	ND	ND	NA	0.295	0.339	ND	0.905	1.07	0.409	ND	ND	1.1 J	ND	ND	ND	1.3 J	ND	ND	ND	13.6 J
PL-TW-2	10/19/2009	0.158	ND	0.215	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.154	0.296	ND	ND	0.72	0.119	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32 J
PL-TW-3	10/19/2009	0.65	ND	0.301	ND	0.163	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.253	0.972	ND	ND	1.48	0.253	ND	ND	ND	ND	1.3 J	ND	1.9 J	ND	ND	ND	4.4 J
PL-TW-4	10/19/2009	0.686	ND	0.403	ND	0.379	0.159	0.149	ND	0.044 J	NA	0.148	NA	ND	ND	ND	NA	0.408	0.65	ND	ND	1.44	0.794	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	26.9 J
PL-TW-5	10/19/2009	0.245	ND	0.121	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.139	ND	ND	0.381	ND	ND	ND	0.55 J	ND	ND	ND	ND	ND	ND	ND	0
PL-TW-6	10/21/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.231	ND	ND	0.197	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3 J	ND	0
PL-TW-7	10/21/2009	0.315	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	1.33	ND	0.343	0.908	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	154.9 J
PL-TW-8	10/21/2009	0.526	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	1.09	ND	33.2	1.19	ND	ND	0.9 J	ND	ND	ND	ND	ND	25	ND	ND	241.1 J
PL-TW-9	10/22/2009	ND	ND	0.545	ND	0.656	0.528	ND	0.4	ND	NA	0.616	NA	ND	ND	0.349	NA	0.56	0.564	0.246	3.8	0.947	1.12	ND	ND	ND	ND	ND	ND	ND	ND	6.1	ND	132 J
PL-TW-10	10/22/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17.2 J
PL-TW-11	10/22/2009	ND	ND	0.334	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.302	0.988	ND	8.6	1.55	0.481	ND	1.5 J	ND	ND	ND	ND	ND	ND	14.1	ND	503 J
PL-TW-12	10/22/2009	0.393	ND	0.131	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.577	ND	8.5	0.587	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8	ND	127.9 J
PL-TW-13	10/22/2009	ND	ND	ND	ND	0.517	0.898	ND	ND	ND	NA	1.1	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	0.503	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	366 J
PL-TW-14	10/22/2009	62.7	1.84	18.3	ND	12.9	4.03	7.3	1.05	3.1	NA	9.6	NA	ND	ND	0.86	NA	62.1	52.4	1.41	249	107	43.5	ND	7.3	ND	ND	ND	ND	ND	ND	56.7	ND	613 J
PL-TW-15	10/23/2009	16.4	ND	12.9	ND	7.6	4.19	5.8	1.92	2.7	NA	10	NA	ND	ND	0.777	NA	19.6	16.4	2.45	138	31.6	15.8	ND	ND	ND	ND	ND	ND	6.8	ND	54.5	ND	2,146 J
PL-TW-16	10/23/2009	11.7	ND	6.3	ND	2.98	1.67	2.7	0.886	0.77 J	NA	3.09	NA	ND	ND	ND	NA	11.9	9.4	0.664	24.6	34.3	9.2	ND	ND	ND	ND	ND	ND	10.4	ND	19.8	ND	4,170 J
PL-TW-17	10/23/2009	1.11	ND	0.217	ND	0.197	ND	ND	ND	ND	NA	0.211	NA	ND	ND	ND	NA	0.527	0.653	ND	0.206	1.43	0.605	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	672 J
PL-TW-18	10/23/2009	ND	ND	0.395	ND	0.402	0.355	ND	ND	ND	NA	0.664	NA	ND	ND	ND	NA	0.328	1.29	ND	2.34	2.68	0.677	ND	ND	ND	ND	ND	ND	ND	ND	5.7	ND	1,026 J
PL-TW-19	10/23/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PL-TW-20	10/26/2011	ND	ND	ND	ND	3.66	2.14	2.43	0.989 J	1.85 J	NA	3.64	ND	ND	ND	0.461	ND	ND	ND	0.989 J	ND	ND	14.2	ND	ND	ND	ND	ND	ND	1.77	ND	ND	ND	1280

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Base Neutrals																															
Sample ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Acetophenone	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-Ethylhexyl) phthalate	Chrysene	Carbazole	Caprolactam	2-Chloronaphthalene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Butyl benzyl phthalate	1,1'-Biphenyl	4-Chloroaniline	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	bis(2-Ethylhexyl)phthalate	Isophorone	2-Methylnaphthalene	N-Nitroso-di-n-propylamine	Total Semi-Volatile (TIC)
NJDEP GWQS		400	100	2,000	700	0.1	0.1	0.2	100	0.5	2	5	NA	5000	600	0.3	NA	300	300	0.2	300	100	200	100	400	30	700	100	6,000	3	40	30	10	500
HS14-TW-1	9/17/2010	41.6	0.553	6	ND	8	4.42	6.2	2.08	3.97	NA	9.6	NA	ND	ND	0.953	NA	38.6	29.1	2.03	0.925	24.6	31.2	ND	ND	ND	ND	ND	ND	15.1	ND	0.91	ND	273.7
HS14-TW-2	9/17/2010	16.8	ND	0.296	ND	0.374	ND	0.176	ND	0.155	NA	0.315	NA	ND	ND	ND	NA	1.13	1.01	ND	0.15	0.345	1.01	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	46.2
HS14-TW-3	9/17/2010	17.2	ND	0.812	ND	1.5	0.166	0.43	ND	0.346	NA	1.16	NA	ND	ND	ND	NA	7.8	1.6	ND	0.312	0.61	5.1	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	209.1
HS14-TW-4	9/17/2010	67.7	ND	ND	ND	3.5	1.19	2.37	1	1.47	NA	4.9	NA	ND	ND	0.448	NA	15.3	122	0.8	16.3	101	18.3	ND	ND	ND	ND	ND	ND	69.4	ND	29.5	ND	6,250
HS14-TW5	10/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
HS14-TW6	10/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
*HS14-TW7	10/26/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HS14-TW8	10/26/2011	7.85	0.265 J	2.39	ND	0.573	0.461	0.197	0.35	0.164	NA	1.38	1.63	ND	ND	ND	1.84	1.71	8.89	ND	36.5	16.5	3.21	ND	2.35	ND	ND	0.236 J	ND	0.478	ND	17.3	ND	389.7J(15)
HS14-TW9	10/26/2011	176	1.48 J	36.7	ND	41.8	22.6	22.3	6.56	19.9	NA	30.3	8.72	ND	ND	3.7	112	218	149	7.42	67.5	337	141	ND	4.3	ND	ND	ND	ND	ND	ND	135	ND	711.6J(15)
AB-TW-1	9/17/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AB-TW-2	9/17/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AB-TW-3	9/17/2010	0.615	ND	0.352	ND	0.776	0.222	ND	ND	ND	NA	0.825	NA	ND	ND	ND	NA	0.82	ND	ND	ND	0.467	1.79	ND	ND	ND	ND	ND	ND	22.1	ND	ND	ND	232.2
AB-TW-4	9/17/2010	0.916	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	1.04	ND	0.115	1.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	156.9
HS9-TW-1	9/20/2010	25.5	ND	5.13	ND	3.5	1.27	ND	ND	ND	NA	6.1	NA	ND	ND	ND	NA	2.15	25.3	ND	259	53.2	15.1	ND	11.8	ND	ND	ND	ND	6	ND	457	ND	2,035
HS9-TW-2	9/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.285	ND	0.269	0.801	0.131	ND	0.76	ND	ND	ND	ND	ND	ND	3.3	ND	28
HS9-TW-3	9/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.164	ND	ND	0.566	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11
HS9-TW-4	9/21/2010	0.166	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.283	ND	0.182	0.815	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.7
HS6-TW-1	9/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	0.238	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS6-TW-2	9/21/2010	0.197	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.138	ND	0.858	0.244	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
**HS6-TW-3	9/21/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HS6-TW-4	9/21/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	0
HS6-TW-5	9/21/2010	ND	ND	ND	0.52	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16
HS4-TW-1	9/21/2010	111	ND	55.1	ND	23.2	10.5	14	5.51	10.5	NA	ND	NA	ND	ND	ND	NA	81.2	214	4.58	68.4	512	110	ND	10.8	ND	ND	ND	ND	42.8	ND	707	ND	10,070
HS4-TW-2	9/21/2010	156	ND	19.8	ND	20.4	5.83	ND	3.8	ND	NA	161	NA	ND	ND	ND	NA	16.6	347	ND	ND	511	169	ND	ND	ND	ND	ND	ND	ND	ND	2,820	ND	4,140
HS4-TW-3	9/21/2010	3.81	ND	1.15	ND	0.168	ND	ND	ND	ND	NA	0.151	NA	ND	ND	ND	NA	1.35	1.65	ND	0.179	3.55	0.873	ND	ND	ND	ND	ND	ND	32.5	ND	1.3	ND	172
HS8-TW-1	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.133	ND	ND	ND	0.113	0.121	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	21.3
HS8-TW-2	9/22/2010	20.4	ND	ND	ND	0.35	0.111	0.125	0.125	0.0704	NA	0.389	NA	ND	ND	ND	NA	0.875	41.7	ND	14.7	62.3	2.13	ND	ND	ND	ND	ND	ND	3.2	ND	829	ND	490
HS8-TW-3	9/22/2010	4.54	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.242	15.5	ND	ND	0.68	0.634	ND	ND	ND	ND	ND	ND	7.7	ND	ND	ND	884.6
HS8-TW-4	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS8-TW-5	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.136	ND	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.7
HS8-TW-6	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS8-TW-7	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	0
HS2-TW-1	9/22/2010	3.93	ND	0.812	ND	0.334	ND	ND	ND	ND	NA	0.12	NA	ND	ND	ND	NA	2.39	3.16	ND	0.636	4.91	1.53	ND	0.55	ND	ND	ND	ND	2.1	ND	ND	ND	57.5
HS2-TW-2	9/22/2010	0.987	ND	0.12	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.255	0.472	ND	ND	0.31	0.253	ND	ND	ND	ND	ND	ND	2.5	ND	1.1	ND	191.9
HS2-TW-3	9/22/2010	401	3.16	39.8	ND	13.7	1.56	3.34	0.376	1.85	NA	11.5	NA	ND	ND	0.131	NA	140	249	0.413	20.5	397	81.5	ND	47.1	ND	ND	ND	ND	16.4	ND	21	ND	703
HS2-TW4	11/21/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.5
HS2-TW5	11/21/2011	6.92	ND	1.13	ND	0.27	ND	0.128	ND	0.114	0.342 J	0.474 J	1.38	ND	ND	ND	2.54	3.13	4.14 J	ND	ND	5.56	1.95	ND	0.555 J	ND	ND	ND	0.298 J	ND	ND	ND	ND	ND
HS16-TW-1	9/23/2010	ND	ND	0.108	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.137	ND	ND	ND	0.189	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AU-TW-1	9/23/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	0.319	0.123	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	0
AU-TW-2	9/23/2010	97.3	ND	17.4	ND	0.475	ND	ND	ND	ND	NA	0.402	NA	ND	ND	ND	NA	3.4	91.5	ND	284	331	8.5	ND	16.7	ND	ND	ND	ND	ND	ND	1,160	ND	3,107
AU-TW-3	9/23/2010	3.36	0.551	0.529	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.116	2.6	ND	1.52	9.7	ND	ND	0.83	ND	ND	ND	ND	ND	ND	23.2	ND	246.4
AU-TW-4	9/23/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AU-TW-5	9/23/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	1.24	0.279	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.9	ND	56.1
CR-TW-1	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
CR-TW-2	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	0.139	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	74
CR-TW-3	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
BR-TW-2	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
BR-TW-3	9/28/2010	0.696	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	1.21	ND	2.39	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.6	ND	78.7
BR-TW-4	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS18-TW-1	9/29/2010	1.62	ND	0.12	ND	0.242	ND	ND	ND	ND	NA	0.146	NA	ND	ND	ND	NA	0.311	1.71	ND	202	1.05	0.317	ND	ND	ND	ND	ND	ND	4.9	ND	219	ND	868
HS18-TW-2	9/29/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	10.1	NA	ND	ND	ND	NA	5.19	20.9	ND	ND	76.4	7.1	ND	ND	ND	ND	ND	ND	ND	ND	262	ND	1,837
HS18-TW-3	10/6/2010	1.31	ND	0.731	ND	0.536	ND	ND	ND	ND	NA	0.639	NA	ND	ND	ND	NA	2.44	1.51	ND	ND	3.61	1.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	510
HS18-TW-4	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11
HS18-TW5	10/25/2011	20.7	3.02	30.3	ND	14.0	7.18	12.8	2.38	10.0	NA	17.6	3.70	ND	ND	ND	10.9	84.3	24.0	2.7	88.8	76.5	45.7	ND	ND	ND	ND	ND	ND	ND	ND	106	ND	1570
HS18-TW6	10/25/2011	13.3	ND	1.43	ND	7.19	3.28	2.11	ND	2.58	NA	4.66	ND	ND	ND	ND	5.61	5.21	20.5	ND	14.2	33.8	6.36	ND	ND	ND	ND	ND	ND	ND	ND	118	ND	902
HS18-TW7	10/25/2011	2.39	ND	0.825 J	ND	0.458	0.403	0.131	ND	0.102	NA	0.819 J	1.29	ND	ND	ND	ND	0.629 J	2.13	ND	5.77	3.73	1.66	ND	ND	ND	ND	ND	ND	ND	ND	11.4	ND	478
HS18-TW8	10/25/2011	1.79 J	ND	ND	ND	0.398	0.211	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	2.95 J	ND	210	4.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	63.8	ND	1040
HS18-TW9	10/25/2011	3.08	ND	1.17	ND	1.14	ND	ND	ND	ND	NA	1.59	ND	ND	ND	ND	ND	0.485 J	4.31	ND	26.5	6.29	0.846 J	ND	ND	ND	ND	ND	ND	ND	ND	47.3	ND	537
HS18-TW10	10/25/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	0.313 J	0.375 J	ND	5.97	0.627 J	0.334 J	ND	ND	ND	ND	ND	ND	0.324 J	ND	4.05	ND	83.5
HS18-TW11	10/25/2011	27.1	ND	1.47 J	ND	0.501	0.249	0.154	ND	ND	NA	ND	5.91	ND	ND	ND	ND	3.23	8.04	ND	330	10.8	1.98 J	ND	3.87	ND	ND	ND	ND	ND	ND	80.8	ND	3100
HS18-TW12	10/25/2011	2.75	13.2	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	1.53	10.3	ND	92.4	16.3	1.85	ND	ND	ND	ND	ND	ND	ND	ND	210	ND	2560
HS18-TW13	10/25/2011	53.5	0.874 J	9.54	ND	3.2	1.12	1.91	ND	1.52	NA	3.10	5.28	ND	ND	ND	19.8	31.1	29.9	ND	12.8	57.2	17.6	ND	ND	ND	ND	ND	ND	ND	ND	44.9	ND	354

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Base Neutrals																															
Sample ID	Date	Acenaphthene	Acenaphthylene	Anthracene	Acetophenone	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-Ethylhexyl) phthalate	Chrysene	Carbazole	Caprolactam	2-Chloronaphthalene	Dibenzo(a,h)anthracene	Dibenzofuran	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Butyl benzyl phthalate	1,1'-Biphenyl	4-Chloroaniline	Di-n-butyl phthalate	Di-n-octyl phthalate	Diethyl phthalate	bis(2-Ethylhexyl)phthalate	Isophorone	2-Methylnaphthalene	N-Nitroso-di-n-propylamine	Total Semi-Volatile (TIC)
NJDEP GWQS		400	100	2,000	700	0.1	0.1	0.2	100	0.5	2	5	NA	5000	600	0.3	NA	300	300	0.2	300	100	200	100	400	30	700	100	6,000	3	40	30	10	500
HS5-TW-1	9/29/2010	4.3	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.119	1.2	ND	ND	0.431	0.161	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS5-TW-2	9/29/2010	3.35	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.266	0.839	ND	0.602	0.316	0.178	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS5-TW-3	9/29/2010	8	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	2.04	ND	ND	0.145	0.134	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
HS5-TW-4	9/29/2010	0.327	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.376	0.545	ND	0.189	ND	0.504	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	383
HS5-TW-5	9/29/2010	1.22	ND	0.148	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	2.02	ND	0.703	1.79	ND	ND	2	ND	ND	ND	ND	ND	ND	4.2	ND	133.9
HS5-TW-6	9/29/2010	7.34	ND	1.39	ND	**0.412**	ND	ND	ND	ND	NA	0.423	NA	ND	ND	ND	NA	2.49	5	ND	1.03	1.97	1.88	ND	ND	ND	ND	ND	ND	**4.8**	ND	ND	ND	307
HS5-TW-7	10/6/2010	2.03	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.22	1.09	ND	ND	0.717	0.215	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	316
HS5-TW-8	10/6/2010	15.2	ND	3.28	ND	ND	ND	ND	ND	ND	NA	**5.4**	NA	ND	ND	ND	NA	7.12	27.7	ND	ND	54.2	8.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**11,510**
AOC15-TW-1	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-2	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-3	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-4	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-5	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-6	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
AOC15-TW-7	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.429	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	41.8
AOC15-TW-8	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	15.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**510**
AOC15C-TW9	10/25/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	0.326	ND	ND	ND	0.352	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AOC15C-TW10	10/25/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.2
AOC15C-TW11	10/25/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	8.4
DS-TW-1	10/5/2010	0.178	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.19	ND	ND	0.167	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-2	10/5/2010	0.21	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.901	ND	0.697	0.216	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	20
DS-TW-3	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-4	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	0.146	ND	ND	ND	ND	0.155	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-5	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-6	10/5/2010	0.196	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.538	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-7	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
DS-TW-8	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS11-TW-1	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
HS11-TW-2	10/6/2010	0.671	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	1.48	ND	ND	1.53	0.192	ND	ND	ND	ND	ND	ND	ND	ND	15.4	ND	453
HS11-TW-3	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	12.2	ND	ND	24.6	2.33	ND	ND	ND	ND	ND	ND	ND	ND	**155**	ND	**1,914**
HS11-TW-4	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130
HS1-TW-1	10/6/2010	0.551	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	NA	ND	0.679	ND	0.689	0.592	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	79.2
AOC6-TW1	10/24/2011	4.77	ND	3.45	ND	2.94	2.41	**1.15**	ND	**1.18**	ND	2.62	ND	ND	ND	ND	ND	ND	15.8	ND	5.49	24.8	3.17	ND	ND	ND	ND	ND	ND	ND	ND	**103**	ND	1,280
AOC6-TW2	10/25/2011	3.85	ND	ND	ND	**0.448**	ND	ND	ND	ND	NA	0.423 J	ND	ND	ND	ND	ND	1.20	1.04	ND	4.77	ND	1.20	ND	0.649 J	ND	ND	ND	ND	2.07	ND	0.568 J	ND	147
SLF-TW-1	10/27/2009	3.7	ND	1.6	ND	**2.8**	**1.1**	**0.43 J**	ND	ND	ND	4.5	ND	ND	ND	ND	ND	1.4	7	ND	29.3	17	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**835 J**
*SLF-TW-2	10/28/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SLF-TW-3	10/27/2009	2.2	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	21.2	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	320.6 J
SLF-TW-4	10/27/2009	3.8	ND	0.63 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.52 J	3.3	ND	40	3.4	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	433.1 J
SLF-TW-5	10/27/2009	11.6	ND	4.6	ND	**3.2**	**1.8**	ND	ND	ND	ND	5	ND	ND	ND	ND	ND	4.5	12	ND	33.6	27.6	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**966 J**
SLF-TW-6	10/27/2009	1.4	ND	0.29 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	2.8	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	207.8 J
SLF-TW-7	10/27/2009	0.6 J	ND	0.26 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.21 J	1.1	ND	1.3	1.6	0.37 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	117.8 J
SLF-TW-8	10/27/2009	4.1	ND	0.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26 J	5.6	ND	37.9	6.4	0.29 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,034 J**
SLF-TW-9	10/27/2009	1.3	ND	0.36 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	21.7	2.9	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	198.8 J
SLF-TW-10	10/27/2009	4.7	ND	1.6	ND	**1.1 J**	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	1.4	4.9	ND	5.5	10.7	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**751 J**
SLF-TW-11	10/27/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
SLF-TW-12	10/27/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.1 J
SLF-TW-13	9/15/2010	1.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.84	ND	31	1.92	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	169.3
SLF-TW-14	9/15/2010	0.616	ND	0.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.13	ND	2.2	1.97	0.203	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	49.6
SLF-TW-15	9/15/2010	3.03	ND	1.75	ND	**2.82**	**1.94**	**1.07**	0.501	0.475	ND	4.61	ND	ND	ND	**0.416**	ND	1.21	9.9	**0.258**	73.7	26.7	4.35	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	**955**
SLF-TW-16	9/15/2010	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.25	ND	6.6	2.44	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**950**
SLF-TW-17	9/15/2010	5.13	ND	0.982	ND	**0.199**	ND	ND	ND	ND	ND	0.317	ND	ND	ND	ND	ND	0.347	4.7	ND	23.7	5.4	0.847	ND	0.79	ND	ND	ND	ND	ND	ND	ND	ND	220.2
SLF-TW-18	9/15/2010	3.57	ND	0.605	ND	**0.134**	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	0.249	3.25	ND	45.3	4.68	0.53	ND	0.44	ND	ND	ND	ND	ND	ND	ND	ND	220.6
SLF-TW-19	9/15/2010	32.1	ND	18.9	ND	**2.19**	**2.16**	**0.958**	0.69	**1.53**	ND	2.74	ND	ND	ND	**0.44**	ND	2.48	53.8	**0.335**	286	**164**	11.5	ND	10.3	ND	ND	ND	ND	ND	ND	ND	ND	**1,043**
SLF-TW-20	9/15/2010	1.33	ND	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.136	0.986	ND	12.5	1.08	0.231	ND	0.59	ND	ND	ND	ND	ND	ND	ND	ND	52
SLF-TW-21	9/15/2010	36.8	ND	16.7	ND	**2.9**	**2.33**	**1.99**	0.964	**1.16**	ND	4.71	ND	ND	ND	**0.72**	ND	3.52	62.4	**0.422**	219	**213**	16.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**949**
SLF-TW-22	9/15/2010	7	ND	2.42	ND	**0.704**	**0.41**	**0.251**	0.134	0.0936	ND	0.781	ND	ND	ND	ND	ND	1.17	7.2	ND	231	13.6	2.28	ND	10.5	ND	ND	ND	ND	ND	ND	ND	ND	**634**
SLF-TW-23	9/16/2010	9.1	ND	2.56	ND	**0.316**	ND	ND	ND	ND	ND	0.58	ND	5.6	ND	ND	ND	1.56	ND	ND	66.6	17.5	1.66	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	474
SLF-TW-24	9/16/2010	0.448	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.382	ND	0.21	0.342	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
SLF-TW-25	9/16/2010	4	ND	1.52	ND	**2.27**	**1.22**	**0.7**	0.266	0.116	ND	3.51	ND	ND	ND	0.169	ND	1.11	5.5	0.14	148	17.4	4.32	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**622**
SLF-TW-26	9/16/2010	5.58	ND	1.34	ND	**0.334**	ND	ND	ND	ND	ND	0.368	ND	ND	ND	ND	ND	1.91	5.47	ND	5.59	8.9	1.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	116.3
SLF-TW-27	9/16/2010	20.5	ND	4.19	ND	**0.953**	**0.329**	ND	ND	ND	ND	1.09	ND	5.6	ND	ND	ND	6.68	16.4	ND	49.1	29.8	5.07	ND	0.91	ND	ND	ND	ND	ND	ND	ND	ND	341
SLF-TW-28	9/16/2010	17.2	ND	1.79	ND	**0.304**	**0.169**	0.15	ND	0.0728	ND	0.442	ND	ND	4.5	ND	ND	0.836	33.9	ND	**433**	82.3	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1,625**
SLF-TW-29	9/16/2010	63.8	ND	16.5	ND	**0.755**	**0.424**	**0.78**	0.25	0.221	ND	1.13	ND	ND	ND	0.108	ND	3.84	36.3	**0.228**	24.1	100	2.67	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,396**
SLF-TW-30	9/16/2010	2.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.77	ND	1.24	2.56	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0
SLF-TW-31	9/16/2010	24.3	ND	20.8	ND	**4.07**	**3.54**	**3.56**	1.54	**2.32**	ND	**9.3**	ND	ND	ND	**0.55**	ND	15.2	48.8	**1.31**	83.8	**149**	23.1	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	**1,428**
SLF-TW-32	9/16/2010	10.6	ND	4.44	ND	**1.42**	**0.593**	**0.539**	0.348	0.388	ND	2.93	ND	ND	ND	0.133	ND	1.6	16.9	**0.251**	ND	65.4	4.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2,322**
SLF-TW-33	9/17/2010	7.5	ND	0.416	ND	**0.339**	ND	ND	ND	ND	ND	0.182	ND	ND	ND	ND	ND	0.308	9	ND	17.6	10	0.476	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**933**
SLF-TW-34	9/17/2010	4.44	ND	0.379	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.144	4.63	ND	6.1	5.3	0.223	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**982**
SLF-TW35	10/26/2011	5.10	27.1	5.02	ND	**8.53**	**6.19**	**4.14**	2.28 J	**1.75 J**	NA	**17.3**	3.16	ND	ND	**1.91 J**	12.7	14.1	36.6	**1.45 J**	99.1	86.7	18.7	ND	1.91 J	ND	ND	ND	ND	2.01	ND	**305**	ND	**2,122.9J(15)**
TK-7930-TW1	10/28/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Volatile Organics																																	
Sample ID	Date	Acetone	Benzene	Bromodichloromethane	2-Butanone (MEK)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Cyclohexane	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	Methyl Tert Butyl Ether	Methylene chloride	Methylcyclohexane	Tetrachloroethene	Tert Butyl Alcohol	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride	Xylene (total)	Total Volatile (TIC)	Monoethanolamine	Methanol	Ammonia
NJDEP GWQS		6,000	1	1	300	700	1	50	5	70	NA	1	600	600	75	50	1	70	100	700	700	70	3	NA	1	100	600	9	30	1	1	1,000	500	NA	4,000	3,000
TR-TW-1	10/13/2009	10.2	ND	ND	ND	ND	ND	0.69 J	ND	ND	NA	ND	ND	ND	ND	ND	ND	0.3 J	ND	30	NA	14.4	ND	NA	ND	ND	ND	ND	ND	ND	ND	1.2	**732 J**	NA	NA	NA
TR-TW-2	10/14/2009	ND	**13.9**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	23.2	NA	16.7	ND	NA	ND	ND	2.3 J	ND	ND	ND	ND	14.3	**2,040 J**	NA	NA	NA
TR-TW-3	10/14/2009	90.1	**76.4**	ND	30.1	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	84.1	NA	**94.2**	ND	NA	ND	ND	33.9	ND	ND	ND	ND	793	**1,914 J**	NA	NA	NA
TR-TW-4	10/14/2009	43	**6.7**	ND	4.6 J	1.5 J	ND	14.6	ND	ND	NA	ND	1.4	0.74 J	1.9	ND	ND	ND	ND	1.2	NA	**74.8**	ND	NA	ND	ND	1	ND	ND	ND	ND	0.98 J	275 J	NA	NA	NA
TR-TW-5	10/14/2009	ND	**15,800**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**5,120**	NA	**455,000**	ND	NA	ND	ND	ND	ND	ND	ND	ND	**4,870**	**21,100 J**	NA	NA	NA
TR-TW-6	10/14/2009	ND	**21,900**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**2,080**	NA	**1,080,000**	ND	NA	ND	ND	**22,500**	ND	ND	ND	ND	**10,300**	0	NA	NA	NA
TR-TW-7	10/14/2009	ND	**1,420**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**933**	NA	**1,360**	ND	NA	ND	ND	26.5	ND	ND	ND	ND	65	**4,630 J**	NA	NA	NA
TR-TW-8	10/14/2009	ND	**16,700**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**93,400**	NA	**365,000**	ND	NA	ND	ND	**123,000**	ND	ND	ND	ND	**533,000**	**449,000 J**	NA	NA	NA
TR-TW-9	10/14/2009	ND	**3,320**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	**2,300**	ND	**1,640**	NA	**335**	ND	NA	ND	ND	**6,320**	ND	ND	ND	**171**	**7,530**	**16,140 J**	NA	NA	NA
TR-TW-10	10/14/2009	ND	**9,810**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**2,970**	NA	**252,000**	ND	NA	ND	ND	**6,550**	ND	ND	ND	ND	**11,600**	**17,730 J**	NA	NA	NA
TR-TW-11	10/21/2009	10.7	ND	**3.5**	ND	ND	ND	ND	ND	11.8	NA	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
TR-TW-12	10/21/2009	3.6 J	ND	**2.5**	ND	ND	ND	ND	ND	8.8	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND		ND	ND	ND	ND	0	NA	NA	NA
TR-TW-13	10/22/2009	ND	**7,930**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**1,950**	NA	**175,000**	ND	NA	ND	ND	**9,960**	ND	ND	ND	ND	**7,370**	**50,000 J**	NA	NA	NA
*TR-TW-14	10/22/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TR-TW-15	10/22/2009	6.3 J	**4.3**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	109	NA	3	ND	NA	ND	ND	1.3	ND	ND	ND	ND	186	175.3 J	NA	NA	NA
TR-TW-16	10/22/2009	3.5 J	**1.5**	**2.8**	ND	ND	ND	ND	ND	7.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	2.5	NA	6.7	ND	NA	ND	ND	7.8	ND	ND	ND	ND	7.2	0	NA	NA	NA
TR-TW-17	10/22/2009	9.8 J	**9.1**	**2.5**	ND	ND	ND	ND	ND	11	NA	ND	ND	ND	ND	ND	ND	ND	ND	8.6	NA	49.4	ND	NA	ND	ND	27.6	ND	ND	ND	ND	25.9	48.2 J	NA	NA	NA
AD-TW-1	10/15/2009	ND	ND	ND	ND	ND	ND	1.1	ND	ND	NA	ND	2.2	ND	1.1	ND	ND	26.7	0.34 J	ND	NA	ND	ND	NA	**3.6**	**ND**	ND	ND	ND	0.7 J	**1.4**	ND	0	NA	NA	NA
AD-TW-2	10/16/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AD-TW-3	10/15/2009	33 J	0.93 J	0.98 J	5 J	ND	ND	ND	ND	4.9	NA	0.22 J	ND	ND	68.9	0.38 J	**3**	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	1.2	ND	ND	ND	101.2 J	NA	NA	NA
AD-TW-4	10/16/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	0.73 J	ND	0.29 J	ND	ND	ND	ND	0.31 J	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	1.8	0	NA	NA	NA
AD-TW-5	10/15/2009	30.2	ND	ND	4.8 J	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.73	0	NA	NA	NA
AD-TW-6	10/15/2009	66.8	ND	ND	13.6	ND	ND	ND	ND	ND	NA	ND	ND	ND	3.5	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AD-TW-7	10/15/2009	ND	**17.7**	ND	ND	ND	ND	**253**	**9.5 J**	ND	NA	ND	7.6 J	3.8 J	15.1	ND	**31.2**	**3,970**	96.8	ND	NA	ND	ND	NA	140	ND	ND	ND	ND	**4,230**	**1,750**	ND	0	NA	NA	NA
AD-TW-8	10/16/2009	15.2	ND	ND	ND	ND	ND	0.61 J	ND	ND	NA	ND	0.81 J	2.1	2.5	ND	ND	ND	ND	ND	NA	0.27 J	ND	NA	ND	ND	ND	ND	ND	ND	ND	1.2	0	NA	NA	NA
AD-TW-9	10/15/2009	ND	**4.7 J**	ND	ND	ND	ND	**54.2**	ND	ND	NA	ND	**3,860**	110	**1,490**	ND	ND	ND	ND	**2,250**	**NA**	ND	ND	NA	**36.1**	**ND**	225	**2,170**	ND	ND	ND	**14,200**	0	NA	NA	NA
AD-TW-10	10/16/2009	7.7 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	21.1	0.36 J	7.2	ND	ND	ND	ND	8.2	NA	ND	ND	NA	ND	ND	0.6 J	**14.9**	ND	ND	ND	56.3	0	NA	NA	NA
TM-TW-1	10/16/2009	6.1 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.41 J	0	NA	NA	NA
TM-TW-2	10/16/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	0.46 J	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.95 J	0	NA	NA	NA
TM-TW-3	10/15/2009	22	**1.3**	ND	3.6 J	ND	ND	ND	ND	ND	NA	ND	1.1	ND	0.39 J	ND	ND	ND	ND	311	NA	7.5	ND	NA	ND	ND	0.47 J	1.7 J	ND	ND	ND	3	**2,698 J**	NA	NA	NA
TM-TW-4	10/15/2009	ND	ND	ND	ND	0.75 J	ND	ND	ND	ND	NA	ND	11.1	0.28 J	3.7	ND	ND	ND	ND	3.3	NA	ND	ND	NA	ND	ND	ND	**13.6**	ND	ND	ND	22.1	7.6 J	NA	NA	NA
TM-TW-5	10/19/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
TM-TW-6	10/19/2009	80.2	**1.4 J**	ND	17.2 J	ND	ND	ND	4	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	79.8	NA	ND	ND	NA	ND	ND	2.3	ND	ND	ND	ND	250	**17,320 J**	NA	NA	NA
TM-TW-7	10/20/2009	ND	**10.9**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	63	NA	2.1	ND	NA	ND	ND	1.4	ND	ND	ND	ND	27.2	**931 J**	NA	NA	NA
TM-TW-8	10/20/2009	ND	**6.4**	ND	ND	ND	ND	ND	ND	ND	94.5	ND	ND	ND	ND	ND	ND	ND	ND	56.6	52.3	2	ND	95.4	ND	ND	5.9	ND	ND	ND	ND	17.3	**2,396 J**	NA	NA	NA
TM-TW-9	10/20/2009	11.7	**13**	ND	3.1 J	ND	ND	ND	1.5	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	38.5	NA	ND	ND	NA	ND	ND	0.6 J	ND	ND	ND	ND	70.4	**852 J**	NA	NA	NA
TM-TW-10	10/20/2009	6.1 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	1	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.91 J	0	NA	NA	NA
TM-TW-11	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	120.8 J	NA	NA	NA
TM-TW-12	10/20/2009	ND	**51**	ND	ND	ND	ND	ND	1.4	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	118	NA	8	ND	NA	ND	ND	0.32 J	ND	ND	ND	ND	36.9	**664 J**	NA	NA	NA
TM-TW-13	10/20/2009	11.8	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	281 J	NA	NA	NA
TM-TW-14	10/20/2009	6.9 J	0.6 J	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.93 J	NA	1.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.83 J	**778 J**	NA	NA	NA
TF-TW-1	10/20/2009	4.1 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	285.6 J	NA	NA	NA
TF-TW-2	10/20/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
TF-TW-3	10/21/2009	5.2 J	0.3 J	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1	ND	NA	ND	ND	0.49 J	ND	ND	ND	ND	ND	**730 J**	NA	NA	NA
TF-TW-4	10/21/2009	13.9	**209**	ND	ND	0.79 J	ND	ND	ND	0.51 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	103	NA	8.6	ND	NA	ND	ND	6.4	ND	ND	ND	ND	304	325 J	NA	NA	NA
TF-TW-5	10/21/2009	13.9	**14.6**	ND	2.3J	ND	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.3	2.3	15.3	ND	1.7J	ND	770	1.3	ND	ND	ND	ND	10.6J	239.5(15)	NA	NA	NA
TF-TW-6	10/24/2011	17.4	0.739 J	ND	3.82	0.855 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.1	0.411 J	ND	8.09	ND	36.1	ND	ND	ND	ND	ND	ND	171	NA	NA	NA
TF-TW-7	10/24/2011	13.3	**2.18**	ND	2.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
PL-TW-1	10/19/2009	ND	0.56 J	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J	NA	5.4	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.28 J	0	NA	NA	NA
PL-TW-2	10/19/2009	3.3 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
PL-TW-3	10/19/2009	5 J	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	7.1	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
PL-TW-4	10/19/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	5.7	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
PL-TW-5	10/19/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	10.8	ND	NA	ND	ND	0.31 J	ND	ND	ND	ND	ND	0	NA	NA	NA
PL-TW-6	10/21/2009	7.2 J	ND	ND	ND	ND	ND	ND	ND	3.1	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
PL-TW-7	10/21/2009	45.7	0.25 J	ND	8.4 J	ND	ND	ND	ND	1.4	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.27 J	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.4 J	210.8 J	NA	NA	NA
PL-TW-8	10/21/2009	13.2	0.7 J	ND	ND	ND	ND	ND	ND	0.42 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	10	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.98 J	233.6 J	NA	NA	NA
PL-TW-9	10/22/2009	ND	**23.4**	0.46 J	ND	ND	ND	ND	ND	2.7	NA	ND	ND	ND	ND	ND	ND	ND	ND	21.8	NA	0.71 J	ND	NA	ND	ND	0.81 J	ND	ND	ND	ND	22.5	133.5 J	NA	NA	NA
PL-TW-10	10/22/2009	ND	**55.4**	ND	ND	ND	ND	ND	ND	1.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	12.3	NA	0.93 J	ND	NA	ND	ND	0.38 J	ND	ND	ND	ND	18.6	56.3 J	NA	NA	NA
PL-TW-11	10/22/2009	ND	**218**	ND	ND	ND	ND	ND	ND	1.5 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	98.9	NA	ND	ND	NA	ND	ND	1.9 J	ND	ND	ND	ND	221	**515 J**	NA	NA	NA
PL-TW-12	10/22/2009	ND	**83.3**	ND	ND	ND	ND	ND	ND	3.6	NA	ND	ND	ND	ND	ND	ND	ND	ND	38.6	NA	1.1	ND	NA	ND	ND	0.8 J	ND	ND	ND	ND	62.1	429 J	NA	NA	NA
PL-TW-13	10/22/2009	ND	ND	ND	ND	ND	ND	ND	ND	1.4	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	4	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	38.1 J	NA	NA	NA
PL-TW-14	10/22/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.36 J	NA	2.3	ND	NA	ND	ND	0.36 J	ND	ND	ND	ND	0.79 J	397 J	NA	NA	NA
PL-TW-15	10/23/2009	ND	**5**	ND	ND	ND	ND	ND	ND	3.7	NA	ND	ND	ND	ND	ND	ND	ND	ND	135	NA	33.6	ND	NA	ND	ND	0.42 J	ND	ND	ND	ND	4.7	**1,827 J**	NA	NA	NA
PL-TW-16	10/23/2009	ND	**52.1**	ND	ND	ND	ND	ND	ND	2.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	48	NA	8.8	ND	NA	ND	ND	1.2 J	ND	ND	ND	ND	0.74 J	**2,738 J**	NA	NA	NA
PL-TW-17	10/23/2009	ND	**1.9**	ND	ND	1.4 J	ND	ND	ND	3	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	16.3	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	59.5 J	NA	NA	NA
PL-TW-18	10/23/2009	ND	**2.6**	**1.1**	ND	1.8 J	ND	ND	ND	10.3	NA	ND	ND	ND	ND	ND	ND	ND	ND	3.9	NA	0.62 J	ND	NA	ND	ND	ND	ND	ND	ND	ND	1.1	59.4 J	NA	NA	NA
PL-TW-19	10/23/2009	6.2 J	ND	ND	ND	0.92 J	ND	ND	ND	0.61 J	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	57.6 J	NA	NA	NA
PL-TW-20	10/26/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Volatile Organics																																		
Sample ID	Date	Acetone	Benzene	Bromodichloromethane	2-Butanone (MEK)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Cyclohexane	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	Methyl Tert Butyl Ether	Methylene chloride	Methylcyclohexane	Tetrachloroethene	Tert Butyl Alcohol	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride	Xylene (total)	Total Volatile (TIC)	Monoethanolamine	Methanol	Ammonia
NJDEP GWQS		6,000	1	1	300	700	1	50	5	70	NA	1	600	600	75	50	1	70	100	700	700	70	3	NA	1	100	600	9	30	1	1	1,000	500	NA	4,000	3,000
HS14-TW-1	9/17/2010	23.3	ND	ND	3.5	1.5	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	0.59	ND	NA	ND	ND	0.54	ND	ND	ND	ND	ND	38	NA	NA	NA
HS14-TW-2	9/17/2010	19.2	ND	ND	2.3	1	ND	0.51	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	4	ND	NA	ND	10	0.61	ND	ND	ND	ND	ND	57	NA	NA	NA
HS14-TW-3	9/17/2010	21.6	ND	ND	1.6	2.3	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.1	ND	NA	ND	ND	0.52	ND	ND	ND	ND	ND	0	NA	NA	NA
HS14-TW-4	9/17/2010	20.7	**11.7**	ND	ND	1.4	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	8.5	NA	0.58	ND	NA	ND	ND	0.7	ND	ND	ND	ND	9.4	401	NA	NA	NA
HS14-TW5	10/26/2011	14.2	**241**	ND	6.06	0.874	ND	7.21	ND	ND	ND	ND	1.59	ND	ND	ND	ND	ND	ND	53.3	18.6	27.8	ND	ND	ND	**126**	6.27	ND	ND	ND	ND	104	865.8J(10)	ND	ND	12,500
HS14-TW6	10/26/2011	14.8	**154**	ND	5.11	ND	ND	20.2	ND	ND	ND	ND	3.23	ND	1.20 J	ND	ND	ND	ND	43.0	13	40.1	ND	7.17	ND	92.6	3.54	ND	ND	ND	ND	53.1	731.8J(10)	ND	ND	21,000
*HS14-TW7	10/26/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HS14-TW8	10/26/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	2,060
HS14-TW9	10/26/2011	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND	ND	1,550
AB-TW-1	9/17/2010	6.8	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	0.64	ND	ND	ND	ND	ND	0	NA	NA	NA
AB-TW-2	9/17/2010	5.6	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	6.1	ND	NA	ND	34.8	0.82	ND	ND	ND	ND	ND	25	NA	NA	NA
AB-TW-3	9/17/2010	5.7	0.32	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	0.54	ND	ND	ND	ND	ND	0	NA	NA	NA
AB-TW-4	9/17/2010	ND	ND	ND	ND	1.6	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	0.35	ND	NA	ND	ND	0.82	ND	ND	ND	ND	ND	0	NA	NA	NA
HS9-TW-1	9/20/2010	31.4	1	ND	6.7	ND	ND	ND	ND	6.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	26.4	NA	3.1	ND	NA	ND	26.2	0.88	ND	ND	ND	ND	9.1	**2,094**	NA	NA	NA
HS9-TW-2	9/21/2010	45.8	0.45	ND	5.9	ND	ND	ND	ND	3.7	NA	ND	ND	ND	ND	ND	ND	0.55	ND	ND	NA	0.98	0.44	NA	ND	ND	0.38	ND	ND	ND	ND	ND	0	NA	NA	NA
HS9-TW-3	9/21/2010	34.2	**3.2**	ND	ND	ND	0.59	ND	ND	67.8	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	18.4	2.7	NA	0.5	32	1.9	ND	ND	ND	ND	ND	0	NA	NA	NA
HS9-TW-4	9/21/2010	ND	**4.8**	ND	ND	ND	0.73	ND	ND	**81.3**	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	30	2.4	NA	**1.2**	41.8	0.39	ND	ND	0.46	ND	ND	32.3	NA	NA	NA
HS6-TW-1	9/21/2010	16.9	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.2	ND	NA	ND	ND	3.9	ND	ND	ND	ND	ND	0	NA	NA	NA
HS6-TW-2	9/21/2010	17.9	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	2.2	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
**HS6-TW-3	9/21/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
HS6-TW-4	9/21/2010	4.6	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.34	NA	ND	ND	NA	ND	ND	10.6	ND	ND	ND	ND	1.3	22	NA	NA	NA
HS6-TW-5	9/21/2010	21.3	0.43	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	195	ND	ND	ND	ND	ND	0	NA	NA	NA
HS4-TW-1	9/21/2010	ND	**3.2**	ND	ND	ND	ND	1.4	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	53.5	ND	NA	ND	**1,470**	ND	ND	ND	ND	ND	0.86	**1,014**	NA	NA	NA
HS4-TW-2	9/21/2010	ND	**17**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	28	ND	NA	ND	**1,140**	ND	ND	ND	ND	ND	0.88	**1,059**	NA	NA	NA
HS4-TW-3	9/21/2010	ND	ND	ND	ND	ND	ND	9	ND	ND	NA	ND	0.29	0.25	0.59	ND	ND	ND	ND	ND	NA	3	ND	NA	ND	22.1	1.3	ND	ND	ND	ND	1.7	26.1	NA	NA	NA
HS8-TW-1	9/22/2010	4.1	0.41	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.9	ND	NA	ND	60.6	188	ND	ND	ND	ND	ND	0	NA	NA	NA
HS8-TW-2	9/22/2010	37.9	**490**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	3	NA	28.4	ND	NA	ND	**1,190**	6.4	ND	ND	ND	ND	1.4	**5,630**	NA	NA	NA
HS8-TW-3	9/22/2010	16.2	ND	ND	3.4	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	21.4	ND	ND	ND	ND	ND	**604**	NA	NA	NA
HS8-TW-4	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	0.76	ND	NA	ND	ND	0.37	ND	ND	ND	ND	ND	0	NA	NA	NA
HS8-TW-5	9/22/2010	3.9	ND	ND	ND	ND	ND	ND	ND	0.25	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	2.1	ND	NA	0.99	ND	8.8	ND	ND	ND	ND	ND	0	NA	NA	NA
HS8-TW-6	9/22/2010	7.2	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	12.3	ND	ND	ND	ND	ND	0	NA	NA	NA
HS8-TW-7	9/22/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	41.1	ND	NA	ND	ND	3.1	ND	ND	ND	ND	ND	0	NA	NA	NA
HS2-TW-1	9/22/2010	19.9	0.25	ND	4.1	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	4.4	ND	NA	49.6	ND	1.1	ND	ND	ND	ND	0.59	0	NA	NA	NA
HS2-TW-2	9/22/2010	14.4	0.64	ND	2.7	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	1.3	ND	ND	ND	ND	1.7	179.5	NA	NA	NA
HS2-TW-3	9/22/2010	4.5	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	1.8	ND	ND	ND	ND	ND	104.8	NA	NA	NA
HS2-TW4	11/21/2011	6.56	**7.06**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.647 J	3.06	1.28	ND	ND	ND	ND	0.488 J	ND	ND	ND	ND	1.05 J	31	NS	NS	NS
HS2-TW5	11/21/2011	8.51	0.453 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NS	NS
HS16-TW-1	9/23/2010	6.1	ND	ND	ND	ND	ND	0.76	ND	ND	NA	ND	2.4	ND	0.35	ND	ND	1.9	ND	ND	NA	ND	ND	NA	ND	ND	1.1	ND	ND	0.3	ND	ND	0	NA	NA	NA
AU-TW-1	9/23/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	3	**4.1**	ND	ND	ND	NA	ND	ND	NA	ND	ND	0.63	ND	ND	**1.8**	ND	ND	0	NA	NA	NA
AU-TW-2	9/23/2010	15.5	**1.7**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	0.75	ND	6.5	NA	ND	ND	NA	ND	ND	0.52	ND	ND	ND	ND	14.4	**875**	NA	NA	NA
AU-TW-3	9/23/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	1.4	**2.9**	ND	ND	ND	NA	ND	ND	NA	ND	ND	0.58	ND	0.67	ND	ND	ND	83.8	NA	NA	NA
AU-TW-4	9/23/2010	0	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AU-TW-5	9/23/2010	182	**3.9**	ND	ND	ND	ND	7.2	ND	ND	NA	ND	3.6	ND	0.36	3.5	1	ND	ND	16.9	NA	10.3	ND	NA	ND	ND	2.9	ND	ND	ND	ND	1.6	**889.7**	NA	NA	NA
CR-TW-1	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	1.4	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
CR-TW-2	9/28/2010	ND	ND	ND	ND	ND	ND	2.8	ND	ND	NA	ND	238	6.1	**89.4**	ND	ND	**278**	46.1	ND	NA	ND	ND	NA	**859**	ND	ND	**267**	ND	**2,130**	**14.1**	1.4	0	NA	NA	NA
CR-TW-3	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	0.87	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
BR-TW-2	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
BR-TW-3	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	76.3	NA	NA	NA
BR-TW-4	9/28/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
HS18-TW-1	9/29/2010	30.5	**134**	ND	7.4	2.2	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	4.5	NA	25.2	ND	NA	ND	**158**	6.1	ND	ND	ND	ND	11	**1,974**	NA	NA	NA
HS18-TW-2	9/29/2010	15.6	**1.3**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.63	NA	6.4	ND	NA	ND	**263**	0.78	ND	ND	ND	ND	1.3	**1,136**	NA	NA	NA
HS18-TW-3	10/6/2010	ND	**1.4**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	383	NA	NA	NA
HS18-TW-4	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
HS18-TW5	10/25/2011	28.5	**459**	ND	ND	14.4	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	237	16.7	8.61 J	ND	NA	ND	87.4	111	ND	ND	ND	ND	**1,040**	**1,210**	NA	NA	NA
HS18-TW6	10/25/2011	9.32	**39.5**	ND	3.17	3.79	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.6	2.14	ND	NA	ND	18.7	0.967 J	ND	ND	ND	ND	ND	400	NA	NA	NA
HS18-TW7	10/25/2011	ND	**684**	ND	ND	12.3	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.05	ND	ND	NA	ND	ND	4.60 J	ND	ND	ND	ND	ND	94	NA	NA	NA
HS18-TW8	10/25/2011	ND	**11.7**	ND	ND	ND	ND	ND	ND	ND	87.4	ND	ND	ND	ND	ND	ND	ND	ND	206	51.4	1.75 J	ND	NA	ND	**175**	1.39	ND	ND	ND	ND	4.78	**3020**	NA	NA	NA
HS18-TW9	10/25/2011	ND	**34.0**	ND	ND	10.6	ND	ND	ND	ND	220	ND	ND	ND	ND	ND	ND	ND	ND	ND	120	3.74 J	ND	635	ND	ND	ND	ND	ND	ND	ND	ND	**2940**	NA	NA	NA
HS18-TW10	10/25/2011	17.2	**17.3**	ND	6.56	0.808 J	ND	ND	ND	ND	16.5	ND	ND	ND	ND	ND	ND	ND	ND	1.53	2.84	ND	ND	16	ND	6.57	1.14	ND	ND	ND	ND	23.5	188	NA	NA	NA
HS18-TW11	10/25/2011	27.7	**3.97**	ND	12.3	8.11	ND	ND	ND	ND	92.0	ND	ND	ND	ND	ND	ND	ND	ND	206	23.2	ND	ND	139	ND	**130**	8.85	ND	ND	ND	ND	482	**5640**	NA	NA	NA
HS18-TW12	10/25/2011	ND	**4.43 J**	ND	ND	11.4	ND	ND	ND	ND	64.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	34.2	1.58 J	ND	59.6	ND	**222**	2.17 J	ND	ND	ND	ND	ND	**1890**	NA	NA	NA
HS18-TW13	10/25/2011	4.77	**27.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.46	15.3	ND	ND	20.4	ND	4.49	3.04	ND	ND	ND	ND	4.09	1000	NA	NA	NA

Table 4
Temporary Well Analytical Data Summary
Hess Corporation- Port Reading Refinery
750 Cliff Rd
Port Reading, Middlesex County, New Jersey

		Volatile Organics																																		
Sample ID	Date	Acetone	Benzene	Bromodichloromethane	2-Butanone (MEK)	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Cyclohexane	Dibromochloromethane	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	Methyl Tert Butyl Ether	Methylene chloride	Methylcyclohexane	Tetrachloroethene	Tert Butyl Alcohol	Toluene	1,2,4-Trichlorobenzene	1,1,1-Trichloroethane	Trichloroethene	Vinyl chloride	Xylene (total)	Total Volatile (TIC)	Monoethanolamine	Methanol	Ammonia
NJDEP GWQS		6,000	1	1	300	700	1	50	5	70	NA	1	600	600	75	50	1	70	100	700	700	70	3	NA	1	100	600	9	30	1	1	1,000	500	NA	4,000	3,000
HS5-TW-1	9/29/2010	ND	ND	ND	ND	ND	ND	ND	ND	0.38	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.1	ND	NA	ND	62.2	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
HS5-TW-2	9/29/2010	10.4	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	0.77	ND	NA	ND	38.6	ND	ND	ND	ND	ND	0.28	0	NA	NA	NA
HS5-TW-3	9/29/2010	5.5	0.24	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.9	ND	NA	ND	38.7	ND	ND	ND	ND	ND	0.25	8.9	NA	NA	NA
HS5-TW-4	9/29/2010	13.8	ND	ND	2.7	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	0.79	ND	NA	ND	40.2	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
HS5-TW-5	9/29/2010	22.7	ND	ND	4.7	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	159.2	NA	NA	NA
HS5-TW-6	9/29/2010	10.4	0.28	ND	ND	2.2	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.6	NA	0.78	ND	NA	ND	ND	ND	ND	ND	ND	ND	4.6	72.9	NA	NA	NA
HS5-TW-7	10/6/2010	5.6	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	400	NA	NA	NA
HS5-TW-8	10/6/2010	ND	**75.1**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	180	NA	ND	ND	NA	ND	ND	16.9	ND	ND	ND	ND	1,270	**2,273**	NA	NA	NA
AOC15-TW-1	10/4/2010	ND	ND	ND	ND	ND	ND	0.39	ND	ND	NA	ND	ND	ND	ND	ND	ND	0.42	ND	ND	NA	ND	ND	NA	0.42	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AOC15-TW-2	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	1.6	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	0.27	ND	ND	0	NA	NA	NA
AOC15-TW-3	10/4/2010	ND	ND	ND	ND	ND	ND	0.71	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	0.52	ND	ND	0	NA	NA	NA
AOC15-TW-4	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	0.95	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AOC15-TW-5	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
AOC15-TW-6	10/4/2010	6.7	ND	ND	ND	ND	ND	0.59	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	1.1	ND	ND	ND	ND	ND	0	NA	NA	NA
AOC15-TW-7	10/4/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.41	0	NA	NA	NA
AOC15-TW-8	10/4/2010	5.2	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	**3,870**	NA	NA	NA
AOC15C-TW9	10/25/2011	ND	ND	ND	ND	1.07	ND	2.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
AOC15C-TW10	10/25/2011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
AOC15C-TW11	10/25/2011	ND	0.296	ND	ND	ND	ND	4.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.301	ND	ND	ND	ND	ND	13.3	NA	NA	NA
DS-TW-1	10/5/2010	4.1	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
DS-TW-2	10/5/2010	3.1	ND	ND	ND	ND	ND	1.6	ND	ND	NA	ND	1.4	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	1.1	74	NA	NA	NA
DS-TW-3	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	0.35	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
DS-TW-4	10/5/2010	ND	ND	ND	ND	ND	ND	0.72	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
DS-TW-5	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
DS-TW-6	10/5/2010	2.9	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
DS-TW-7	10/5/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
DS-TW-8	10/5/2010	7.6	ND	ND	ND	1.2	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	19	NA	NA	NA
HS11-TW-1	10/6/2010	ND	ND	ND	ND	0.99	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	27	ND	ND	ND	ND	ND	ND	438	NA	NA	NA
HS11-TW-2	10/6/2010	20.4	0.41	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.2	ND	NA	ND	73.8	0.36	ND	ND	ND	ND	0.62	**735.7**	NA	NA	NA
HS11-TW-3	10/6/2010	ND	**4.8**	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	3	ND	NA	ND	**169**	0.62	ND	ND	ND	ND	0.47	**596**	NA	NA	NA
HS11-TW-4	10/6/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	143.6	NA	NA	NA
HS1-TW-1	10/6/2010	20.4	ND	ND	12.9	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.98	24.6	NA	NA	NA
AOC6-TW1	10/24/2011	30.9	**1.71**	ND	8.18	10.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	349	NA	NA	NA
AOC6-TW2	10/25/2011	12.2	**56.3**	ND	3.51	0.601 J	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	0.392 J	3.56	0.440 J	ND	NA	ND	ND	1.88	ND	ND	ND	ND	1.26 J	57.8	NA	NA	NA
SLF-TW-1	10/27/2009	16.4	**9.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45.1	ND	ND	ND	ND	ND	ND	0.69 J	ND	ND	ND	ND	3.1	462 J	NA	NA	NA
*SLF-TW-2	10/28/2009	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SLF-TW-3	10/27/2009	19.8	**69.6**	ND	ND	ND	ND	0.68 J	ND	0.75 J	ND	**468 J**	ND	ND	ND	ND	ND	ND	ND	55.2	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	37.3	468 J	NA	NA	NA
SLF-TW-4	10/27/2009	30.5	**27.3**	ND	ND	ND	ND	3.7	ND	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.8	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	12.6	306 J	NA	NA	NA
SLF-TW-5	10/27/2009	7.3 J	**9**	ND	ND	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.3	ND	ND	ND	ND	ND	ND	1.7	ND	ND	ND	ND	9.4	206 J	NA	NA	NA
SLF-TW-6	10/27/2009	7.8 J	**4.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.9	ND	ND	ND	ND	ND	ND	0.57 J	ND	ND	ND	ND	6.7	196 J	NA	NA	NA
SLF-TW-7	10/27/2009	ND	0.39 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.46 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.77 J	87.9 J	NA	NA	NA
SLF-TW-8	10/27/2009	48.3	**172**	ND	14.6	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	113	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	39.8	**874 J**	NA	NA	NA
SLF-TW-9	10/27/2009	5.8 J	**22.4**	ND	ND	ND	ND	1.3	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	39.3	ND	ND	ND	ND	ND	ND	0.81 J	ND	ND	ND	ND	37.2	310 J	NA	NA	NA
SLF-TW-10	10/27/2009	24.2	**25.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.72 J	ND	ND	ND	ND	ND	ND	0.93 J	ND	ND	ND	ND	4	116.7 J	NA	NA	NA
SLF-TW-11	10/27/2009	ND	**19.8**	ND	ND	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.7	200.6 J	NA	NA	NA
SLF-TW-12	10/27/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
SLF-TW-13	9/15/2010	15	**4.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.7	ND	0.82	ND	ND	ND	18.7	0.36	ND	ND	ND	ND	4.4	190.1	NA	NA	NA
SLF-TW-14	9/15/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.7	NA	NA	NA
SLF-TW-15	9/15/2010	15	**97**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87.9	ND	3.7	ND	ND	ND	25.4	25.1	ND	ND	ND	ND	123	**1,700**	NA	NA	NA
SLF-TW-16	9/15/2010	ND	**153**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.9	ND	1	ND	ND	ND	**318**	4	ND	ND	ND	ND	11.3	**1,047**	NA	NA	NA
SLF-TW-17	9/15/2010	ND	**4.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.6	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	ND	14	211.8	NA	NA	NA
SLF-TW-18	9/15/2010	ND	**20.2**	ND	ND	ND	ND	0.85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	47.9	ND	1	ND	ND	ND	17.6	1.6	ND	ND	ND	ND	22.7	496	NA	NA	NA
SLF-TW-19	9/15/2010	ND	**103**	ND	ND	ND	ND	2.1	ND	ND	ND	ND	3.2	ND	ND	ND	ND	ND	ND	125	ND	ND	ND	ND	ND	ND	19.9	ND	ND	ND	ND	427	**1,625**	NA	NA	NA
SLF-TW-20	9/15/2010	ND	**9.5**	ND	ND	ND	ND	0.76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.6	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	5.6	81.3	NA	NA	NA
SLF-TW-21	9/15/2010	19.5	**9.4**	ND	ND	ND	ND	0.55	ND	ND	ND	ND	0.72	ND	ND	ND	ND	ND	ND	28.8	ND	13.4	ND	ND	ND	**926**	1.6	ND	ND	ND	ND	13.8	448	NA	NA	NA
SLF-TW-22	9/15/2010	ND	**314**	ND	ND	ND	ND	12.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	65.1	ND	1.1	ND	ND	ND	**393**	2.8	ND	ND	ND	ND	79.7	**708**	NA	NA	NA
SLF-TW-23	9/16/2010	20.2	**18.1**	ND	ND	ND	ND	0.84	ND	ND	ND	ND	4.5	0.31	1.4	ND	ND	ND	ND	10.8	ND	7.5	0.7	ND	**11.9**	**388**	8.2	1.4	ND	**9.5**	4.2	21.9	137.7	NA	NA	NA
SLF-TW-24	9/16/2010	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
SLF-TW-25	9/16/2010	ND	**36.6**	ND	ND	ND	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.2	ND	15.5	ND	ND	ND	ND	1.1	ND	ND	ND	ND	10.5	**591**	NA	NA	NA
SLF-TW-26	9/16/2010	ND	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0	NA	NA	NA
SLF-TW-27	9/16/2010	15.3	**7.7**	ND	ND	ND	ND	1.5	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	0.92	ND	ND	ND	ND	18.4	204.2	NA	NA	NA
SLF-TW-28	9/16/2010	18.8	**64**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.6	ND	5	ND	ND	ND	ND	4.8	ND	ND	ND	ND	11.8	**2,166**	NA	NA	NA
SLF-TW-29	9/16/2010	ND	**15.5**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5**	ND	10.6	**9,720**	NA	NA	NA
SLF-TW-30	9/16/2010	15.1	0.38	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.71	35.2	NA	NA	NA
SLF-TW-31	9/16/2010	ND	**345**	ND	ND	ND	ND	15.3	ND	ND	ND	ND	77.2	ND	4.4	ND	ND	ND	ND	61.2	ND	1.5	ND	ND	ND	**1,180**	14.3	2.8	ND	ND	**279**	116	**752**	NA	NA	NA
SLF-TW-32	9/16/2010	27.9	**3.5**	ND	ND	ND	ND	2.9	ND	ND	ND	ND	0.51	ND	ND	ND	ND	ND	ND	ND	ND	7.9	ND	ND	ND	**494**	0.46	ND	ND	ND	ND	0.75	**582**	NA	NA	NA
SLF-TW-33	9/17/2010	21.2	**3.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	1.9	**1,209**	NA	NA	NA
SLF-TW-34	9/17/2010	38.1	**28.2**	ND	7.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	5.3	ND	ND	ND	ND	1.6	ND	ND	ND	ND	2.1	**1,378**	NA	NA	NA
SLF-TW35	10/26/2011	14.7	**516**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35.8	13.4	3.22J	ND	36.6	ND	**247**	5.66	ND	ND	ND	ND	64.3	**1,645.5J(10)**	ND	ND	18,700
TK-7930-TW1	10/28/2009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA

All data is reported in ug/kg unless otherwise noted
ND- Not Detected
NA- Not Analyzed/ Not Applicable
NS- Not Sampled
NR- Not Reported
J- Estimate Value
* Sample was not collected due to the presence of LNAPL
** Sample was not collected, location was observed to be dry

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
PL-1	10/8/2001	20.90	11.82	2.20	2.70	0.50	10.00	10/8/2001	30	25
	11/7/2001	20.90	11.82	5.02	5.21	0.19	6.94	11/7/2001	30	25
	12/5/2001	20.90	11.82	5.35	5.43	0.08	6.53	12/5/2001	30	25
	1/9/2002	20.90	11.82	4.51	4.56	0.05	7.35	1/11/2002	30	25
	2/6/2002	20.90	11.82	4.24	4.34	0.10	7.66	2/8/2002	30	25
	3/6/2002	20.90	11.82	4.04	4.06	0.02	7.80	3/8/2002	30	25
	4/3/2002	20.90	11.82	3.15	3.18	0.03	8.69	4/5/2002	30	25
	5/8/2002	20.90	11.82	3.10	3.12	0.02	8.74	5/10/2002	30	25
	6/5/2002	20.90	11.82	2.65	2.68	0.03	9.19	6/47/02	30	25
	7/10/2002	20.90	11.82	2.69	2.72	0.03	9.15	7/12/2002	30	25
	8/7/2002	20.90	11.82	3.75	3.80	0.05	8.11	8/9/2002	30	25
	9/11/2002	20.90	11.82	3.83	3.90	0.07	8.04	9/13/2002	30	25
	10/9/2002	20.90	11.82	4.76	5.13	0.37	7.34	10/11/2002	30	25
	11/6/2002	20.90	11.82	5.09	5.41	0.32	6.97	11/8/2002	30	25
	12/4/2002	20.90	11.82	5.31	5.70	0.39	6.80	12/6/2002	30	25
	1/8/2003	20.90	11.82	3.38	3.72	0.34	8.70	1/10/2003	30	25
	2/5/2003	20.90	11.82	4.56	4.62	0.06	7.31	2/7/2003	30	25
	3/5/2003	20.90	11.82	2.17	2.20	0.03	9.67	3/7/2003	30	25
	5/22/2003	20.90	11.82	NP	2.88	NP	8.94	5/23/2003	30	25
	6/11/2003	20.90	11.82	NP	2.27	NP	9.55	6/13/2003	30	25
	7/9/2003	20.90	11.82	0.96	1.01	0.05	10.90	7/11/2003	30	25
	8/14/2003	20.90	11.82	2.46	2.47	0.01	9.37	8/15/2003	30	25
	9/12/2003	20.90	11.82	2.52	2.54	0.02	9.32	9/15/2003	30	25
	10/8/2003	20.90	11.82	4.32	4.35	0.03	7.52	10/10/2003	30	25
	11/6/2003	20.90	11.82	4.13	4.16	0.03	7.71	11/7/2003	30	25
	12/3/2003	20.90	11.82	4.22	4.26	0.04	7.63	12/5/2003	30	25
	1/14/2004	20.90	11.82	4.14	4.18	0.04	7.71	1/16/2004	30	25
	2/9/2004	20.90	11.82	4.21	4.25	0.04	7.64	2/13/2004	30	25
	3/10/2004	20.90	11.82	4.08	4.10	0.02	7.76	3/12/2004	30	25
	4/14/2004	20.90	11.82	4.15	4.21	0.06	7.72	4/16/2004	30	25
	5/11/2004	20.90	11.82	4.20	4.28	0.08	7.68	5/14/2004	30	25
	6/9/2004	20.90	11.82	4.17	4.23	0.06	7.70	6/14/2004	30	25
	7/14/2004	20.90	11.82	4.09	4.17	0.08	7.79	7/16/2004	30	25
	8/4/2004	20.90	11.82	3.98	4.06	0.08	7.90	8/13/2004	30	25
	9/8/2004	20.90	11.82	4.08	4.14	0.06	7.79	9/17/2004	30	25
	10/15/2004	20.90	11.82	4.16	4.21	0.05	7.70	10/15/2004	30	25
	11/10/2004	20.90	11.82	4.27	4.31	0.04	7.58	11/18/2004	30	25
	12/8/2004	20.90	11.82	4.23	4.29	0.06	7.64	12/9/2004	30	25
	1/12/2005	20.90	11.82	4.20	4.26	0.06	7.67	1/14/2005	30	25
	2/9/2005	20.90	11.82	4.28	4.31	0.03	7.56	2/14/2005	30	25
	3/9/2005	20.90	11.82	4.24	4.27	0.03	7.60	3/15/2005	30	25
	4/13/2005	20.90	11.82	4.32	4.34	0.02	7.52	4/14/2005	30	25
	5/11/2005	20.90	11.82	4.27	4.29	0.02	7.57	5/18/2005	30	25
	6/8/2005	20.90	11.82	4.22	4.24	0.02	7.62	6/14/2005	30	25
	7/14/2005	20.90	11.82	4.30	4.32	0.02	7.54	7/18/2005	30	25
	8/3/2005	20.90	11.82	4.19	4.22	0.03	7.65	8/8/2005	30	25
	9/7/2005	20.90	11.82	4.26	4.28	0.02	7.58	9/9/2005	30	25
	11/10/2005	20.90	11.82	5.07	5.60	0.53	7.15	10/17/2005	30	25
	8/11/2005	20.90	11.82	5.50	5.64	0.14	6.43	11/14/2005	30	25
	12/14/2005	20.90	11.82	5.48	5.52	0.04	6.37	12/16/2005	30	25
	6/1/2007	20.90	11.82	1.55	1.56	0.01	10.28	6/6/2007	30	25
	10/5/2007	20.90	11.82	NP	3.60	NP	8.22	10/8/2007	30	25
	11/2/2007	20.90	11.82	NP	4.73	NP	7.09	11/23/2007	30	25
	12/6/2007	20.90	11.82	NP	5..01	NP	6.81	12/26/2007	30	25
	1/4/2008	20.90	11.82	5.01	5.02	0.01	6.82	1/8/2008	30	25
	9/7/2010	19.90	11.82	NP	3.50	NP	8.32	9/15/2010	30	25
	11/9/2010	19.90	11.82	4.14	4.15	NP	7.67	11/24/2010	60	50
	12/8/2010	19.90	11.82	4.26	4.27	NP	7.55	12/22/2010	30	25
	1/5/2011	19.90	11.82	NP	4.34	NP	7.48	1/31/2011	45	40
	2/4/2011	19.90	11.82	NP	3.87	NP	7.95	2/24/2011	45	40
	3/1/2011	19.90	11.82	NP	3.13	NP	8.69	3/24/2011	45	40
	4/14/2011	19.90	11.82	NP	2.34	NP	9.48	4/29/2011	45	40
	5/10/2011	19.90	11.82	NP	1.73	NP	10.09	5/26/2011	45	40
	6/2/2011	19.90	11.82	NP	1.19	NP	10.63	6/29/2011	45	40
	7/6/2011	19.90	11.82	2.68	2.69	0.01	9.13	7/11/2011	45	40
	8/4/2011	19.90	11.82	2.14	2.14	0.00	9.68	8/18/2011	45	40
	9/19/2011	19.90	11.82	NP	3.01	NP	8.81	9/29/2011	45	40
	10/7/011	**19.90**	**11.82**	**NP**	**3.23**	**NP**	**8.59**	**10/31/2011[1]**	**30**	**280**
	11/1/2011	**19.90**	**11.82**	**SHEEN**	**2.95**	**SHEEN**	**8.87**	**11/28/2011[1]**	**30**	**280**
	12/14/2011	**19.90**	**11.82**	**SHEEN**	**3.84**	**SHEEN**	**7.98**	**12/30/2011[1]**	**30**	**280**
								Volume Recovered (gal)		**2,675**

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750 Cliff Road
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Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
PL-2	9/12/2003	18.68	11.78	3.59	3.62	0.03	8.21	9/15/2003	30	25
	10/8/2003	18.68	11.78	3.02	3.06	0.04	8.79	10/10/2003	30	25
	11/6/2003	18.68	11.78	2.87	2.91	0.04	8.94	11/7/2003	30	25
	12/3/2003	18.68	11.78	3.00	3.04	0.04	8.81	12/5/2003	30	25
	1/14/2004	18.68	11.78	2.89	2.93	0.04	8.92	1/16/2004	30	25
	2/9/2004	18.68	11.78	2.94	3.00	0.06	8.89	2/13/2004	30	25
	3/10/2004	18.68	11.78	NP	2.37	NP	9.41	3/12/2004	30	25
	4/14/2004	18.68	11.78	NP	2.48	NP	9.30	4/16/2004	30	25
	5/11/2004	18.68	11.78	NP	2.42	NP	9.36	5/14/2004	30	25
	6/9/2004	18.68	11.78	NP	2.36	NP	9.42	6/14/2004	30	25
	7/14/2004	18.68	11.78	NP	2.41	NP	9.37	7/16/2004	30	25
	8/4/2004	18.68	11.78	NP	2.32	NP	9.46	8/13/2004	30	25
	9/8/2004	18.68	11.78	NP	2.34	NP	9.44	9/17/2004	30	25
	10/15/2004	18.68	11.78	NP	2.43	NP	9.35	10/15/2004	30	25
	11/10/2004	18.68	11.78	NP	2.47	NP	9.31	11/18/2004	30	25
	12/8/2004	18.68	11.78	NP	2.51	NP	9.27	12/9/2004	30	25
	1/12/2005	18.68	11.78	NP	2.46	NP	9.32	1/14/2005	30	25
	2/9/2005	18.68	11.78	NP	2.53	NP	9.25	2/14/2005	30	25
	3/9/2005	18.68	11.78	NP	2.49	NP	9.29	3/15/2005	30	25
	10/11/2005	18.68	11.78	2.43	2.59	0.16	9.47	10/17/2005	30	25
	11/8/2005	18.68	11.78	2.41	2.62	0.21	9.53	11/14/2005	30	25
	12/14/2005	18.68	11.78	2.39	2.50	0.11	9.47	12/16/2005	30	25
	2/7/2007	18.68	11.78	3.12	3.34	0.22	8.44	2/12/2007	30	25
	3/2/2007	18.68	11.78	2.04	2.05	0.01	9.73	3/9/2007	30	25
	4/6/2007	18.68	11.78	2.32	2.34	0.02	9.44	4/12/2007	30	25
	5/4/2007	18.68	11.78	2.31	2.32	0.01	9.46	5/14/2007	30	25
	6/1/2007	18.68	11.78	2.59	2.60	0.01	9.18	6/6/2007	30	25
	7/6/2007	18.68	11.78	2.30	2.33	0.03	9.50	7/16/2007	30	25
	8/3/2007	18.68	11.78	2.61	2.62	0.01	9.18	8/13/2007	30	25
	9/6/2007	18.68	11.78	3.12	3.14	0.02	8.68	9/13/2007	30	25
	10/5/2007	18.68	11.78	3.59	3.62	0.03	8.16	10/8/2007	30	25
	11/2/2007	18.68	11.78	2.92	2.93	0.01	8.85	11/23/2007	30	25
	12/6/2007	18.68	11.78	3.10	3.11	0.01	8.67	12/26/2007	30	25
	1/4/2008	18.68	11.78	2.81	2.83	0.02	8.99	1/8/2008	30	25
	2/8/2008	18.68	11.78	2.28	2.29	0.01	9.51	2/15/2008	30	25
	3/7/2008	18.68	11.78	2.18	2.19	0.01	9.61	3/22/2008	30	25
	11/5/2008	18.68	11.78	2.09	2.36	0.27	9.42	11/17/2008	30	25
	12/5/2008	18.68	11.78	2.76	2.77	0.01	9.01	12/18/2008	30	25
	1/9/2009	18.68	11.78	2.56	2.57	0.01	9.21	1/21/2009	30	25
	2/3/2009	18.68	11.78	3.01	3.02	0.01	8.76	2/18/2009	30	25
	3/3/2009	18.68	11.78	NP	3.42	NP	8.36	3/25/2009	30	25
	4/22/2009	18.68	11.78	2.08	2.09	0.01	9.69	4/22/2009	30	25
	5/19/2009	18.68	11.78	2.40	2.41	0.01	9.37	5/20/2009	30	25
	6/11/2009	18.68	11.78	2.21	2.23	0.02	9.55	6/23/2009	30	25
	7/10/2009	18.68	11.78	2.31	2.34	0.03	9.44	7/21/2009	30	25
	8/14/2009	18.68	11.78	2.98	3.00	0.02	8.78	8/19/2009	30	25
	9/23/2009	18.68	11.78	1.98	2.00	0.02	9.78	9/23/2009	30	25
	10/28/2009	18.68	11.78	NP	3.34	NP	8.44	10/28/2009	30	25
	11/25/2009	18.68	11.78	NP	2.76	NP	9.02	11/25/2009	30	25
	12/14/2009	18.68	11.78	2.08	2.10	0.02	9.68	12/30/2009	30	25
	1/11/2010	18.68	11.78	NP	2.61	NP	9.17	1/27/2010	30	25
	2/12/2010	18.68	11.78	NP	3.09	NP	8.69	2/24/2010	30	25
	3/12/2010	18.68	11.78	NP	2.13	NP	9.65	3/24/2010	30	25
	4/1/2010	18.68	11.78	NP	2.04	NP	9.74	4/2/2010	30	25
	5/14/2010	18.68	11.78	NP	2.14	NP	9.64	5/26/2010	30	25
	6/28/2010	18.68	11.78	NP	3.41	NP	8.37	6/29/1930	30	25
	7/21/2010	18.68	11.78	NP	2.51	NP	9.27	7/28/2010	30	25
	8/9/2010	18.68	11.78	2.73	2.74	0.01	9.04	8/19/2010	30	25
	9/7/2010	18.68	11.78	NP	2.92	NP	8.86	9/15/2010	30	25
	10/12/2010	18.68	11.78	2.23	2.24	0.01	9.54	10/28/2010	60	50
	11/9/2010	18.68	11.78	NP	2.39	NP	9.39	11/24/2010	60	50
	12/8/2010	18.68	11.78	NP	2.55	NP	9.23	12/22/2010	60	50
	1/5/2011	18.68	11.78	NP	2.17	NP	9.61	1/31/2011	60	50
	2/4/2011	18.68	11.78	NP	2.02	NP	9.76	2/24/2011	45	40
	3/1/2011	18.68	11.78	NP	2.23	NP	9.55	3/24/2011	45	40
	4/14/2011	18.68	11.78	NP	2.05	NP	9.73	4/29/2011	45	40
	5/10/2011	18.68	11.78	2.15	2.16	0.01	9.62	5/26/2011	45	40
	6/2/2011	18.68	11.78	1.85	1.99	0.14	9.79	6/29/2011	45	40
	7/6/2011	18.68	11.78	2.41	2.42	0.01	9.36	7/11/2011	45	40
	8/4/2011	18.68	11.78	3.30	3.42	0.12	8.36	8/18/2011	45	40
	9/19/2011	18.68	11.78	2.15	2.18	0.03	9.60	9/29/2011	45	40
	10/7/2011	**18.68**	**11.78**	**2.40**	**2.60**	**0.20**	**9.33**	**10/31/2011[1]**	**45**	**420**
	11/1/2011	**18.68**	**11.78**	**2.22**	**2.23**	**0.01**	**9.56**	**11/28/2011[1]**	**45**	**420**
	12/14/2011	**18.68**	**11.78**	**2.08**	**2.09**	**0.01**	**9.70**	**12/30/2011[1]**	**45**	**420**
									Volume Recovered (gal)	**3,255**
PL-3R	11/25/2009	21.30	12.27	NP	3.60	NP	8.67	11/25/2009	30	25
	12/14/2009	21.30	12.27	NP	3.49	NP	8.78	12/30/2009	30	25
	1/11/2010	21.30	12.27	NP	3.96	NP	8.31	1/27/2010	30	25
	2/12/2010	21.30	12.27	NP	2.62	NP	9.65	2/24/2010	30	25
	3/12/2010	21.30	12.27	NP	2.68	NP	9.59	3/24/2010	30	25
	4/1/2010	21.30	12.27	NP	1.98	NP	10.29	4/2/2010	30	25
	5/14/2010	21.30	12.27	NP	2.32	NP	9.95	5/26/2010	30	25
	6/28/2010	21.30	12.27	2.74	2.75	0.01	9.52	6/29/2010	30	25
	7/21/2010	21.30	12.27	2.46	2.47	0.01	9.80	7/28/2010	30	25
	8/9/2010	21.30	12.27	NP	2.73	NP	9.54	8/19/2010	30	25
	9/7/2010	21.30	12.27	NP	2.74	NP	9.53	9/15/2010	30	25
	10/12/2010	21.30	12.27	NP	2.43	NP	9.84	10/28/2010	30	25
	11/9/2010	21.30	12.27	NP	2.91	NP	9.36	11/24/2010	30	25
	12/8/2010	21.30	12.27	NP	3.31	NP	8.96	12/22/2010	30	25
	1/5/2011	21.30	12.27	NP	2.82	NP	9.45	1/31/2011	45	40
	2/4/2011	21.30	12.27	NP	2.33	NP	9.94	2/24/2011	45	40
	3/1/2011	21.30	12.27	NP	2.73	NP	9.54	3/24/2011	45	40
	4/14/2011	21.30	12.27	2.43	2.44	0.01	9.83	4/29/2011	45	40
	5/10/2011	21.30	12.27	2.39	2.40	0.01	9.87	5/26/2011	45	40
	6/2/2011	21.30	12.27	NP	2.18	NP	10.09	6/29/2011	45	40
	7/6/2011	21.30	12.27	6.01	6.04	0.03	6.23	7/11/2011	45	40
	8/4/2011	21.30	12.27	6.08	6.08	0.00	6.19	8/18/2011	45	40
	9/19/2011	21.30	12.27	5.62	5.63	0.01	6.64	9/29/2011	45	40
	10/7/2011	**21.30**	**12.27**	**Sheen**	**2.92**	**Sheen**	**9.35**	**10/31/2011[1]**	**30**	**280**
	11/1/2011	**21.30**	**12.27**	**Sheen**	**2.70**	**Sheen**	**9.57**	**11/28/2011[1]**	**30**	**280**
	12/14/2011	**21.30**	**12.27**	**NP**	**2.92**	**NP**	**9.35**	**12/30/2011[1]**	**30**	**280**
									Volume Recovered (gal)	**1,550**

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
PL-5	10/8/2001	10.17	9.10	4.30	4.50	0.20	4.95	10/8/2001	30	25
	11/7/2001	10.17	9.10	2.81	3.31	0.50	6.67	11/7/2001	30	25
	12/5/2001	10.17	9.10	3.36	3.45	0.09	5.81	12/5/2001	30	25
	1/9/2002	10.17	9.10	NP	2.51	NP	6.59	1/11/2002	30	25
	2/6/2002	10.17	9.10	2.24	2.25	0.01	6.87	2/8/2002	30	25
	3/6/2002	10.17	9.10	1.95	2.00	0.05	7.19	3/8/2002	30	25
	4/3/2002	10.17	9.10	1.75	1.78	0.03	7.37	4/5/2002	30	25
	5/8/2002	10.17	9.10	2.05	2.08	0.03	7.07	5/10/2002	30	25
	6/5/2002	10.17	9.10	2.16	2.40	0.24	7.12	6/7/2002	30	25
	7/10/2002	10.17	9.10	2.96	3.47	0.51	6.52	7/12/2002	30	25
	8/7/2002	10.17	9.10	2.58	3.31	0.73	7.07	8/9/2002	30	25
	9/11/2002	10.17	9.10	1.83	1.87	0.04	7.30	9/13/2002	30	25
	10/9/2002	10.17	9.10	1.80	2.34	0.54	7.71	10/11/2002	30	25
	11/6/2002	10.17	9.10	2.30	2.53	0.23	6.97	11/8/2002	30	25
	12/4/2002	10.17	9.10	1.97	2.23	0.26	7.33	12/6/2002	30	25
	1/8/2003	10.17	9.10	1.16	1.33	0.17	8.07	1/10/2003	30	25
	2/5/2003	10.17	9.10	1.41	1.62	0.21	7.85	2/7/2003	30	25
	3/5/2003	10.17	9.10	1.03	1.16	0.13	8.17	3/7/2003	30	25
	5/22/2003	10.17	9.10	1.67	1.69	0.02	7.45	5/23/2003	30	25
	6/11/2003	10.17	9.10	NA	0.90	NA	8.20	6/13/2003	30	25
	7/9/2003	10.17	9.10	1.63	1.71	0.08	7.53	7/11/2003	30	25
	8/14/2003	10.17	9.10	1.01	1.69	0.68	8.60	8/15/2003	30	25
	9/12/2003	10.17	9.10	1.65	2.07	0.42	7.77	9/15/2003	30	25
	10/8/2003	10.17	9.10	1.63	2.01	0.38	7.76	10/10/2003	30	25
	11/6/2003	10.17	9.10	1.46	1.82	0.36	7.91	11/7/2003	30	25
	12/3/2003	10.17	9.10	1.58	1.96	0.38	7.81	12/5/2003	30	25
	1/14/2004	10.17	9.10	1.49	1.86	0.37	7.89	1/16/2004	30	25
	2/9/2004	10.17	9.10	1.55	1.92	0.37	7.83	2/13/2004	30	25
	3/10/2004	10.17	9.10	1.64	1.94	0.30	7.69	3/12/2004	30	25
	4/14/2004	10.17	9.10	1.69	1.98	0.29	7.63	4/16/2004	30	25
	5/11/2004	10.17	9.10	1.72	1.93	0.21	7.54	5/14/2004	30	25
	6/9/2004	10.17	9.10	1.74	2.03	0.29	7.58	6/14/2004	30	25
	7/14/2004	10.17	9.10	1.70	1.96	0.26	7.60	7/16/2004	30	25
	8/4/2004	10.17	9.10	1.62	1.83	0.21	7.64	8/13/2004	30	25
	9/8/2004	10.17	9.10	1.65	1.87	0.22	7.62	9/17/2004	30	25
	10/15/2004	10.17	9.10	1.76	1.94	0.18	7.48	10/15/2004	30	25
	11/10/2004	10.17	9.10	1.81	2.04	0.23	7.46	11/18/2004	30	25
	12/8/2004	10.17	9.10	1.84	2.09	0.25	7.45	12/9/2004	30	25
	1/12/2005	10.17	9.10	1.80	2.02	0.22	7.47	1/14/2005	30	25
	2/9/2005	10.17	9.10	1.83	2.07	0.24	7.45	2/14/2005	30	25
	3/9/2005	10.17	9.10	1.81	2.05	0.24	7.47	3/15/2005	30	25
	4/13/2005	10.17	9.10	1.96	2.11	0.15	7.25	4/14/2005	30	25
	5/11/2005	10.17	9.10	1.90	2.09	0.19	7.34	5/18/2005	30	25
	6/8/2005	10.17	9.10	1.84	2.01	0.17	7.39	6/14/2005	30	25
	7/14/2005	10.17	9.10	1.99	2.16	0.17	7.24	7/18/2005	30	25
	8/3/2005	10.17	9.10	1.90	2.06	0.16	7.32	8/8/2005	30	25
	8/11/2005	10.17	9.10	0.05	1.91	1.86	10.45	9/9/2005	30	25
	9/7/2005	10.17	9.10	1.85	2.01	0.16	7.37	10/17/2005	30	25
	11/10/2005	10.17	9.10	1.52	1.87	0.35	7.84	11/14/2005	30	25
	12/15/2005	10.17	9.10	1.17	1.82	0.65	8.42	12/16/2005	30	25
	1/11/2006	10.17	9.10	1.87	2.09	0.22	7.40	1/13/2006	30	25
	2/14/2006	10.17	9.10	1.94	2.14	0.20	7.31	2/10/2006	30	25
	3/1/2006	10.17	9.10	1.92	2.11	0.19	7.32	3/7/2006	30	25
	4/5/2006	10.17	9.10	1.85	2.07	0.22	7.42	4/5/2006	30	25
	5/3/2006	10.17	9.10	1.88	2.10	0.22	7.39	5/3/2006	30	25
	6/2/2006	10.17	9.10	1.93	2.16	0.23	7.34	6/2/2006	30	25
	7/5/2006	10.17	9.10	1.86	2.09	0.23	7.41	7/5/2006	30	25
	8/8/2006	10.17	9.10	1.97	2.19	0.22	7.30	8/8/2006	30	25
	9/13/2006	10.17	9.10	1.93	2.11	0.18	7.31	9/13/2006	30	25
	2/7/2007	10.17	9.10	1.62	1.64	0.02	7.50	2/12/2007	30	25
	3/2/2007	10.17	9.10	0.50	0.56	0.06	8.65	3/9/2007	30	25
	4/6/2007	10.17	9.10	0.69	0.70	0.01	8.42	4/12/2007	30	25
	5/4/2007	10.17	9.10	0.78	0.79	0.01	8.33	5/14/2007	30	25
	6/1/2007	10.17	9.10	1.53	1.57	0.04	7.60	6/6/2007	30	25
	7/6/2007	10.17	9.10	1.61	1.63	0.02	7.51	7/16/2007	30	25
	8/3/2007	10.17	9.10	1.29	2.10	0.81	8.42	8/13/2007	30	25
	9/6/2007	10.17	9.10	2.14	3.20	1.06	7.76	9/13/2007	30	25
	10/5/2007	10.17	9.10	2.71	3.40	0.69	5.70	10/8/2007	30	25
	11/2/2007	10.17	9.10	2.14	2.80	0.66	6.30	11/23/2007	30	25
	12/6/2007	10.17	9.10	1.76	2.25	0.49	6.85	12/26/2007	30	25
	1/4/2008	10.17	9.10	1.08	1.70	0.62	8.49	1/8/2008	30	25
	2/8/2008	10.17	9.10	0.94	2.05	1.11	8.99	2/15/2008	30	25
	3/7/2008	10.17	9.10	1.05	1.80	0.75	8.61	3/22/2008	30	25
	4/4/2008	10.17	9.10	0.91	1.75	0.84	7.35	4/11/2008	30	25
	5/2/2008	10.17	9.10	1.09	1.90	0.81	7.20	5/9/2008	30	25
	6/6/2008	10.17	9.10	1.17	2.21	1.04	6.89	6/12/2008	30	25
	7/7/2008	10.17	9.10	1.04	2.50	1.46	6.60	7/21/2008	30	25
	8/6/2008	10.17	9.10	1.94	2.97	1.03	6.13	8/18/2008	30	25
	9/5/2008	10.17	9.10	2.67	3.17	0.50	5.93	9/9/2008	30	25
	10/15/2008	10.17	9.10	2.49	2.76	0.27	6.34	10/15/2008	30	25
	11/5/2008	10.17	9.10	2.17	2.62	0.45	6.48	11/17/2008	30	25
	12/5/2008	10.17	9.10	2.23	2.56	0.33	6.54	12/18/2008	30	25
	1/9/2009	10.17	9.10	0.81	2.81	2.00	6.29	1/21/2009	30	25
	2/3/2009	10.17	9.10	0.81	1.37	0.56	7.73	2/18/2009	30	25
	3/3/2009	10.17	9.10	0.87	0.97	0.10	8.13	3/25/2009	30	25
	4/22/2009	10.17	9.10	0.71	1.19	0.48	7.91	4/22/2009	30	25
	5/19/2009	10.17	9.10	1.09	1.32	0.23	7.78	5/20/2009	30	25
	6/11/2009	10.17	9.10	0.82	1.21	0.39	7.89	6/23/2009	30	25
	7/10/2009	10.17	9.10	1.52	1.77	0.25	7.33	7/21/2009	30	25
	8/14/2009	10.17	9.10	1.59	1.65	0.06	7.45	8/19/2009	30	25
	9/23/2009	10.17	9.10	0.98	1.09	0.11	8.01	9/23/2009	30	25
	10/28/2009	10.17	9.10	1.87	1.90	0.03	7.20	10/28/2009	30	25
	11/25/2009	10.17	9.10	1.54	1.58	0.04	7.52	11/25/2009	30	25
	12/14/2009	10.17	9.10	1.09	1.11	0.02	7.99	12/30/2009	30	25
	1/11/2010	10.17	9.10	1.25	1.98	0.73	7.12	1/27/2010	30	25
	2/12/2010	10.17	9.10	1.14	1.68	0.54	7.42	2/24/2010	30	25
	3/12/2010	10.17	9.10	0.81	4.37	0.56	4.73	3/24/2010	30	25
	4/1/2010	10.17	9.10	0.25	3.68	0.43	5.42	4/2/2010	30	25
	5/14/2010	10.17	9.10	1.08	3.15	2.07	5.95	5/26/2010	30	25
	Solar-Powered Recovery System Installed									
	2/4/2011	10.17	9.10	0.59	0.61	0.02	8.49	2/24/2011	45	40
	3/1/2011	10.17	9.10	0.84	0.85	0.01	8.25	3/24/2011	45	40
	4/14/2011	10.17	9.10	0.78	0.80	0.02	8.30	4/29/2011	45	40
	5/10/2011	10.17	9.10	0.98	1.10	0.12	8.00	5/26/2011	45	40
	6/2/2011	10.17	9.10	0.98	1.08	0.10	8.02	6/29/2011	45	40
	7/6/2011	10.17	9.10	2.08	2.28	0.20	6.82	7/11/2011	45	40
	8/4/2011	10.17	9.10	2.57	2.61	0.04	6.49	8/18/2011	45	40
	9/19/2011	10.17	9.10	0.84	1.90	1.06	7.20	9/29/2011	45	40
	10/7/2011	10.17	***9.08**	**1.38**	**1.40**	**0.02**	**7.70**	**10/31/2011[1]**	**45**	**420**
	11/1/2011	10.17	**9.08**	**0.97**	**0.98**	**0.01**	**8.11**	**11/28/2011[1]**	**45**	**420**
	12/14/2011	10.17	**9.08**	**1.13**	**1.14**	**0.01**	**7.95**	**12/30/2011[1]**	**45**	**420**
								Volume Recovered (gal)		**4,055**

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
PL-7	2/7/2007	19.53	13.06	4.78	4.80	0.02	8.26	2/12/2007	30	25
	3/2/2007	19.53	13.06	3.89	3.90	FALSE	9.16	3/9/2007	30	25
	10/5/2007	19.53	13.06	5.33	5.38	0.05	7.68	10/8/2007	30	25
	1/4/2008	19.53	13.06	NP	4.68	NP	8.38	1/8/2008	0	0
	2/8/2008	19.53	13.06	4.52	4.54	0.02	8.56	2/15/2008	30	25
	3/7/2008	19.53	13.06	NP	4.33	NP	8.73	3/22/2008	0	0
	4/4/2008	19.53	13.06	3.93	3.95	0.02	9.11	4/11/2008	30	25
	5/2/2008	19.53	13.06	4.51	5.53	0.02	7.53	5/9/2008	30	25
	6/6/2008	19.53	13.06	NP	4.36	NP	8.70	6/12/2008	0	0
	7/7/2008	19.53	13.06	NP	4.53	NP	8.53	7/21/2008	30	25
	8/6/2008	19.53	13.06	NP	3.79	NP	9.27	8/18/2008	30	25
	9/5/2008	19.53	13.06	NP	4.53	NP	8.53	9/9/2008	30	25
	10/15/2008	19.53	13.06	NP	4.53	NP	8.53	10/15/2008	30	25
	11/5/2008	19.53	13.06	NP	4.83	NP	8.23	11/17/2008	30	25
	12/5/2008	19.53	13.06	NP	4.87	NP	8.19	12/18/2008	30	25
	1/9/2009	19.53	13.06	NP	4.68	NP	8.38	1/21/2009	30	25
	2/3/2009	19.53	13.06	NP	4.24	NP	8.82	2/18/2009	30	25
	3/3/2009	19.53	13.06	NP	4.82	NP	8.24	3/25/2009	30	25
	4/22/2009	19.53	13.06	NP	4.03	NP	9.03	4/22/2009	30	25
	5/19/2009	19.53	13.06	NP	4.80	NP	8.26	5/20/2009	30	25
	6/11/2009	19.53	13.06	NP	4.21	NP	8.85	6/23/2009	30	25
	7/10/2009	19.53	13.06	NP	4.63	NP	8.43	7/21/2009	30	25
	8/14/2009	19.53	13.06	NP	4.67	NP	8.39	8/19/2009	30	25
	10/7/2011	**19.53**	***9.10**	**NP**	**4.48**	**NP**	**4.62**	**10/31/2011[1]**	**--**	**--**
	11/1/2011	**19.53**	**9.10**	**NP**	**3.99**	**NP**	**5.11**	**11/28/2011[1]**	**--**	**--**
	12/14/2011	**19.53**	**9.10**	**Sheen**	**4.52**	**Sheen**	**4.58**	**12/30/2011[1]**	**--**	**--**
									Volume Recovered (gal)	**500**
TF-1	9/12/2003	10.07	10.82	2.98	3.05	0.07	7.89	9/15/2003	30	25
	10/8/2003	10.07	10.82	3.92	3.98	0.06	6.95	10/10/2003	30	25
	11/6/2003	10.07	10.82	3.60	3.66	0.06	7.27	11/7/2003	30	25
	12/3/2003	10.07	10.82	3.67	3.72	0.05	7.19	12/5/2003	30	25
	1/14/2004	10.07	10.82	3.68	3.74	0.06	7.19	1/16/2004	30	25
	2/9/2004	10.07	10.82	3.73	3.81	0.08	7.15	2/13/2004	30	25
	3/10/2004	10.07	10.82	NP	2.57	NP	8.25	3/12/2004	30	25
	4/14/2004	10.07	10.82	NP	2.65	NP	8.17	4/16/2004	30	25
	5/11/2004	10.07	10.82	NP	2.61	NP	8.21	5/14/2004	30	25
	6/9/2004	10.07	10.82	NP	2.66	NP	8.16	6/14/2004	30	25
	7/14/2004	10.07	10.82	NP	2.51	NP	8.31	7/16/2004	30	25
	8/4/2004	10.07	10.82	NP	2.43	NP	8.39	8/13/2004	30	25
	9/8/2004	10.07	10.82	NP	2.47	NP	8.35	9/17/2004	30	25
	10/15/2004	10.07	10.82	NP	2.51	NP	8.31	10/15/2004	30	25
	11/10/2004	10.07	10.82	NP	2.58	NP	8.24	11/18/2004	30	25
	12/8/2004	10.07	10.82	NP	2.61	NP	8.21	12/9/2004	30	25
	1/12/2005	10.07	10.82	NP	2.54	NP	8.28	1/14/2005	30	25
	2/9/2005	10.07	10.82	NP	2.58	NP	8.24	2/14/2005	30	25
	3/9/2005	10.07	10.82	NP	2.56	NP	8.26	3/15/2005	30	25
	9/7/2005	10.07	10.82	NP	2.63	NP	8.19	10/17/2005	30	25
	11/10/2005	10.07	10.82	2.51	2.96	0.45	8.65	11/14/2005	30	25
	12/13/2005	10.07	10.82	2.74	2.93	0.19	8.22	12/16/2005	30	25
	3/2/2007	10.07	10.82	1.04	1.08	0.04	9.81	3/9/2007	30	25
	5/4/2007	10.07	10.82	2.56	2.58	0.02	8.28	5/14/2007	30	25
	6/1/2007	10.07	10.82	2.81	2.86	0.05	8.05	6/6/2007	30	25
	7/6/2007	10.07	10.82	NP	2.12	NP	8.70	7/16/2007	30	25
	8/3/2007	10.07	10.82	NP	2.66	NP	8.16	8/13/2007	30	25
	9/6/2007	10.07	10.82	NP	2.90	NP	7.92	9/13/2007	30	25
	10/5/2007	10.07	10.82	NP	3.21	NP	7.61	10/8/2007	30	25
	11/2/2007	10.07	10.82	NP	2.86	NP	7.96	11/23/2007	30	25
	12/6/2007	10.07	10.82	NP	2.90	NP	7.92	12/26/2007	30	25
	12/6/2007	10.07	10.82	NP	2.90	NP	7.92	12/26/2007	30	25
	10/7/2011	**10.07**	**10.82**	**Sheen**	**2.51**	**Sheen**	**8.31**	**10/31/2011[1]**	**240**	**2,230**
	11/1/2011	**10.07**	**10.82**	**Sheen**	**1.96**	**Sheen**	**8.86**	**11/28/2011[1]**	**240**	**2,230**
	12/14/2011	**10.07**	**10.82**	**2.58**	**2.59**	**0.01**	**8.24**	**12/30/2011[1]**	**--**	**--**
									Volume Recovered (gal)	**5,260**
TF-2	11/25/2009	11.80	10.13	1.85	3.15	1.30	6.98	11/25/2009	30	25
	12/14/2009	11.80	10.13	1.78	2.79	1.01	7.34	12/30/2009	30	25
	1/11/2010	11.80	10.13	2.22	3.65	1.43	6.48	1/27/2010	30	25
	2/12/2010	11.80	10.13	1.78	2.46	0.68	7.67	2/24/2010	30	25
	3/12/2010	11.80	10.13	1.72	2.36	0.64	7.77	3/24/2010	30	25
	4/1/2010	11.80	10.13	0.89	2.17	1.28	7.96	4/2/2010	30	25
	5/14/2010	11.80	10.13	1.04	2.17	1.13	7.96	5/26/2010	30	25
	6/28/2010	11.80	10.13	1.59	2.38	0.79	7.75	6/29/2010	30	25
	7/21/2010	11.80	10.13	2.11	2.56	0.45	7.57	7/28/2010	120	200
	8/9/2010	11.80	10.13	2.50	3.58	1.08	6.55	8/19/2010	120	200
	9/7/2010	11.80	10.13	2.10	3.34	1.24	6.79	9/15/2010	120	200
	10/12/2010	11.80	10.13	1.74	3.20	1.46	6.93	10/28/2010	120	200
	11/9/2010	11.80	10.13	2.49	3.50	1.01	6.63	11/24/2010	120	200
	12/8/2010	11.80	10.13	2.80	3.65	0.85	6.48	12/22/2010	120	200
	1/5/2011	11.80	10.13	2.11	3.20	1.09	6.93	1/31/2011	240	400
	2/4/2011	Could Not Locate Due To Heavy Snow						2/24/2011	240	400
	3/1/2011	11.80	10.13	1.61	1.94	0.33	8.19	3/24/2011	240	400
	4/14/2011	11.80	10.13	1.78	2.52	0.74	7.61	4/29/2011	240	400
	5/10/2011	11.80	10.13	2.09	2.79	0.70	7.34	5/26/2011	240	400
	6/2/2011	11.80	10.13	1.85	1.99	0.14	8.14	6/29/2011	240	400
	7/6/2011	11.80	10.13	6.01	6.04	0.03	4.09	7/11/2011	45	40
	8/4/2011	11.80	10.13	6.08	6.08	0.00	4.05	8/18/2011	45	40
	9/19/2011	11.80	10.13	5.62	5.63	0.01	4.50	9/29/2011	45	40
	10/7/2011	**11.80**	**10.13**	**6.06**	**6.07**	**0.01**	**4.07**	**10/31/2011[1]**	**--**	**--**
	11/1/2011	**11.80**	**10.13**	**5.50**	**5.52**	**0.02**	**4.63**	**11/28/2011[1]**	**--**	**--**
	12/14/2011	**11.80**	**10.13**	**1.60**	**1.95**	**0.35**	**8.44**	**12/30/2011[1]**	**240**	**2,230**
									Volume Recovered (gal)	**6,150**

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
TM-6	10/8/2001	19.80	NA	8.07	8.25	0.18	NA	10/8/2001	30	25
	11/7/2001	19.80	NA	NP	8.28	NP	NA	11/7/2001	30	25
	12/5/2001	19.80	NA	7.73	8.30	0.57	NA	12/5/2001	30	25
	1/9/2002	19.80	NA	7.09	7.33	0.24	NA	1/11/2002	30	25
	2/6/2002	19.80	NA	7.27	7.68	0.41	NA	2/8/2002	30	25
	3/6/2002	19.80	NA	7.22	7.33	0.11	NA	3/8/2002	30	25
	4/3/2002	19.80	NA	6.54	6.89	0.35	NA	4/5/2002	30	25
	5/8/2002	19.80	NA	6.68	6.79	0.11	NA	5/10/2002	30	25
	6/5/2002	19.80	NA	6.71	6.73	0.02	NA	6/7/2002	30	25
	7/10/2002	19.80	NA	6.68	6.76	0.08	NA	7/12/2002	30	25
	8/7/2002	19.80	NA	6.73	6.80	0.07	NA	8/9/2002	30	25
	9/11/2002	19.80	NA	Sheen	6.33	Sheen	NA	9/13/2002	30	25
	10/9/2002	19.80	NA	7.03	7.08	0.05	NA	10/11/2002	30	25
	11/6/2002	19.80	NA	6.13	6.17	0.04	NA	11/8/2002	30	25
	12/4/2002	19.80	NA	6.94	6.98	0.04	NA	12/6/2002	30	25
	1/8/2003	19.80	NA	5.76	5.78	0.02	NA	1/10/2003	30	25
	2/5/2003	19.80	NA	7.44	7.49	0.05	NA	2/7/2003	30	25
	3/5/2003	19.80	NA	NP	6.05	NP	NA	3/7/2003	30	25
	5/22/2003	19.80	NA	6.44	6.47	0.03	NA	5/23/2003	30	25
	6/11/2003	19.80	NA	NP	5.76	NP	NA	6/13/2003	30	25
	7/9/2003	19.80	NA	NP	6.14	NP	NA	7/11/2003	30	25
	8/14/2003	19.80	NA	6.05	6.08	0.03	NA	8/15/2003	30	25
	9/12/2003	19.80	NA	6.12	6.15	0.03	NA	9/15/2003	30	25
	10/8/2003	19.80	NA	6.21	6.24	0.03	NA	10/10/2003	30	25
	11/6/2003	19.80	NA	6.07	6.11	0.04	NA	11/7/2003	30	25
	12/3/2003	19.80	NA	6.18	6.21	0.03	NA	12/5/2003	30	25
	1/14/2004	19.80	NA	6.11	6.18	0.07	NA	1/16/2004	30	25
	2/9/2004	19.80	NA	6.17	6.21	0.04	NA	2/13/2004	30	25
	3/10/2004	19.80	NA	NP	6.72	NP	NA	3/12/2004	30	25
	4/14/2004	19.80	NA	NP	6.56	NP	NA	4/16/2004	30	25
	5/11/2004	19.80	NA	NP	6.62	NP	NA	5/14/2004	30	25
	6/9/2004	19.80	NA	NP	6.51	NP	NA	6/14/2004	30	25
	7/14/2004	19.80	NA	NP	6.48	NP	NA	7/16/2004	30	25
	8/4/2004	19.80	NA	NP	6.30	NP	NA	8/13/2004	30	25
	9/8/2004	19.80	NA	NP	6.36	NP	NA	9/17/2004	30	25
	10/15/2004	19.80	NA	NP	6.40	NP	NA	10/15/2004	30	25
	11/10/2004	19.80	NA	NP	6.49	NP	NA	11/18/2004	30	25
	12/8/2004	19.80	NA	NP	6.53	NP	NA	12/9/2004	30	25
	1/12/2005	19.80	NA	NP	6.45	NP	NA	1/14/2005	30	25
	2/9/2005	19.80	NA	NP	6.49	NP	NA	2/14/2005	30	25
	3/9/2005	19.80	NA	NP	6.47	NP	NA	3/15/2005	30	25
	11/10/2005	19.80	NA	NP	2.96	NP	NA	11/14/2005	30	25
	2/7/2007	19.80	NA	7.28	7.31	0.03	NA	2/12/2007	30	25
	3/2/2007	19.80	NA	NP	6.54	NP	NA	3/9/2007	30	25
	4/6/2007	19.80	NA	6.33	6.34	0.01	NA	4/12/2007	30	25
	5/4/2007	19.80	NA	6.28	6.29	0.01	NA	5/14/2007	30	25
	6/1/2007	19.80	NA	6.44	6.45	0.01	NA	6/6/2007	30	25
	7/6/2007	19.80	NA	6.14	6.15	0.01	NA	7/16/2007	30	25
	8/3/2007	19.80	NA	6.39	6.40	0.01	NA	8/13/2007	30	25
	9/6/2007	19.80	NA	6.97	6.99	0.02	NA	9/13/2007	30	25
	10/5/2007	19.80	NA	7.42	7.44	0.02	NA	10/8/2007	30	25
	11/2/2007	19.80	NA	7.09	7.11	0.02	NA	11/23/2007	30	25
	12/6/2007	19.80	NA	7.34	7.35	0.01	NA	12/26/2007	30	25
	1/4/2008	19.80	NA	6.88	6.89	0.01	NA	1/8/2008	30	25
	2/8/2008	19.80	NA	6.58	6.59	0.01	NA	2/15/2008	30	25
	3/7/2008	19.80	NA	6.19	6.21	0.02	NA	3/22/2008	30	25
	4/4/2008	19.80	NA	5.88	5.89	0.01	NA	4/11/2008	30	25
	5/2/2008	19.80	NA	5.96	5.99	0.03	NA	5/9/2008	30	25
	7/7/2008	19.80	NA	NP	6.32	NP	NA	7/21/2008	30	25
	8/6/2008	19.80	NA	NP	5.91	NP	NA	8/18/2008	30	25
	9/5/2008	19.80	NA	NP	6.93	NP	NA	9/9/2008	30	25
	10/15/2008	19.80	NA	7.13	7.15	0.02	NA	10/15/2008	30	25
	11/5/2008	19.80	NA	7.03	7.07	0.04	NA	11/17/2008	30	25
	12/5/2008	19.80	17.86	NP	6.73	NP	11.13	12/18/2008	30	25
	1/9/2009	19.80	17.86	NP	4.72	NP	13.14	1/21/2009	30	25
	2/3/2009	19.80	17.86	NP	3.98	NP	13.88	2/18/2009	30	25
	3/3/2009	19.80	17.86	NP	4.52	NP	13.34	3/25/2009	30	25
	4/22/2009	19.80	17.86	NP	5.88	NP	11.98	4/22/2009	30	25
	5/19/2009	19.80	17.86	NP	6.16	NP	11.70	5/20/2009	30	25
	6/11/2009	19.80	17.86	NP	5.80	NP	12.06	6/23/2009	30	25
	7/10/2009	19.80	17.86	NP	6.27	NP	11.59	7/21/2009	30	25
	8/14/2009	19.80	17.86	NP	6.36	NP	11.50	8/19/2009	30	25
	9/23/2009	19.80	17.86	NP	6.55	NP	11.31	9/23/2009	30	25
	10/28/2009	19.80	17.86	NP	6.15	NP	11.71	10/28/2009	30	25
	11/25/2009	19.80	17.86	NP	6.55	NP	11.31	11/25/2009	30	25
	12/14/2009	19.80	17.86	NP	6.03	NP	11.83	12/30/2009	30	25
	2/12/2010	19.80	17.86	NP	6.46	NP	11.40	2/24/2010	30	25
	12/8/2010	19.80	17.86	7.40	7.42	0.02	10.48	12/22/2010	60	50
	1/5/2011	19.80	17.86	6.93	6.94	0.01	10.94	1/31/2011	45	40
	2/4/2011	19.80	17.86	6.63	6.64	0.01	11.24	2/24/2011	30	25
	3/1/2011	19.80	17.86	6.21	6.22	0.01	11.66	3/24/2011	30	25
	4/14/2011	19.80	17.86	6.30	6.31	0.01	11.57	4/29/2011	30	25
	5/10/2011	19.80	17.86	6.32	6.33	0.01	11.55	5/26/2011	30	25
	6/2/2011	19.80	17.86	6.23	6.24	0.01	11.64	6/29/2011	30	25
	7/6/2011	19.80	17.86	6.49	6.50	0.01	11.36	7/11/2011	45	40
	8/4/2011	19.80	17.86	6.73	6.74	0.01	11.12	8/18/2011	45	40
	9/19/2011	19.80	17.86	6.98	6.98	0.00	10.88	9/29/2011	45	40
	10/7/2011	**19.80**	**17.86**	**6.83**	**6.84**	**0.01**	**11.03**	**10/31/2011[1]**	**30**	**280**
	11/1/2011	**19.80**	**17.86**	**6.58**	**6.59**	**0.01**	**11.28**	**11/28/2011[1]**	**30**	**280**
	12/14/2011	**19.80**	**17.86**	**Could not Gauged due to Obstruction in well at 6.08 ft**				**12/30/2011[1]**	**30**	**280**
								Volume Recovered (gal)		**3,075**

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		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
TM-7	10/8/2001	21.40	NA	6.72	7.31	0.59	NA	10/8/2001	30	25
	11/7/2001	21.40	NA	NP	7.34	NP	NA	11/7/2001	30	25
	12/5/2001	21.40	NA	NP	8.38	NP	NA	12/5/2001	30	25
	1/9/2002	21.40	NA	NP	8.25	NP	NA	1/11/2002	30	25
	2/6/2002	21.40	NA	NP	8.15	NP	NA	2/8/2002	30	25
	3/6/2002	21.40	NA	NP	8.34	NP	NA	3/8/2002	30	25
	4/3/2002	21.40	NA	NP	8.59	NP	NA	4/5/2002	30	25
	5/8/2002	21.40	NA	NP	8.64	NP	NA	5/10/2002	30	25
	6/5/2002	21.40	NA	NP	7.95	NP	NA	6/7/2002	30	25
	10/9/2002	21.40	NA	Sheen	8.07	Sheen	NA	10/11/2002	30	25
	11/6/2002	21.40	NA	Sheen	7.44	Sheen	NA	11/8/2002	30	25
	12/4/2002	21.40	NA	Sheen	8.07	Sheen	NA	12/6/2002	30	25
	1/8/2003	21.40	NA	Sheen	7.01	Sheen	NA	1/10/2003	30	25
	2/5/2003	21.40	NA	NP	8.14	NP	NA	2/7/2003	30	25
	3/5/2003	21.40	NA	Sheen	7.24	Sheen	NA	3/7/2003	30	25
	5/22/2003	21.40	NA	NP	7.77	NP	NA	5/23/2003	30	25
	6/11/2003	21.40	NA	NP	7.19	NP	NA	6/13/2003	30	25
	7/9/2003	21.40	NA	NP	7.51	NP	NA	7/11/2003	30	25
	8/14/2003	21.40	NA	NP	7.45	NP	NA	8/15/2003	30	25
	9/12/2003	21.40	NA	NP	7.56	NP	NA	9/15/2003	30	25
	10/8/2003	21.40	NA	NP	7.63	NP	NA	10/10/2003	30	25
	11/6/2003	21.40	NA	NP	7.28	NP	NA	11/7/2003	30	25
	12/3/2003	21.40	NA	NP	7.36	NP	NA	12/5/2003	30	25
	1/14/2004	21.40	NA	NP	7.32	NP	NA	1/16/2004	30	25
	2/9/2004	21.40	NA	NP	7.41	NP	NA	2/13/2004	30	25
	3/10/2004	21.40	NA	NP	7.56	NP	NA	3/12/2004	30	25
	4/14/2004	21.40	NA	NP	7.43	NP	NA	4/16/2004	30	25
	5/11/2004	21.40	NA	NP	7.58	NP	NA	5/14/2004	30	25
	6/9/2004	21.40	NA	NP	7.62	NP	NA	6/14/2004	30	25
	7/14/2004	21.40	NA	NP	7.47	NP	NA	7/16/2004	30	25
	8/4/2004	21.40	NA	NP	7.31	NP	NA	8/13/2004	30	25
	9/8/2004	21.40	NA	NP	7.38	NP	NA	9/17/2004	30	25
	10/15/2004	21.40	NA	NP	7.41	NP	NA	10/15/2004	30	25
	11/10/2004	21.40	NA	NP	7.48	NP	NA	11/18/2004	30	25
	12/8/2004	21.40	NA	NP	7.51	NP	NA	12/9/2004	30	25
	1/12/2005	21.40	NA	NP	7.46	NP	NA	1/14/2005	30	25
	2/9/2005	21.40	NA	NP	7.51	NP	NA	2/14/2005	30	25
	3/9/2005	21.40	NA	NP	7.48	NP	NA	3/15/2005	30	25
	11/10/2005	21.40	NA	NP	7.74	NP	NA	11/14/2005	30	25
	10/5/2007	21.40	NA	8.05	8.14	0.09	NA	10/8/2007	30	25
	11/2/2007	21.40	NA	7.99	8.01	0.02	NA	11/23/2007	30	25
	12/6/2007	21.40	NA	8.21	8.22	0.01	NA	12/26/2007	30	25
	2/8/2008	21.40	NA	7.35	7.36	0.01	NA	2/15/2008	30	25
	9/5/2008	21.40	NA	7.64	7.65	0.01	NA	9/9/2008	30	25
	10/15/2008	21.40	NA	NP	7.60	NP	NA	10/15/2008	30	25
	11/5/2008	21.40	NA	NP	7.75	NP	NA	11/17/2008	30	25
	12/5/2008	21.40	17.52	NP	7.72	NP	9.80	12/18/2008	30	25
	1/9/2009	21.40	17.52	NP	4.89	NP	12.63	1/21/2009	30	25
	2/3/2009	21.40	17.52	NP	3.71	NP	13.81	2/18/2009	30	25
	3/3/2009	21.40	17.52	NP	4.47	NP	13.05	3/25/2009	30	25
	4/22/2009	21.40	17.52	NP	7.71	NP	9.81	4/22/2009	30	25
	5/19/2009	21.40	17.52	NP	7.15	NP	10.37	5/20/2009	30	25
	6/11/2009	21.40	17.52	NP	7.05	NP	10.47	6/23/2009	30	25
	7/10/2009	21.40	17.52	NP	7.11	NP	10.41	7/21/2009	30	25
	8/14/2009	21.40	17.52	NP	7.52	NP	10.00	8/19/2009	30	25
	9/23/2009	21.40	17.52	NP	7.01	NP	10.51	9/23/2009	30	25
	10/28/2009	21.40	17.52	NP	7.46	NP	10.06	10/28/2009	30	25
	11/25/2009	21.40	17.52	NP	7.82	NP	9.70	11/25/2009	30	25
	12/14/2009	21.40	17.52	NP	7.39	NP	10.13	12/30/2009	30	25
	2/12/2010	21.40	17.52	NP	7.27	NP	10.25	2/24/2010	30	25
	12/8/2010	21.40	17.52	7.90	7.91	0.01	9.63	12/22/2010	60	50
	1/5/2011	21.40	17.52	7.58	7.59	0.01	9.95	1/31/2011	45	40
	2/4/2011	21.40	17.52	7.24	7.25	0.01	10.29	2/24/2011	30	25
	3/1/2011	21.40	17.52	7.36	7.37	0.01	10.17	3/24/2011	30	25
	4/14/2011	21.40	17.52	7.08	7.09	0.01	10.45	4/29/2011	30	25
	5/10/2011	21.40	17.52	7.52	7.53	0.01	10.01	5/26/2011	30	25
	6/2/2011	21.40	17.52	6.95	6.96	0.01	10.58	6/29/2011	30	25
	7/6/2011	21.40	17.52	7.22	7.24	0.02	10.28	7/11/2011	45	40
	8/4/2011	21.40	17.52	7.43	7.48	0.05	10.04	8/18/2011	45	40
	9/19/2011	21.40	17.52	7.59	7.59	0.00	9.93	9/29/2011	45	40
	10/7/2011	**21.40**	**17.52**	**NP**	**7.89**	**NP**	**9.63**	**10/31/2011[1]**	**30**	**280**
	11/1/2011	**21.40**	**17.52**	**7.19**	**7.20**	**0.01**	**10.33**	**11/28/2011[1]**	**30**	**280**
	12/14/2011	**21.40**	**17.52**	**NP**	**7.37**	**NP**	**10.15**	**12/30/2011[1]**	**30**	**280**
								Volume Recovered (gal)		**2,650**

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
TR-2	10/18/2001	21.30	14.62	5.89	6.20	0.31	8.96	10/19/2001	30	25
	10/24/2001	21.30	14.62	5.35	5.55	0.20	9.42	10/26/2001	30	25
	10/31/2001	21.30	14.62	5.45	5.82	0.37	9.45	11/2/2001	30	25
	11/7/2001	21.30	14.62	5.77	6.02	0.25	9.04	11/9/2001	30	25
	11/14/2001	21.30	14.62	5.87	5.98	0.11	8.83	11/23/2001	30	25
	11/23/2001	21.30	14.62	6.08	6.24	0.16	8.66	11/26/2001	30	25
	11/28/2001	21.30	14.62	6.15	6.18	0.03	8.49	11/30/2001	30	25
	12/5/2001	21.30	14.62	NP	6.53	NP	8.09	12/7/2001	30	25
	12/11/2001	21.30	14.62	6.39	6.49	0.10	8.31	12/14/2001	30	25
	12/19/2001	21.30	14.62	6.31	6.42	0.11	8.39	12/21/2001	30	25
	12/26/2001	21.30	14.62	6.26	6.64	0.38	8.65	12/28/2001	30	25
	1/2/2002	21.30	14.62	6.39	6.50	0.11	8.31	1/4/2002	30	25
	2/6/2002	21.30	14.62	6.42	6.49	0.07	8.25	2/8/2002	30	25
	3/6/2002	21.30	14.62	6.38	6.99	0.61	8.70	3/8/2002	30	25
	4/3/2002	21.30	14.62	6.17	6.94	0.77	9.03	4/5/2002	30	25
	5/8/2002	21.30	14.62	6.13	6.83	0.70	9.02	5/10/2002	30	25
	6/5/2002	21.30	14.62	4.21	4.67	0.46	10.76	6/7/2002	30	25
	7/10/2002	21.30	14.70	6.31	6.69	0.38	8.68	7/12/2002	30	25
	8/7/2002	21.30	14.70	6.23	6.91	0.68	8.98	8/9/2002	30	25
	9/11/2002	21.30	14.70	6.41	6.83	0.42	8.61	9/13/2002	30	25
	10/9/2002	21.30	14.70	6.13	6.51	0.38	8.86	10/11/2002	30	25
	11/6/2002	21.30	14.70	Sheen	6.14	Sheen	8.56	11/8/2002	30	25
	12/4/2002	21.30	14.70	4.83	4.97	0.14	9.98	12/6/2002	30	25
	1/8/2003	21.30	14.70	6.28	6.40	0.12	8.51	1/10/2003	30	25
	2/5/2003	21.30	14.70	5.67	5.73	0.06	9.08	2/7/2003	30	25
	3/5/2003	21.30	14.70	4.98	5.02	0.04	9.75	3/7/2003	30	25
	5/22/2003	21.30	14.70	Sheen	6.02	Sheen	8.68	5/23/2003	30	25
	6/11/2003	21.30	14.70	5.73	5.76	0.03	8.99	6/13/2003	30	25
	7/9/2003	21.30	14.70	Sheen	5.56	Sheen	9.14	7/11/2003	30	25
	8/14/2003	21.30	14.70	NP	5.31	NP	9.39	8/15/2003	30	25
	9/12/2003	21.30	14.70	NP	5.42	NP	9.28	9/15/2003	30	25
	10/8/2003	21.30	14.70	NP	5.48	NP	9.22	10/10/2003	30	25
	11/6/2003	21.30	14.70	NP	5.71	NP	8.99	11/7/2003	30	25
	12/3/2003	21.30	14.70	NP	5.56	NP	9.14	12/5/2003	30	25
	1/14/2004	21.30	14.70	NP	5.68	NP	9.02	1/16/2004	30	25
	2/9/2004	21.30	14.70	NP	5.53	NP	9.17	2/13/2004	30	25
	3/10/2004	21.30	14.70	NP	5.57	NP	9.13	3/12/2004	30	25
	4/14/2004	21.30	14.70	NP	5.61	NP	9.09	4/16/2004	30	25
	5/11/2004	21.30	14.70	NP	5.63	NP	9.07	5/14/2004	30	25
	6/9/2004	21.30	14.70	NP	5.59	NP	9.11	6/14/2004	30	25
	7/14/2004	21.30	14.70	NP	5.50	NP	9.20	7/16/2004	30	25
	8/4/2004	21.30	14.70	NP	5.40	NP	9.30	8/13/2004	30	25
	9/8/2004	21.30	14.70	NP	5.44	NP	9.26	9/17/2004	30	25
	10/15/2004	21.30	14.70	NP	5.49	NP	9.21	10/15/2004	30	25
	11/10/2004	21.30	14.70	NP	5.30	NP	9.40	11/18/2004	30	25
	12/8/2004	21.30	14.70	NP	5.34	NP	9.36	12/9/2004	30	25
	1/12/2005	21.30	14.70	NP	5.31	NP	9.39	1/14/2005	30	25
	2/9/2005	21.30	14.70	NP	5.39	NP	9.31	2/14/2005	30	25
	3/9/2005	21.30	14.70	NP	5.34	NP	9.36	3/15/2005	30	25
	3/2/2007	21.30	14.70	1.04	1.08	0.04	13.69	3/9/2007	30	25
	4/6/2007	21.30	14.70	3.50	3.60	0.10	11.28	4/12/2007	30	25
	5/4/2007	21.30	14.70	3.80	3.86	0.06	10.95	5/14/2007	30	25
	6/1/2007	21.30	14.70	3.90	4.04	0.14	10.91	6/6/2007	30	25
	7/6/2007	21.30	14.70	6.22	6.38	0.16	8.60	7/16/2007	30	25
	8/3/2007	21.30	14.70	4.31	4.33	0.02	10.41	8/13/2007	30	25
	9/6/2007	21.30	14.70	4.78	4.86	0.08	9.98	9/13/2007	30	25
	10/5/2007	21.30	14.70	5.16	5.39	0.23	9.31	10/8/2007	30	25
	11/2/2007	21.30	14.70	5.30	5.65	0.35	9.05	11/23/2007	30	25
	12/6/2007	21.30	14.70	5.48	5.61	0.13	9.09	12/26/2007	30	25
	1/4/2008	21.30	14.70	5.19	5.30	0.11	9.59	1/8/2008	30	25
	2/8/2008	21.30	14.70	4.26	4.29	0.03	10.46	2/15/2008	30	25
	3/7/2008	21.30	14.70	3.62	3.71	0.09	11.15	3/22/2008	30	25
	4/4/2008	21.30	14.70	NA	NA	NA	NA	4/11/2008	30	25
	5/2/2008	21.30	14.70	4.29	4.31	0.02	10.39	5/9/2008	30	25
	6/6/2008	21.30	14.70	NP	3.54	NP	11.16	6/12/2008	30	25
	7/7/2008	21.30	14.70	NP	2.99	NP	11.71	7/21/2008	30	25
	8/6/2008	21.30	14.70	NP	2.87	NP	11.83	8/18/2008	30	25
	9/5/2008	21.30	14.70	NP	3.77	NP	10.93	9/9/2008	30	25
		Well Abandoned								
									Volume Recovered (gal)	**1,550**

Table 5
Pump and Haul Summary Table
Port Reading Refinery
750 Cliff Road
Port Reading, Middlesex County, New Jersey

Well I.D.	Date	GROUND WATER GAUGING AND PUMP & HAUL DATA								
		DTB from TOC (ft)	TOC Elevation (ft)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation (ft)*	Date Pumped	Aprox. Time Pumped (min)	Approx. Volume Recovered (gal)
TR-2R	9/23/2009	20.20	14.66	4.53	4.55	0.02	10.11	9/23/2009	30	25
	10/28/2009	20.20	14.66	NP	4.01	NP	10.65	10/28/2009	30	25
	11/25/2009	20.20	14.66	NP	4.48	NP	10.18	11/25/2009	30	25
	12/14/2009	20.20	14.66	NP	4.34	NP	10.32	12/30/2009	30	25
	1/11/2010	20.20	14.66	NP	5.41	NP	9.25	1/27/2010	30	25
	2/12/2010	Unable To Open Due To Heavy Snow						2/24/2010	30	25
	3/12/2010	20.20	14.66	NP	4.42	NP	10.24	3/24/2010	30	25
	4/1/2010	20.20	14.66	NP	3.21	NP	11.45	4/2/2010	30	25
	5/14/2010	20.20	14.66	NP	3.75	NP	10.91	5/26/2010	30	25
	6/28/2010	20.20	14.66	NP	3.98	NP	10.68	6/29/2010	30	25
	7/21/2010	20.20	14.66	NP	3.54	NP	11.12	7/28/2010	60	50
	8/9/2010	20.20	14.66	4.76	5.03	0.27	9.63	8/19/2010	60	50
	9/7/2010	20.20	14.66	NP	5.04	NP	9.62	9/15/2010	60	50
	10/12/2010	20.20	14.66	5.10	5.41	NP	9.25	10/28/2010	60	50
	11/9/2010	20.20	14.66	5.42	5.66	NP	9.00	11/24/2010	60	50
	12/8/2010	20.20	14.66	4.97	5.07	NP	9.59	12/22/2010	60	50
	1/5/2011	Could Not Locate Due To Heavy Snow						1/31/2011	45	40
	2/4/2011	20.20	14.66	4.80	4.92	0.12	9.74	2/24/2011	45	40
	3/1/2011	20.20	14.66	4.58	4.69	0.11	9.97	3/24/2011	45	40
	4/14/2011	20.20	14.66	4.11	4.20	0.09	10.46	4/29/2011	45	40
	5/10/2011	20.20	14.66	3.60	3.72	0.12	10.94	5/26/2011	45	40
	6/2/2011	20.20	14.66	3.17	3.25	0.08	11.41	6/29/2011	45	40
	7/6/2011	20.20	14.66	4.45	4.51	0.06	10.15	4/29/2011	45	40
	8/4/2011	20.20	14.66	2.56	2.56	0.00	12.10	5/26/2011	45	40
	9/19/2011	20.20	14.66	NP	4.13	NP	10.53	6/29/2011	45	40
	10/7/2011	**20.20**	**14.66**	**4.53**	**4.60**	**0.07**	**10.11**	**10/31/2011[1]**	**30**	**280**
	11/1/2011	**20.20**	**14.66**	**4.02**	**4.03**	**0.01**	**10.64**	**11/28/2011[1]**	**30**	**280**
	12/14/2011	**20.20**	**14.66**	**4.32**	**4.34**	**0.02**	**10.34**	**12/30/2011[1]**	**30**	**280**
									Volume Recovered (gal)	**1,750**
TR-4	10/28/2009	20.20	14.71	NP	4.33	NP	10.38	10/28/2009	30	25
	11/25/2009	20.20	14.71	NP	5.01	NP	9.70	11/25/2009	30	25
	12/14/2009	20.20	14.71	NP	4.76	NP	9.95	12/30/2009	30	25
	1/11/2010	Unable To Open Due To Ice						1/27/2010	30	25
	2/12/2010	Unable To Open Due To Heavy Snow						2/24/2010	30	25
	3/12/2010	20.20	14.71	NP	3.63	NP	11.08	3/24/2010	30	25
	4/1/2010	20.20	14.71	NP	4.05	NP	10.66	4/2/2010	30	25
	5/14/2010	20.20	14.71	NP	4.20	NP	10.51	5/26/2010	30	25
	6/28/2010	20.20	14.71	NP	4.37	NP	10.34	6/29/2010	30	25
	7/21/2010	20.20	14.71	NP	4.73	NP	9.98	7/28/2010	30	25
	8/9/2010	Could Not Gauge Due To Area Flooding						8/19/2010	30	25
	9/7/2010	20.20	14.71	NP	5.00	NP	9.71	9/15/2010	30	25
	10/12/2010	20.20	14.71	NP	5.21	NP	9.50	10/28/2010	30	25
	11/9/2010	20.20	14.71	NP	5.15	NP	9.56	11/24/2010	30	25
	12/8/2010	20.20	14.71	NP	4.89	NP	9.82	12/22/2010	30	25
									Volume Recovered (gal)	**375**
								TOTAL Volume of Fluids Recovered to Date (gal)		**31,295**

[1]Assumes a steady recovey rate throughout event
* - TOC based on most recent available survey data
NM - Not Monitored

NP - No Product
LNAPL - Light non Aqueous Phase Liquids
TOC- Top of Casing

DTB - Depth to Bottom
ft - feet
-- Information is not applicable or not available

APPENDIX I:

NJDEP- iMap 2007 Wetlands

new jersey **nidep**
department of environmental protection

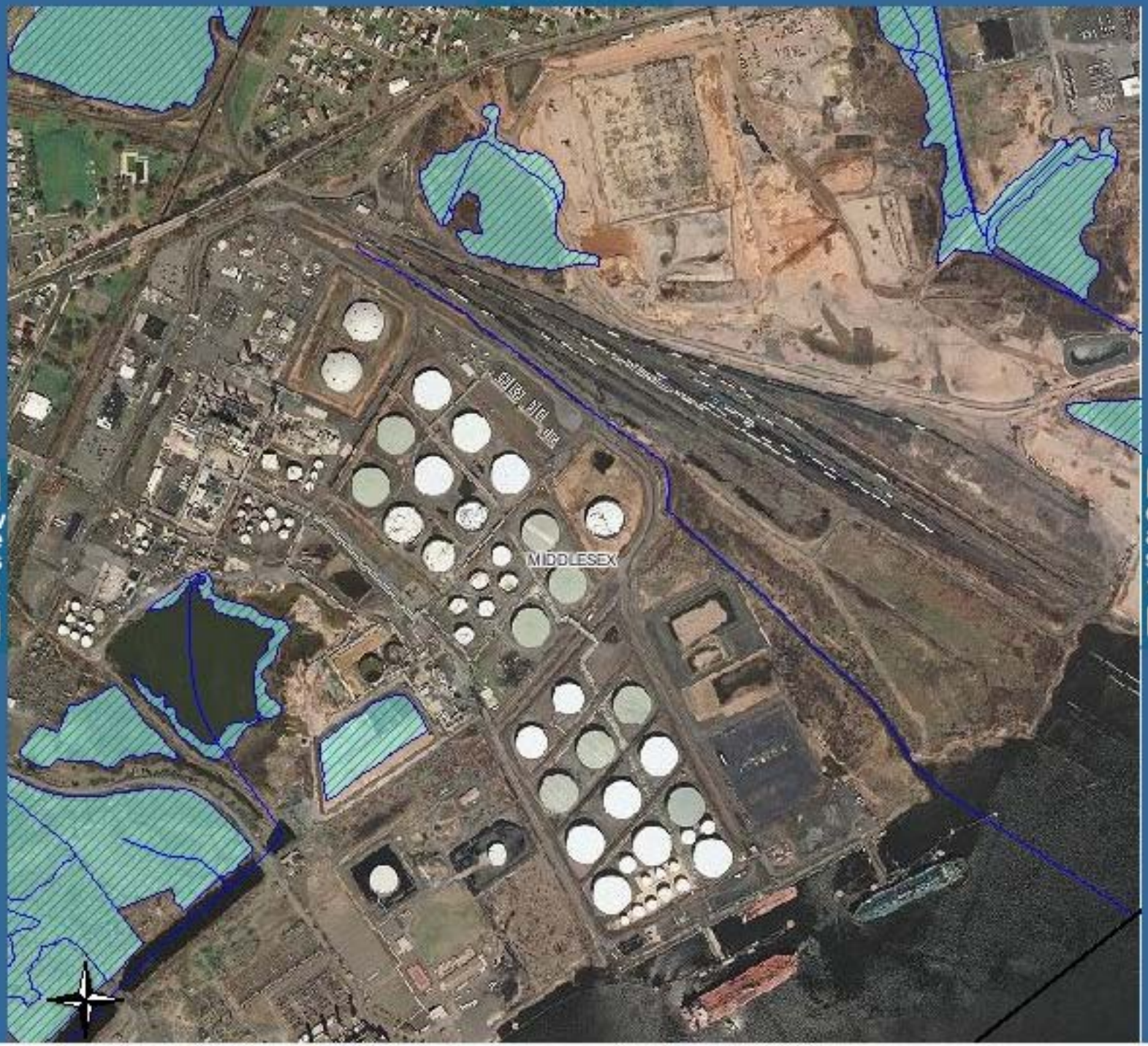
data descriptions

zoom in | zoom out | full extent | last extent | pan | identify | measure | select | set origin | clear selection | print

north

west

east



Query

Find Location of Inte

Legend

- Counties
- Streams
- Wetlands (2002)
- WETLANDS
- Aerial Photos 2007
- Mid-Atlantic States
- New Jersey
- Other States

APPENDIX II:

Monitoring Well Logs

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: AB1 DATE DRILLED: 04/12/2002 COORD #1: 26.31.926 PERMIT #1: 26-63927
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 8'
LENGTH 2:
SLOT SIZE: .010

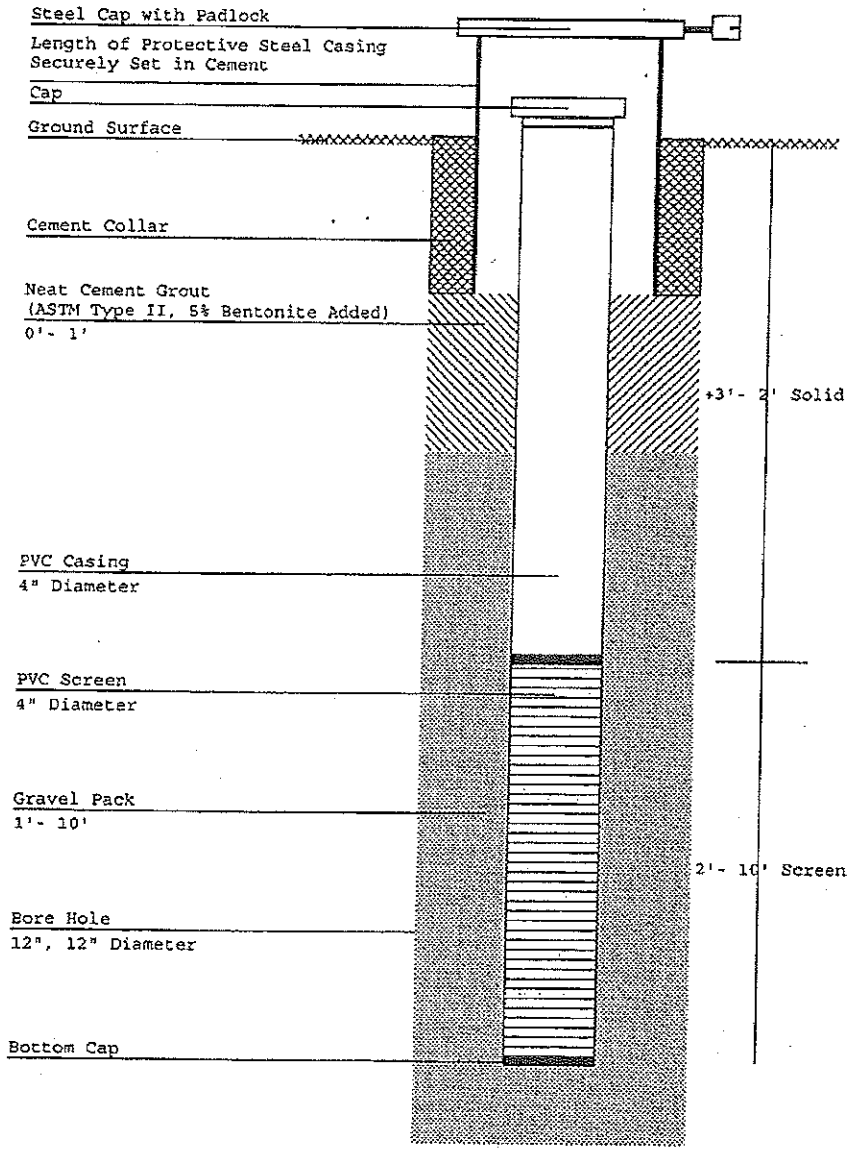
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 10'		Grey silty sand.



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email: info@summitdrilling.com

WELL LOG

WELL: ~~AB2~~ AB2 DATE DRILLED: 04/08/2002 COORD #1: 26.31.926 PERMIT #1: 26-63926
COORD #2: PERMIT #2:

SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH.2:
SLOT SIZE: .010

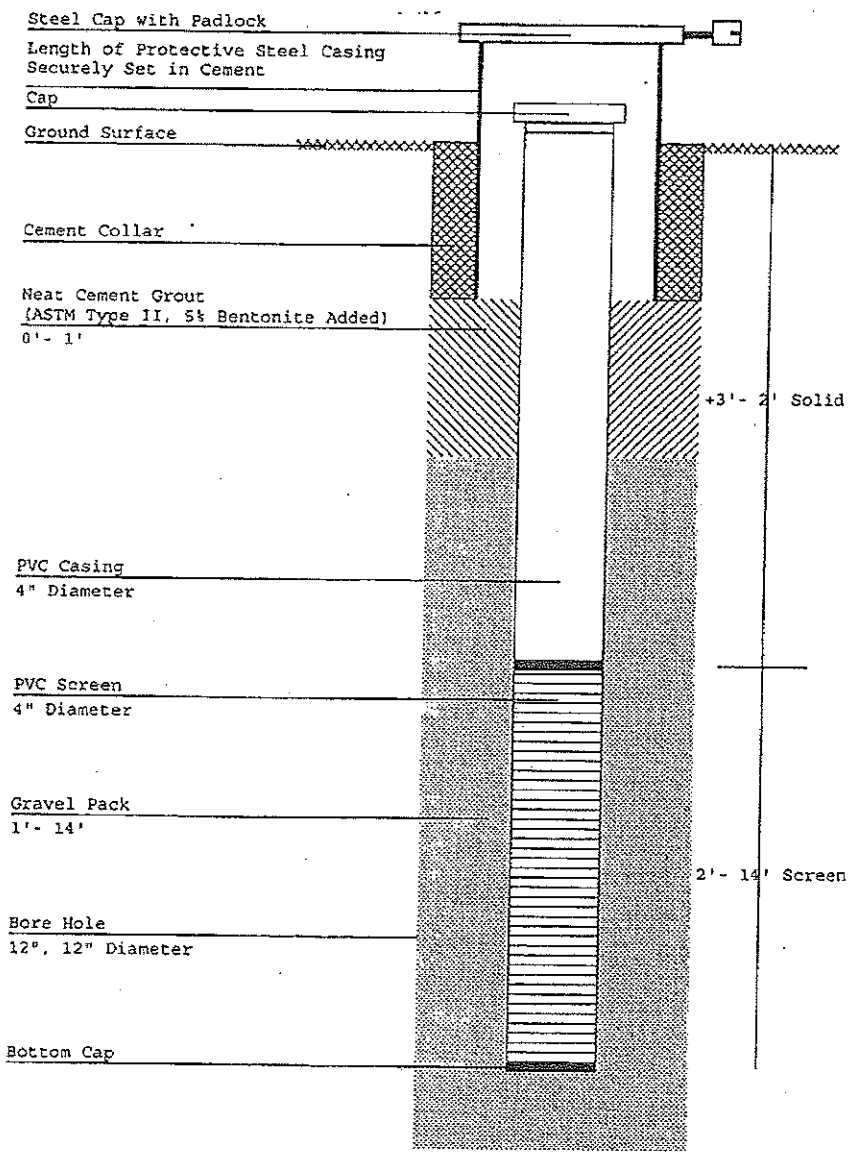
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 14'

SET WELL: 14'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 14'		Grey silty sand.



MONITORING WELL LOG

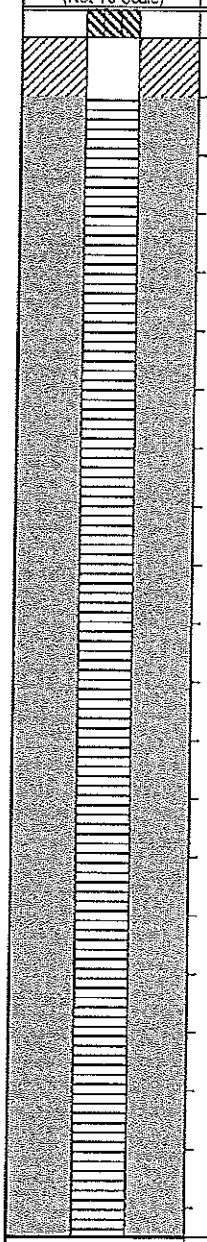
Project Name: Amerada Hess Corporation - Port Reading Refinery	**Well Identification:** MW-AB2
Street Address: Port Reading Refinery	**Well Coordinate Number:**
City, State: Port Reading, New Jersey	**Well Permit Number:**
County: Middlesex	**Latitude:** ; **Longitude:**
Owner: Amerada Hesss Corporation	**Casing Elevation:** feet; **Surface Elevation:** feet
Owner's Representative: Frank Sanclementi, Senior Hydrogeologis	**Well Depth:** 14 feet
Owner's Address: #1 Hess Plaza, Woodbridge, NJ	**Screen Length:** 12 feet; **Casing Length:** 5 feet
GES Project Manager: James Coyne, P G.	**Drilling Method:** Hollow stem auger
GES Case Manager:	**Well Diameter:** 4 0 inches
NJDEP Case Number:	**Borehole Diameter:** 11.0 inches
NJPDES Permit Number: Not applicable	**Sampling Method:** Split-Spoon Sampler and/or Drill cuttings
Driller: Summit Drilling Company	**Static Water Depth:** 3 feet
Driller's Address: Chimney Rock Road, Bldg #9W, Bound Brook, N	**Logged By:** Robert C. Landle, P.G. / ~~John M. Montgomery, P.G.~~
Driller's License Number: JD21245	**Completion Date:** 4/8/02

Depth (feet)	Sample Number	Well Detail	PID (units)	Blow Count Recovery (inches)	Depth (feet)	Lithology/Remarks (Modified Burmister Classification)
1			Stick up +3'		0-5	VACTRON CLEARED
2						
3						
4						
5						
6			0 IN BOREHOLE	1 1 / 1 1	5-7	NO RECOVERY
7						
8			0 / 0	11 17 / 19 14	7-9	(REC=7") LIGHT BROWN TO ORANGE BROWN COARSE TO FINE SAND, trace SILT.
9						
10			0 / 0	10 10 / 20 22	9-11	(REC=15") TOP 10" - SAME AS 7-9' Bottom 5" - GRAY COARSE TO FINE SAND, trace SILT w/ fine gravel.
11						
12			0 / 0	22 10 / 7 5	11-13	(REC=20") DARK GRAY TO GREENISH GRAY COARSE TO FINE SAND, LITTLE fine GRAVEL, Little Silt.
13						
14	S-1 13'6"-14'0"		0@6" 4.2@12" 14.2@18 4.0@24	7 7 / 6 6	13-15	(REC=24") TOP 6" = GRAY COARSE TO FINE SAND, trace SILT. NEXT 4" of LIGHT BROWN FINE SAND, Little SILT. BOTTOM 12" = BROWN PEAT and DARK GRAY ORGANIC SILT.
15						END OF BORING @ 15' SCREEN = 14 - 2' RISER = 2 - +3'
						End boring at 15 feet

Note: Numbers in the column labeled "Blow Count" refer to the number of blows required to drive a standard split-spoon sampler a distance of 6 0 inches using a 140-pound drop weight falling 30 inches. A standard split-spoon sampler is 2 0-inch outer diameter and 1.375-inch inner diameter

LOG OF AB-2R

Client: Hess	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/9/2008 — DTW: 3'	Ground Elevation: Not Surveyed
Drilling Company: Summit Drilling			Measuring Point Elevation
Date Started: 10/9/08	Date Completed: 10/9/08	Well Diameter: 4"	
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING AB-2R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-7' - Coarse to Fine Sand, Silt
	2				
	3				
	4				
	5				
	6				
	7				7'-9' - Light Brown to Orange Brown Coarse to Fine Sand, Trace Silt
	8				
	9				
	10				9'-11' - Grey Coarse to Fine Sand, Trace Silt with Fine Gravel
	11				
	12				11'-13' - Dark Grey to Greenish Grey Coarse to Fine Sand, Little Fine Gravel, Little Silt
	13				
	14				
	15				
	16				13'-20' - Grey Coarse to Fine Sand, Trace Silt, Brown Sand, Organic Material
	17				
	18				
	19				
	20				End of boring at 20'. PVC Screen 1' to 20' , Riser - 2.5'

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: AB3 DATE DRILLED: 04/12/2002 COORD #1: 26.31.926 PERMIT #1: 26-63928
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 8'
LENGTH 2:
SLOT SIZE: .010

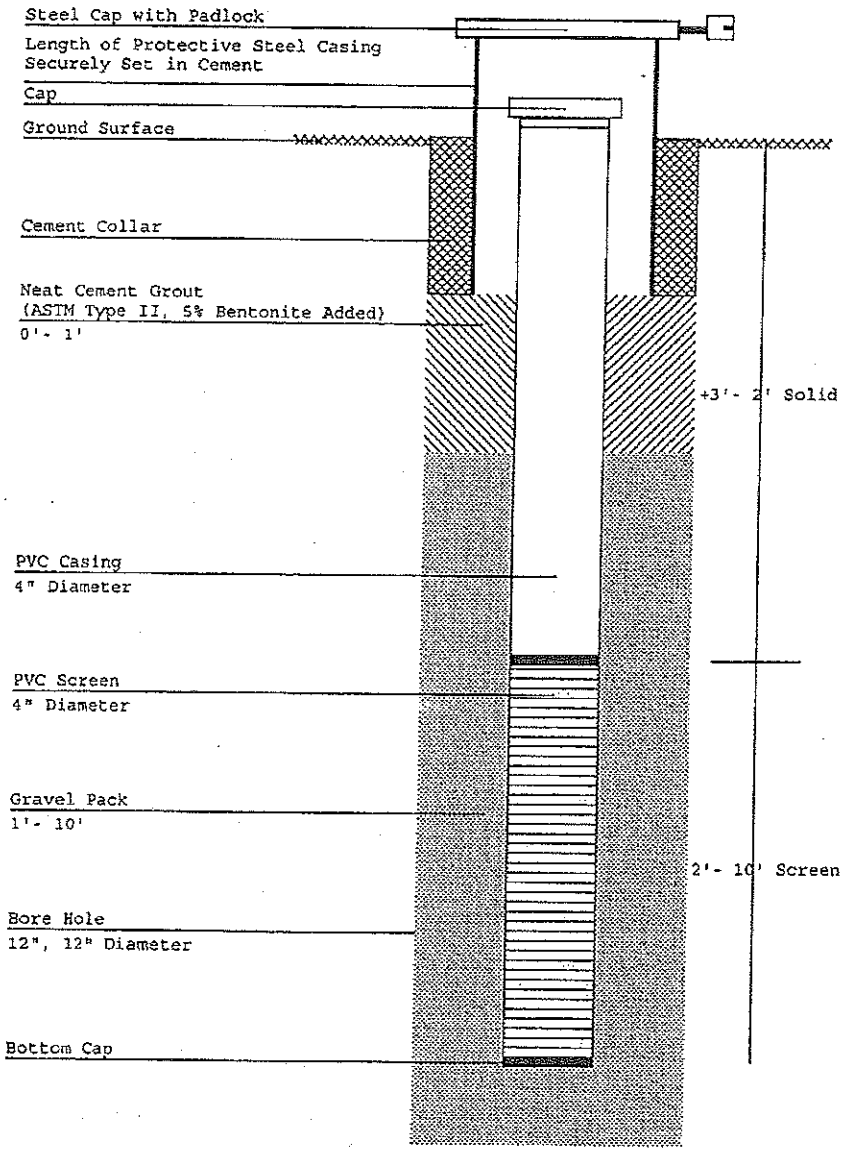
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 10'		Grey silty sand.



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email: info@summitdrilling.com

WELL LOG

WELL: AB4 DATE DRILLED: 04/12/2002 COORD #1: 26.31.926 PERMIT #1: 26-63929
COORD #2: PERMIT #2: COUNTY: Middlesex
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 8'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

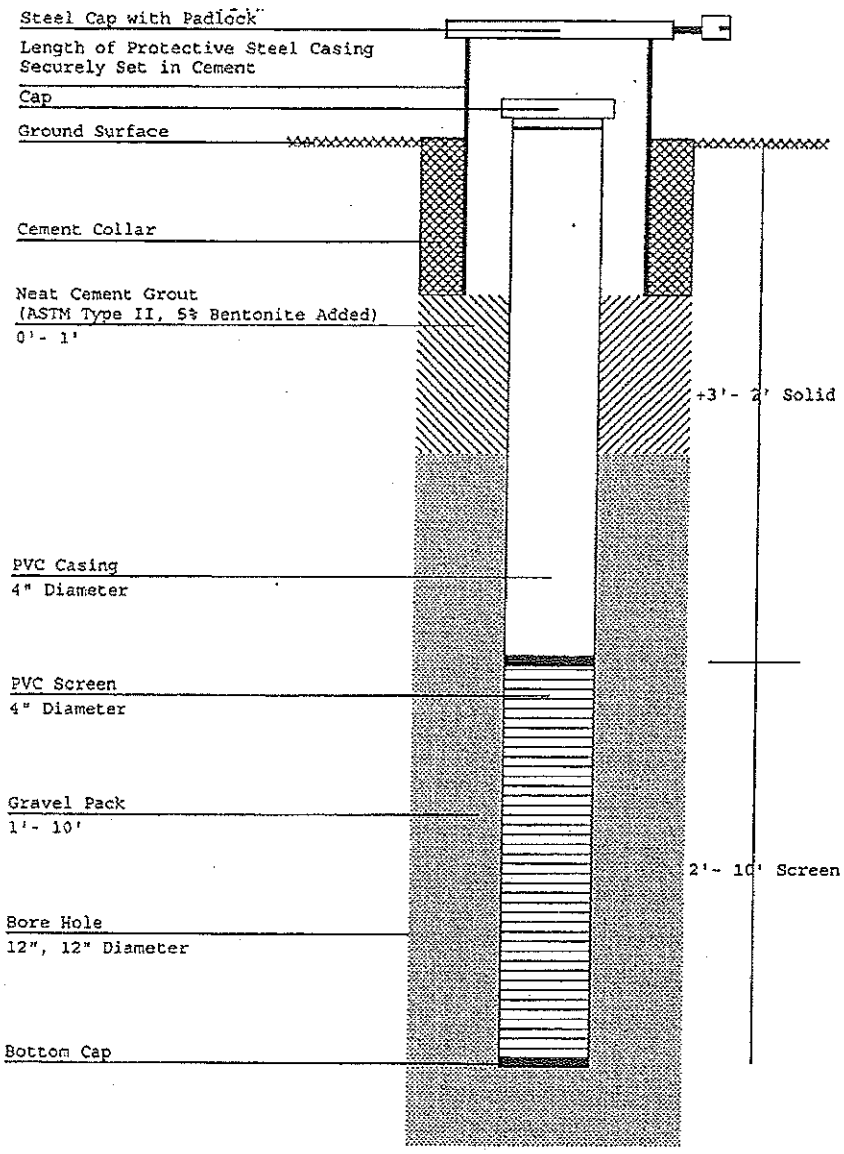
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 10' Grey silty sand.



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WELL LOG

WELL: AB5 DATE DRILLED: 04/12/2002 COORD #1: 26.31.926 PERMIT #1: 26-63930
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 8'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

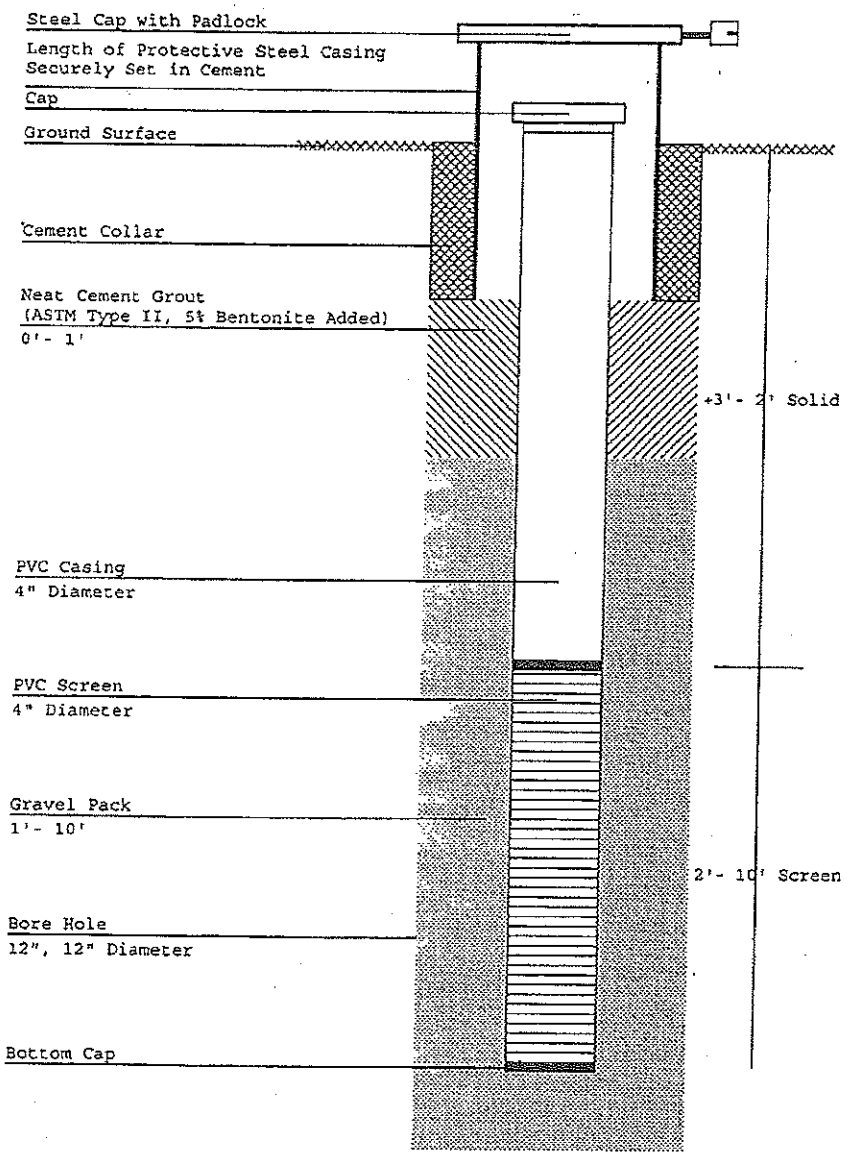
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 10' Grey silty sand.



Hudson Environmental Services, Inc.

Test Boring Log

Project: Amerada Hess Corporation

AD-1

Location: 750 Cliff Road Port Reading NJ

Not to UST 1:013

Contractor: EDI

Drilling Method: Hollow Stem Auger

Boring #: MW-1

Driller: John Muller

Sample Type: Split Spoon

Well Elevation:

Sheet # 1 of 1

Hudson Geologist: M. Roberts

Weight: 140 lbs

Fall: 30"

Date Started: 6-7-91

Date Finished: 6-7-91

Sample #	Penetration/ Recovery	Blows/ 6"	n	Depth (feet)	Description	Remarks
		—			Asphalt	
		—			Gravel	
		3		1		organic silt
1	2'/18"	3		2		PID: 0ppm
		3			Grey mottled SILT, little f Sand	
		4		3		PID: 0ppm
		15				
2	2'/14"	15		4	Grey mottled SILT, little f Sand	(soft)
		20			Reddish Brown SILT, little cf Sand, little cf Gravel	
		16		5		PID: 0ppm (stiff, dry)
		13				▽
3	2'/18"	16		6		Ground water 5.42' (6-26-91)
		16			Reddish Brown SILT, little cf Sand, little cf Gravel	
		15		7		PID: 0ppm
		17				
4	2'/18"	14		8		
		19			Reddish Brown SILT, little cf Sand, little cf Gravel	
		15		9		PID: 0ppm (moist + soft)
		12				
5	2'/18"	11		10		
		15			Reddish Brown SILT little cf Sand, little cf Gravel	
		15		11		PID: 0ppm
		14				
6	2'/18"	20		12		
		26			Reddish Brown SILT little cf Sand, little cf Gravel	
		32		13		PID: 0ppm
				14		
				15		
				16		

R.O.W. 16'

Hudson Environmental Services, Inc.

Test Boring Log

AD-2

Project: Amerada Hess Corporation

Location: 750 Cliff Road

Contractor: EDC

Driller: John Muller

Hudson Geologist: M. Roberts

Drilling Method: Hollow Stem Auger

Sample Type: Split Spoon

Weight: 140 lbs

Well Elevation:

Fall: 30"

Boring #: MW-2

Sheet # 1 of 1

Date Started: 6-7-91

Date Finished: 6-7-91

Sample #	Penetration/Recovery	Blows/6"	n	Depth (feet)	Description	Remarks
		—			Asphalt	
		—		1	Gravel	
		—				
		6		2		
1	2'/14"	4			Reddish Brown Mottled SILT, some cf Sand, little mf Gravel	PID: 0ppm
		4		3		
		5			Grey mottled CLAY, trace f Sand	
		6		4		
2	2'/14"	7				moist
		13		5	Grey mottled CLAY, trace f Sand	
		15			mottled Reddish Brown SILT, some cf Sand, little mf Gravel	stiff
		7		6		PID: 0ppm
	2'/8"	14			mottled Black, Reddish Brown SILT, some cf Sand, little cf Gravel	▽ Groundwater - 6.55' (6-26-91)
		15		7		PID: 0ppm
		15				
		20		8		moist
4	2'/14"	20			Mottled Black, Reddish Brown SILT, some cf Sand, little cf Gravel	
		20		9		
		18				PID: 0ppm
		11		10		
5	2'/21"	10			mottled Grey, Reddish Brown SILT some cf Sand, little cf Gravel	soft
		9		11		
		24			~~2" of Reddish Brown cf SAND, little SILT~~ mottled Black, Reddish Brown SILT some cf Sand, little cf Gravel	PID: 0ppm
		24		12		
6	2'/21"	24			Reddish Brown SILT some cf Sand, little cf Gravel	V. Soft
		28		13		
		24				PID: 0ppm
				14		
				15		
				16		B.O.W 18' Drilled to 24'

Hudson Environmental Services, Inc.

Test Boring Log

Project: Amerada Hess Corporation

Location: 750 Cliff Road, Port Reading NJ 07064

Contractor: EDI

Driller: John Muller

Hudson Geologist: M. Roberts

Drilling Method: Hollow Stem Auger

Sample Type: Split Spoon

Weight: 140 lbs

Well Elevation:

Fall: 30"

AD-3

next to UST 14

Boring #: MW-3

Sheet # 1 of 1

Date Started: 6-7-91

Date Finished: 6-7-91

Sample #	Penetration/ Recovery	Blows/ 6"	n	Depth (feet)	Description	Remarks
1	2'/4"	11, 11, 4, 3		1	Reddish Brown cf Sand, some Silt, some cf Gravel	PID: 0ppm dry
				2		
2	2'/4"	9, 3, 2, 1		3	Reddish Brown SILT, and cf Sand, little mf Gravel	PID: 332ppm wet
				4		
3	2'/5"	3, 2, 4, 4		5	Reddish Brown SILT, and cf Sand, little mf Gravel	very soft PID: 0.6ppm free product droplets - diesel
				6		
	2'/14"	4, 8, 8, 7		7	Reddish Brown SILT, and cf Sand, little cf Gravel	PID: 0ppm free product droplets (firm)
				8	Reddish Brown SILT, little cf Sand, little cf Gravel	
5	2'/24"	7, 10, 16, 13		9	Reddish Brown SILT, some cf Sand, little mf Gravel	PID 0ppm
				10	Reddish Brown cf SAND, trace Silt	▽ Groundwater 4.33' (6-20-91)
6	2'/24"	9, 17, 17, 23		11	Reddish Brown cf SAND, trace Silt	PID: 0ppm
				12		
				13		
				14		
				15		
				16		

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email: info@summitdrilling.com

WELL LOG

WELL: AD4 DATE DRILLED: 04/11/2002 COORD #1: 26.31.926 PERMIT #1: 26-63937
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 13'
LENGTH.2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

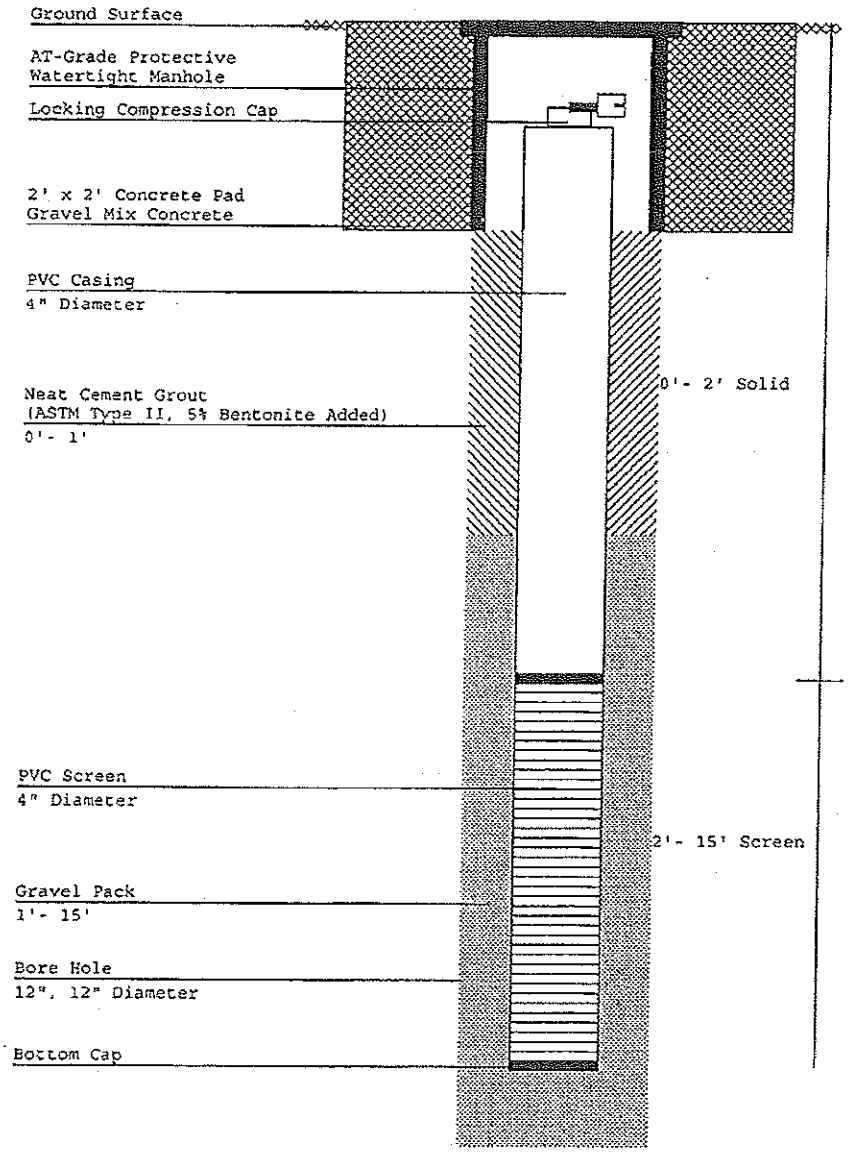
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
-	

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 15' Grey silty sand.



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http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: AD5 DATE DRILLED: 04/11/2002 COORD #1: 26.31.926 PERMIT #1: 26-63938
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 13'
LENGTH 2:
SLOT SIZE: .010

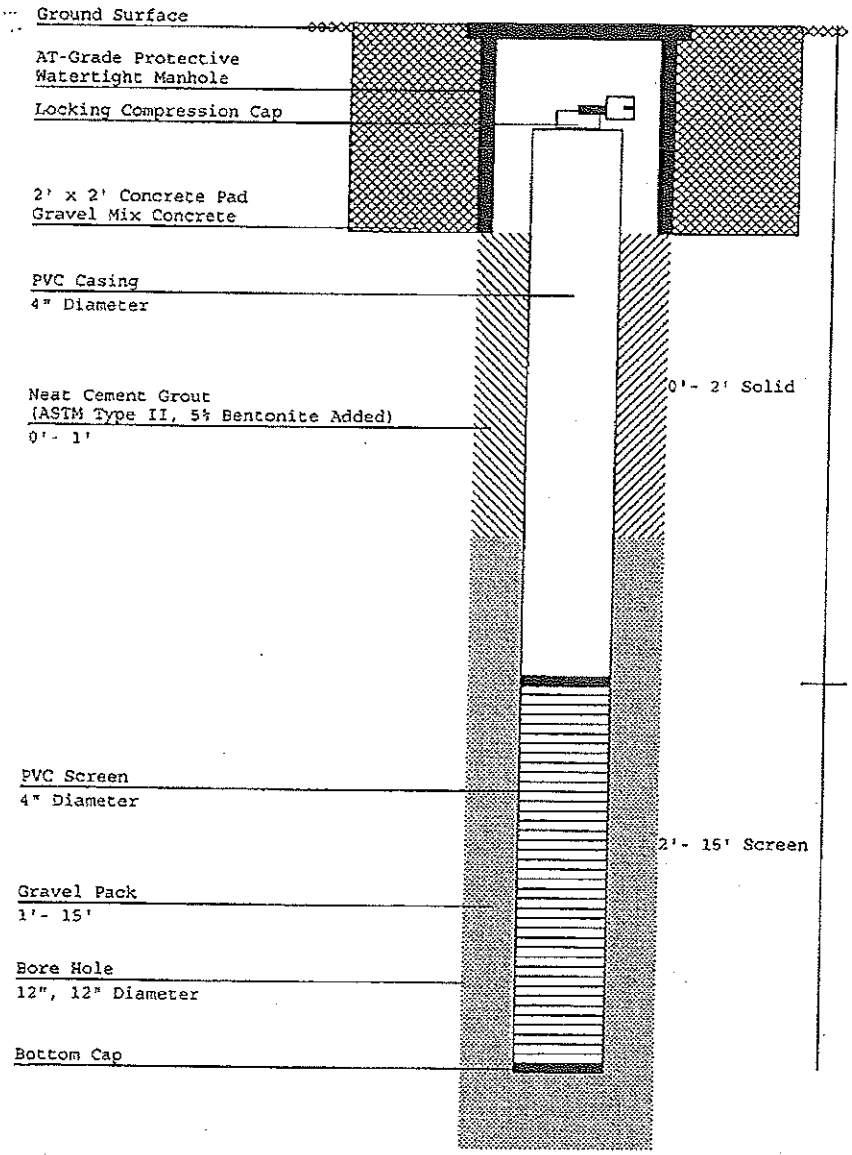
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H20 LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 15'		Grey silty sand.



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FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: AD6 DATE DRILLED: 04/11/2002 COORD #1: 26.31.926 PERMIT #1: 26-63939
COORD #2: PERMIT #2: COUNTY: Middlesex
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 13'
LENGTH 2:
SLOT SIZE: .010

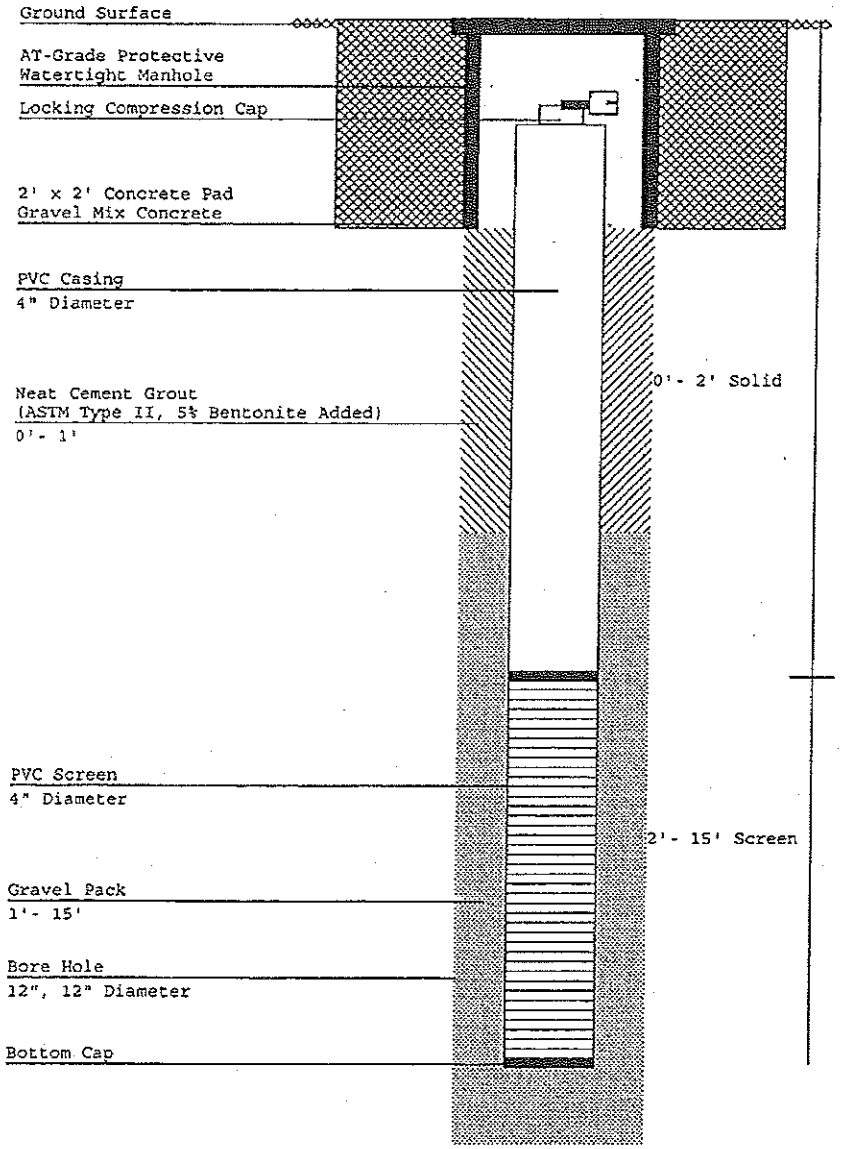
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 15'		Grey silty sand.



LIPPINCOTT ENGINEERING ASSOCIATES
501 BURLINGTON AVENUE DELANCO, N.J. 08075

PROJECT NO. 3929.A1
DATE 10/18/85

SHEET 5 OF 7
SURFACE ELEV 9.6

PROJECT WELL INSTALLATION/NO. 1 LAND FARM CLIENT AMERADA HESS

LOCATION PORT READING REFINERY LOG OF BORING NO. BG-2

Permit No. 26-8132

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	5-7-15-21	Brown coarse-fine SAND, some silt, little gravel.	
5	S-2	A	4/ 6	3-7-7-10	Same.	
10	S-3	A	9/ 11	2-2-1-2	Dark brown PEAT.	
					EOB 11'-0"	

GROUND WATER DATA

DEPTH	HOUR	DATE
3'-0"		10/19/85

R-106 Rev.2

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

DRILLER J. SNYDER HELPER E. DORON

LIPPINCOTT ENGINEERING ASSOCIATES
501 BURLINGTON AVENUE DELANCO, N.J. 08075

PROJECT NO. 3929.A1
DATE 10/16/85

SHEET 2 OF 7
SURFACE ELEV 10.0

PROJECT WELL INSTALLATION/NO. 1 LAND FARM CLIENT AMERADA HESS

LOCATION PORT READING REFINERY LOG OF BORING NO. LP-1 DG-1 L1-2

Permit No. 26-8065

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	6-12-12-14	Brown coarse-fine SAND, little gravel, little silt.	
5	S-2	A	4/ 6	4-7-10-11	Brown coarse-fine GRAVEL & coarse-fine SHALE, trace silt.	
10	S-3	A	9/ 11	7-8-6-3	Light brown, same.	
15	S-4	A	13/ 15	2-2-1-1	Dark brown organic SILTY CLAY.	
					EOB 15'-0"	

GROUND WATER DATA

DEPTH	HOUR	DATE
7'-3"		10/16/85
6'-11"		10/18/85
6'-2"		10/19/85

R-106 Rev.2

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

DRILLER B. WOODINGTON HELPER T. LIPPINCOTT

LIPPINCOTT ENGINEERING ASSOCIATES

501 BURLINGTON AVENUE DELANCO, N.J. 08075

PROJECT NO. 3929.A1
DATE 10/17/85

SHEET 4 OF 7
SURFACE ELEV 11.1

PROJECT WELL INSTALLATION/NO. 1 LAND FARM CLIENT AMERADA HESS

LOCATION PORT READING REFINERY LOG OF BORING NO. LP-1 DG-3 L1-4

Permit No. 26-8067

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	5-8-9-12	Brown coarse-fine SAND, little gravel, little silt.	
5	S-2	A	4/ 6	5-4-4-5	Brown coarse-fine SAND, some silt, little gravel.	
10	S-3	A	9/ 11	1-2-1-1	Dark brown organic SILTY CLAY.	
					EOB 11'-0"	

GROUND WATER DATA

DEPTH	HOUR	DATE
7'-6"		10/17/85

R-106 Rev.2

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

DRILLER J. SNYDER HELPER E. DORON

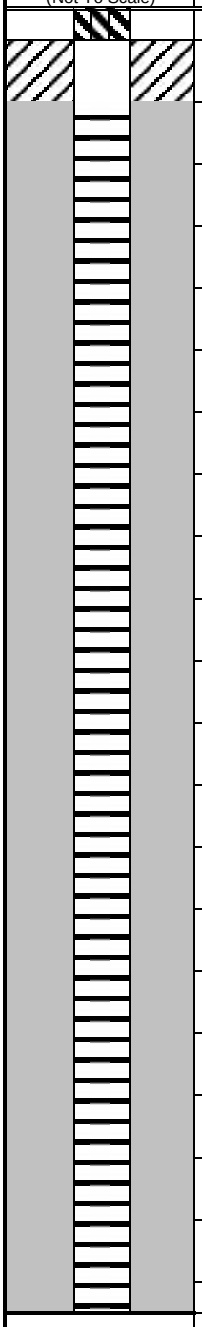
LN-5

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	10/26/2010	6.6	
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			12.85
10/7/10	**10/8/10** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			

SOIL BORING LN-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				0'-5' - Air Knife
	4				
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Light Brown Gravelly Sands
	11				
	12				
	13				
	14				
	15				10'-15' - Grey Silty Sand
	16				
	17				
	18				
	19				
	20				15'-20' - Grey Clay with Some Organic Material End of boring at 20'. PVC Screen 1' to 20' . Riser - 1' - +2.5'

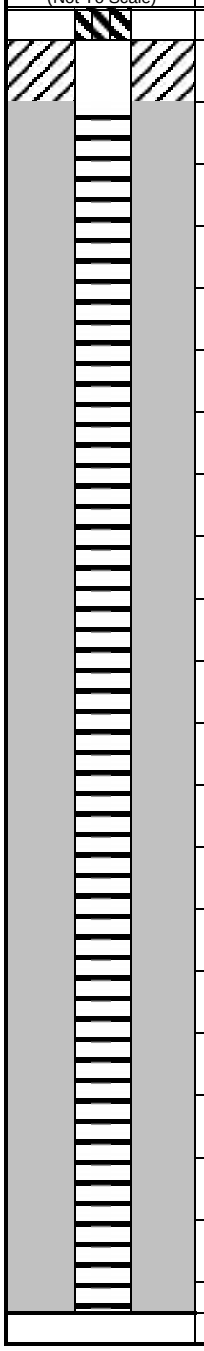
LN-6

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	10/26/2010	8.6	
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			14.56
10/7/10	**10/8/10** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			

SOIL BORING LN-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				0'-5' - Air Knife
	4				
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Light Brown Gravelly Sands
	11				
	12				
	13				
	14				
	15				10'-15' - Grey Silty Sand
	16				
	17				
	18				
	19				
	20				15'-20' - Grey Clay with Some Organic Material End of boring at 20'. PVC Screen 1' to 20' . Riser - 1' - +2.5'

LN-7

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	10/26/2010	9.2	
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			15.75
10/7/10	**10/8/10** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			



SOIL BORING LN-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				0'-5' - Air Knife
	4				
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Light Brown Gravelly Sands
	11				
	12				
	13				
	14				
	15				10'-15' - Grey Silty Sand
	16				
	17				
	18				
	19				
	20				15'-20' - Grey Clay with Some Organic Material End of boring at 20'. PVC Screen 1' to 20' . Riser - 1' - +2.5'

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

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Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: LPG1 DATE DRILLED: 04/13/2002 COORD #1: 26.31.926 PERMIT #1: 26-63940
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

SET WELL: 9'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

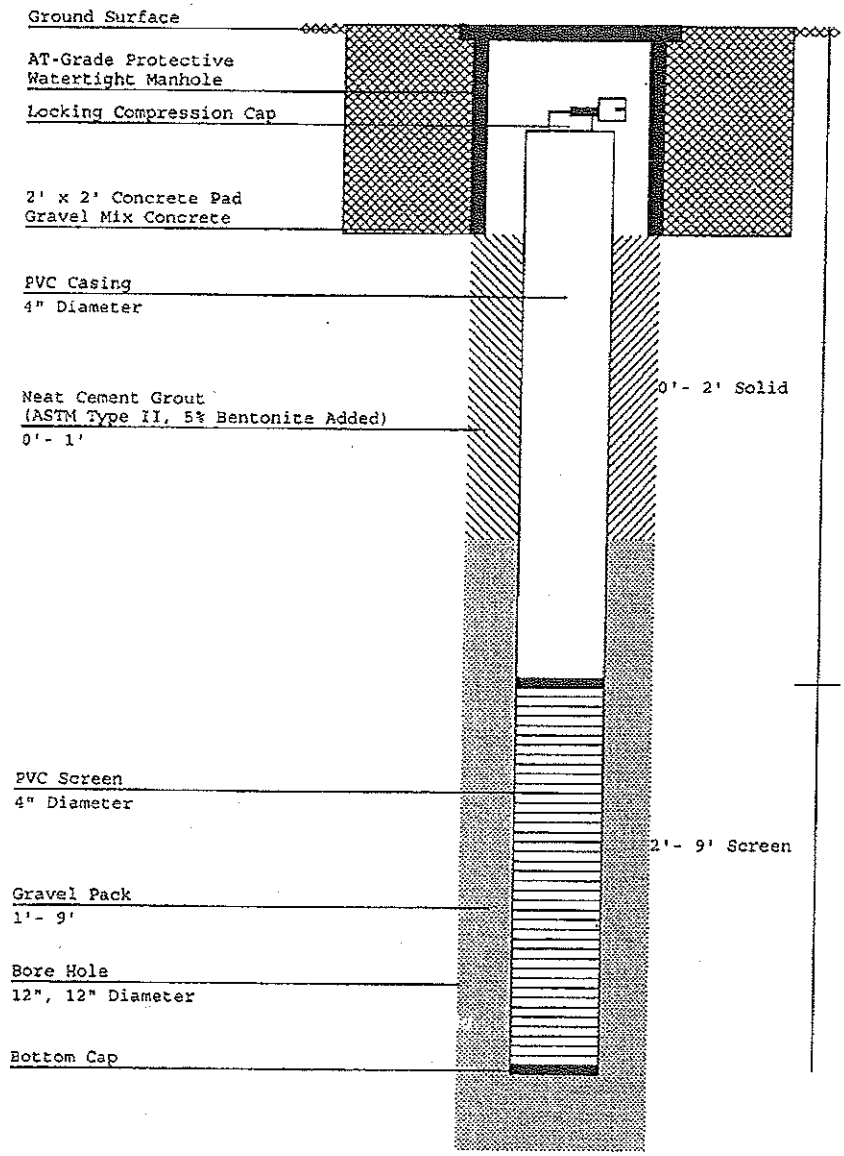
OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 7'
LENGTH 2:
SLOT SIZE: .010
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 9'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 9'		Grey silty sand.



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email: info@summitdrilling.com

WELL LOG

WELL: LPG2 DATE DRILLED: 04/13/2002 COORD #1: 26.31.926 PERMIT #1: 26-63941
COORD #2: PERMIT #2:

SITE: Port Reading Refinery, . 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 8'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 10'

SET WELL: 10'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 10'		Grey silty sand.

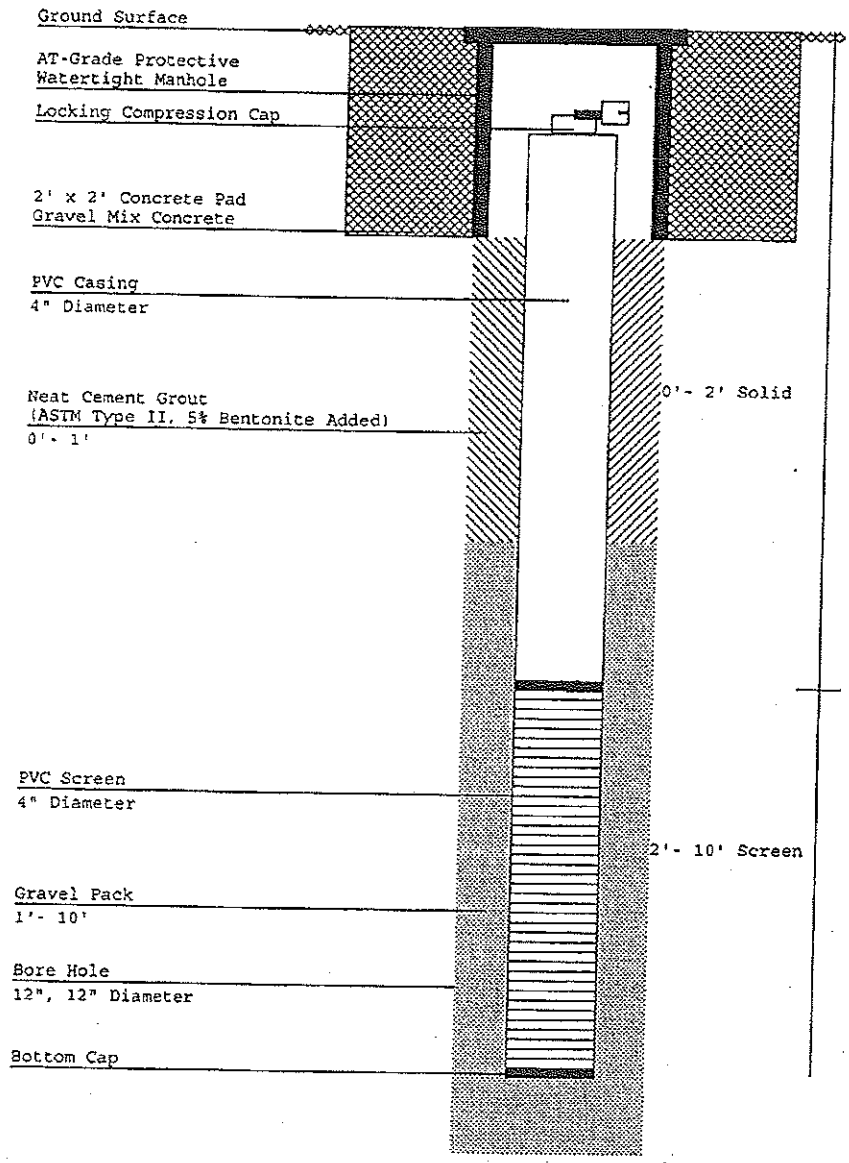

Figure 2

LIPPINCOTT ENGINEERING ASSOCIATES

501 BURLINGTON AVENUE DELANCO, N.J. 08075

PROJECT NO. 3929.1
DATE 4/13/85

SHEET 5 OF 8
SURFACE ELEV

PROJECT SOUTHLAND FARM

CLIENT AMERADA HESS

LOCATION PORT READING, NJ

LOG OF BORING NO. MW-5 = LS-1

Piezm. + No. 26-07542

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT %
0	S-1	A	0/ 2	4-11-7-7	Black SILTY SAND.	
					4'	
5	S-2	A	4/ 6	1-1-1-1	Reddish-brown CLAYEY SAND, trace gravel.	
	S-3	A	8/ 10	1-1-1-2	Same.	
10	S-4	A	10/ 12	3-4-6-7	Same.	
	S-5	A	12/ 14	7-8-10-7	Same.	
15	S-6	A	14/ 16	3-1-2-5	Same.	
	S-7	A	16/ 18	3-5-8-8	Same.	
	S-8	A	18/ 20	7-3-3-3	Brown-grey SILTY SAND.	
20	S-9	A	20/ 22	3-6-4-4	Same.	
	S-10	A	22/ 24	3-4-5-7.	Same.	
	S-11	A	24/ 26	20-20-20-20	Same.	
25						

4.6' Casing

5.0' Screen

TD = 7.67'

EOB 26'-0"

LS-1 = MW-5 has 26 or more feet of Sand. Compare to LS-3 = MW7

R-106 Rev

GROUND WATER DATA

DEPTH	HOUR	DATE
2'-2"		4/23/85

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

DRILLER E. DORON HELPER R. BRODSKY

LIPPINCOTT ENGINEERING ASSOCIATES

501 BURLINGTON AVENUE DELANCO, N.J. 08075

Figure 3

PROJECT NO. 3929.1

DATE 4/13/85

SHEET 6 OF 8

SURFACE ELEV

PROJECT SOUTHLAND FARM

CLIENT AMERADA HESS

LOCATION PORT READING, NJ

LOG OF BORING NO. MW-6 = LS-2

PERMIT NO 26-01593-2

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	4-3-3-2	Brown-black CLAYEY SILTY SAND.	
					4'	
5	S-2	A	4/ 6	7-6-6-6	Same.	
	S-3	A	8/ 10	WOR	Brown SILTY SAND.	
10	S-4	A	10/ 12	1-1-1-1	Green-brown SILTY SAND.	
	S-5	A	12/ 14	1-2-1-2	Green-grey laminated organic SILT.	
20	S-6	A	14/ 16	1-1-2-2	Same.	

5.2' of Fill

5.0' of Sand

TD = 10.25'

EOB 16'-0"

LS-2 = MW6 has 16 or more feet of Sand and Silt. Compare to LS-3 = MW7

R-106 Rev

GROUND WATER DATA

DEPTH	HOUR	DATE
1'-7"		4/23/85

* A. STANDARD PENETRATION TEST (ASTM-D 1586)

B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)

C. CORE DRILLING

DRILLER E. DORON HELPER R. BRODSKY

Figure 4

LIPPINCOTT ENGINEERING ASSOCIATES

501 BURLINGTON AVENUE DELANCO, N.J. 08075

JECT NO. 3929.1 SHEET 7 OF 8

ATE 4/15/85 SURFACE ELEV

JECT SOUTHLAND FARM CLIENT AMERADA HESS

OCATION PORT READING, NJ LOG OF BORING NO. MW-7 = LS-3

Permit no 26-07594-

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	14-28-34-26	Reddish-brown SILTY SAND, trace gravel.	
					4'	
5	S-2	A	4/ 6	3-4-7-8	Reddish-brown SILTY CLAY.	
	S-3	A	8/ 10	2-1-2-1	Same.	
10	S-4	A	10/ 12	4-4-2-2	Same.	
	S-5	A	12/ 14	2-4-3-3	Green-black organic material.	

6.0' of Casing

6.0' of Screen

TD = 12'

EOB 14'-0"

LS-3 = MW-7 Red Clay from 4' to 12' then underlain by ? organic material

R-106 Re

GROUND WATER DATA

DEPTH	HOUR	DATE
2'-10"		4/23/85

* A. STANDARD PENETRATION TEST (ASTM-D 1586)

B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)

C. CORE DRILLING

HELPER R. BROOSKY

Figure 5

LIPPINCOTT ENGINEERING ASSOCIATES

501 BURLINGTON AVENUE DELANCO, N.J. 08075

PROJECT NO. 3929.1
4/15/85

SHEET 8 OF 8
SURFACE ELEV

PROJECT SOUTHLAND PARK

CLIENT AMERADA HESS

LOCATION PORT READING, NJ

LOG OF BORING NO. MW-8 = LS-4

PERMIT NO 26-07595-2

DEPTH	SAMPLE NUMBER	TYPE*	SAMPLE DEPTH	NUMBER OF BLOWS PER 6"	CLASSIFICATION OF MATERIALS BASED ON SAMPLES RECOVERED PLUS OBSERVATION OF MATERIAL RETURNED BETWEEN SAMPLES	MOISTURE CONTENT
0	S-1	A	0/ 2	12-12-12-8	Brown SILTY SAND.	
					4' Black SILT, with gravel.	
5	S-2	A	4/ 6	2-6-4-3	4'	
					8' Red-brown CLAYEY SILT.	
	S-3	A	8/ 10	2-2-3-3		
10	S-4	A	10/ 12	5-14-10-8	11' Brown SAND.	
	S-5	A	12/ 14	9-13-10-13	Brown SANDY CLAY.	
15	S-6	A	14/ 16	4-17-16-8	Red-brown CLAY, trace sand.	
	S-7	A	16/ 18	7-6-3-4	Grey-green organic CLAYEY SILT.	
					EOB 18'-0"	

5.0' of Casing

7.0' of Screen

TD = 12.0'

R-106 Rev.

GROUND WATER DATA

DEPTH	HOUR	DATE
2'-11"		4/23/85

* A. STANDARD PENETRATION TEST (ASTM-D 1586)
B. STANDARD THIN-WALLED 3" TUBE (ASTM-D 1587)
C. CORE DRILLING

DRILLER E. DORON HELPER R. BRODSKY

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http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: PER1 DATE DRILLED: 04/10/2002 COORD #1: 26.31.926 PERMIT #1: 26-63933
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 6'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

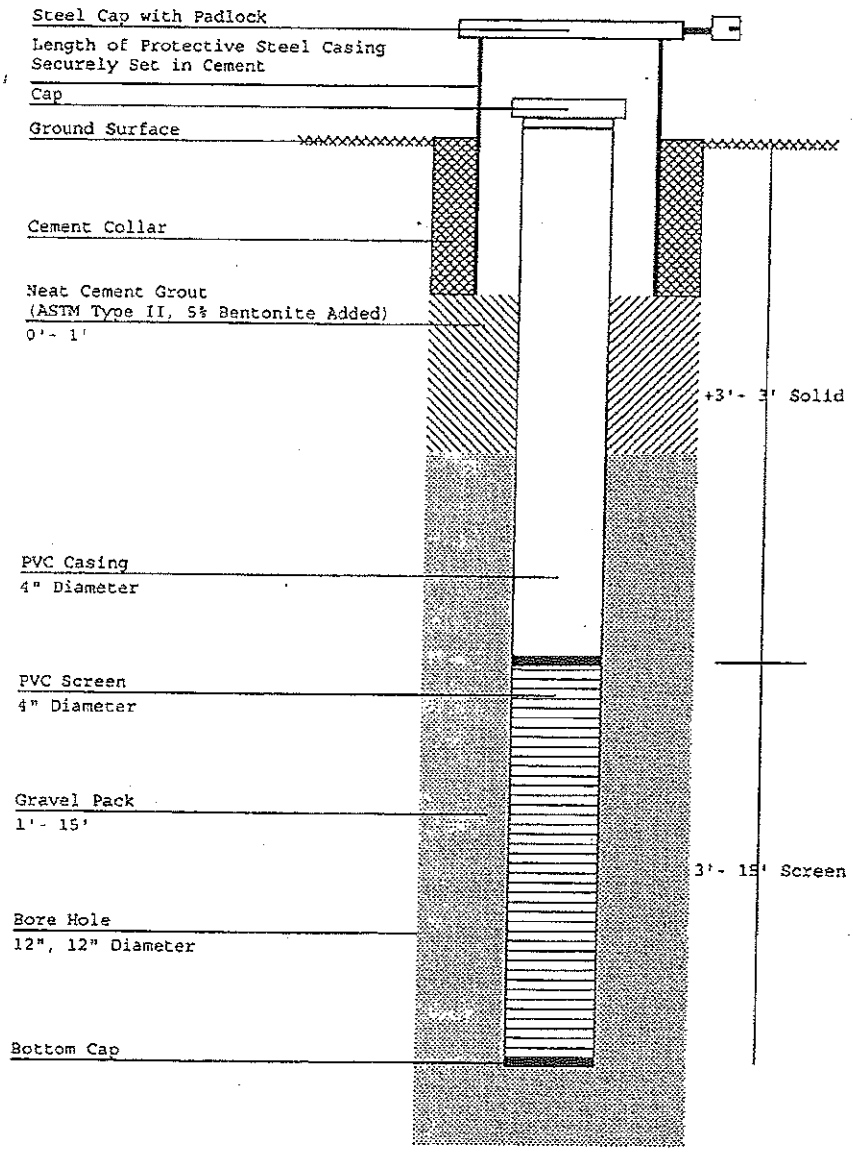
OUTER CASING:
DIAMETER:
LENGTH:

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .010
CASING SEAL: Portland
OPEN HOLE:

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 15'		Grey silty sand.



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email: info@summitdrilling.com

WELL LOG

WELL: PER2 DATE DRILLED: 04/10/2002 COORD #1: 26.31.926 PERMIT #1: 26-63924
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 7'
LENGTH 2:
SLOT SIZE: .010

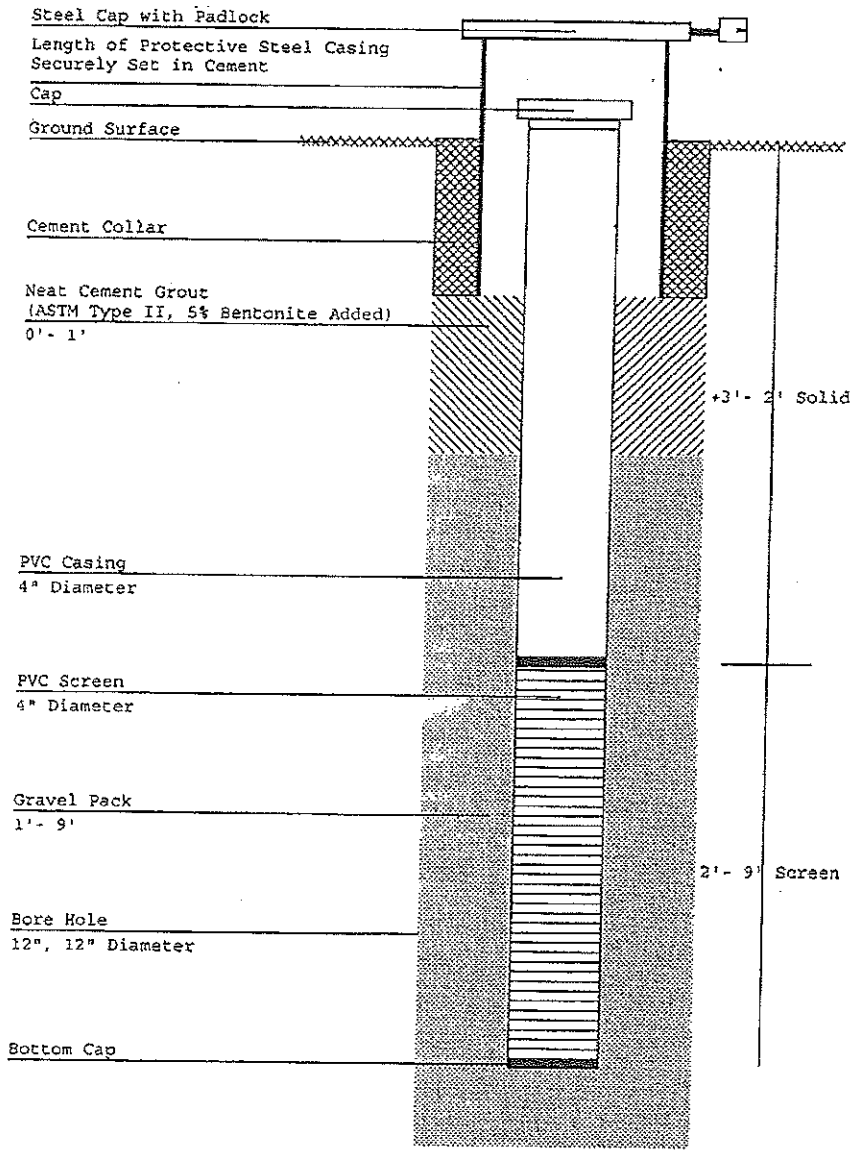
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 9'

SET WELL: 9'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 9'		Grey silty sand.



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email: info@summitdrilling.com

WELL LOG

WELL: PER3 DATE DRILLED: 04/10/2002 COORD #1: 26.31.926 PERMIT #1: 26-63925
COORD #2: PERMIT #2:

SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 7'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 9'

SET WELL: 9'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: S

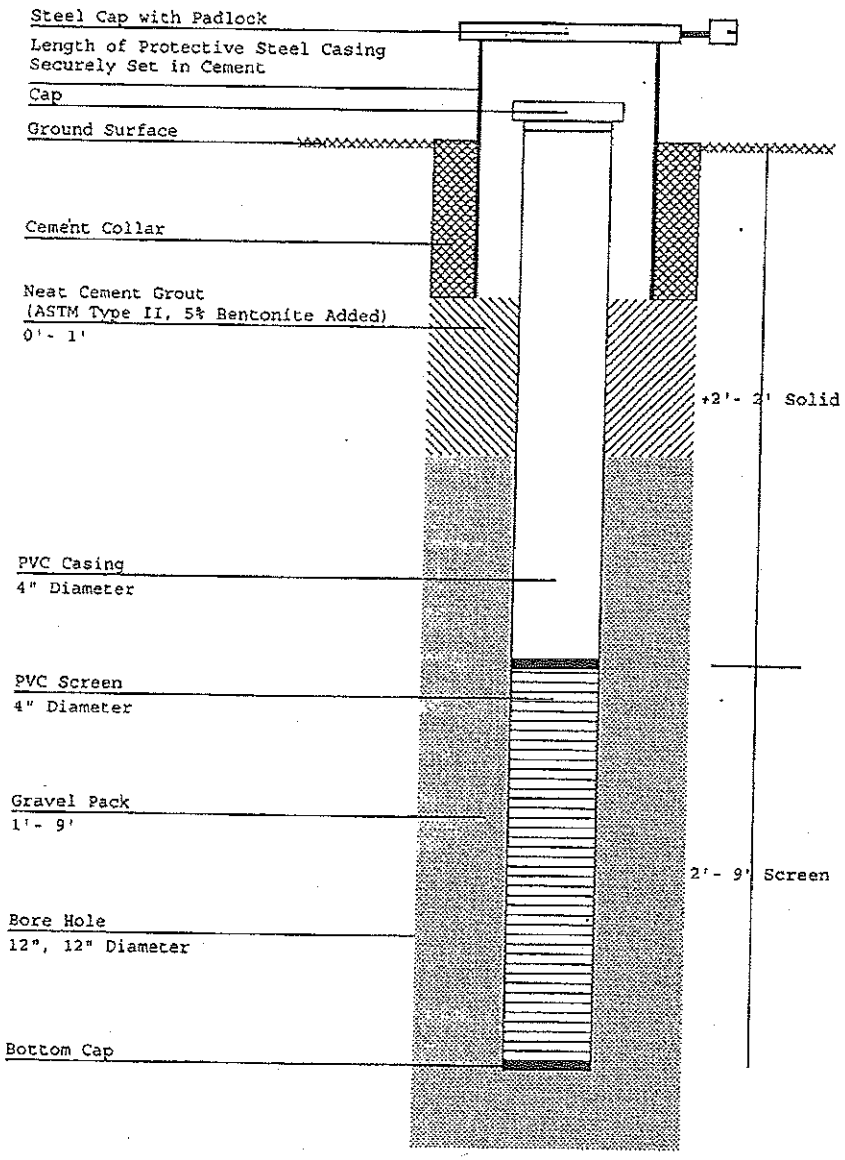
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 9' Grey silty sand.



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http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: PER4 DATE DRILLED: 04/09/2002 COORD #1: 26.31.926 PERMIT #1: 26-63934
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 15'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

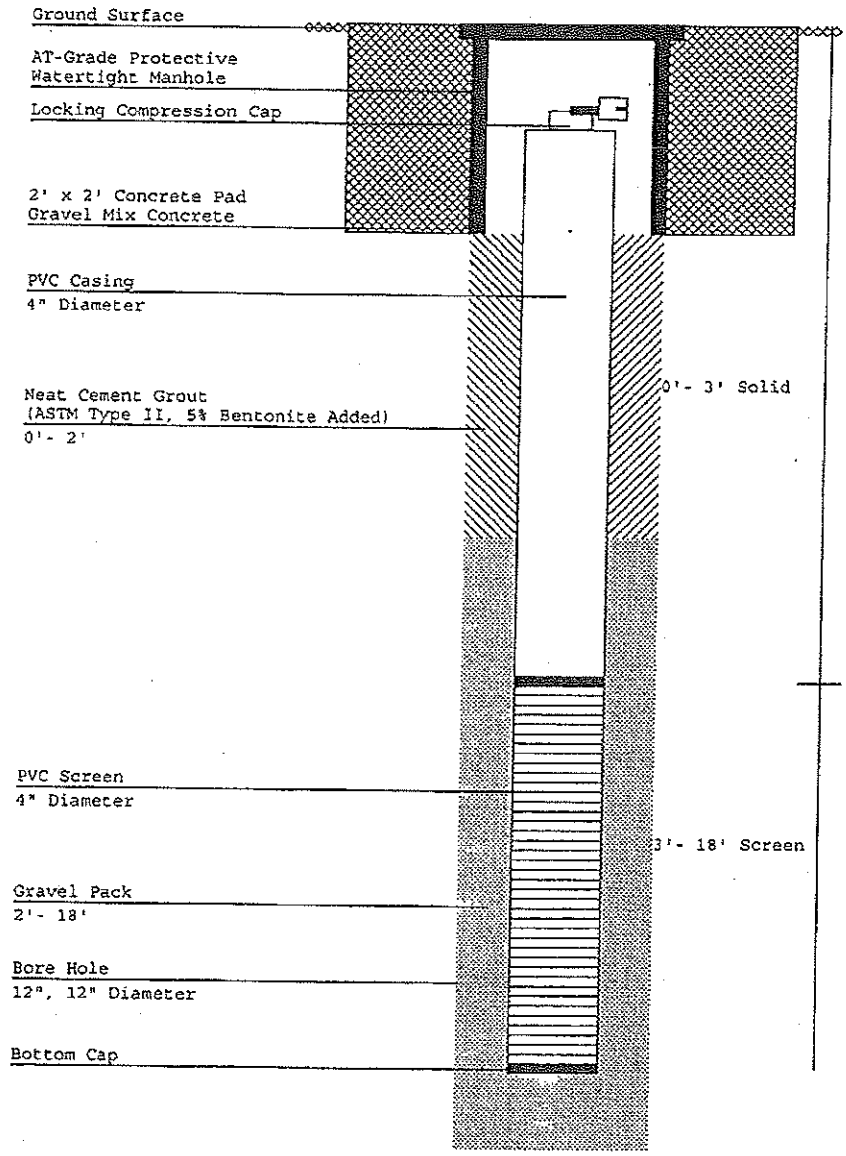
GAL PER MIN: 1/2
STAT H20 LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 17' Gre silty sand.
17'- 18' Grey clay with peat.



Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

Chimney Rock Road, Bldg. 9W
Bound Brook, NJ 08805
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: PER5 DATE DRILLED: 04/10/2002 COORD #1: 26.31.926 PERMIT #1: 26-63935
COORD #2: PERMIT #2:
COUNTY: Middlesex
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000
XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, P.O. Box 500, I Hess Plaza, WB 6, Woodbridge, NJ 07095
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .010

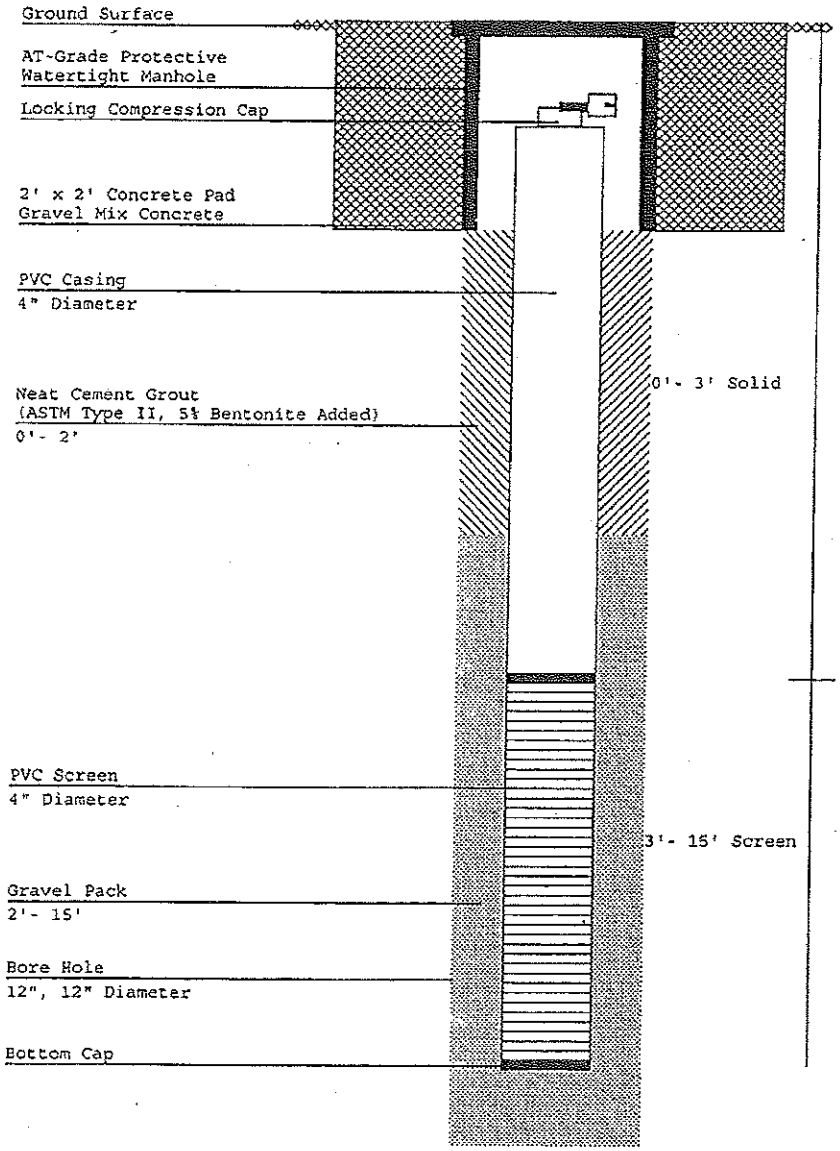
DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

GAL PER MIN: 1/2
STAT H20 LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

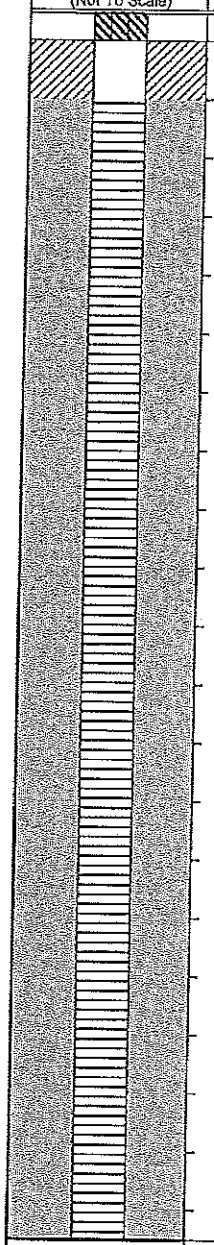
CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0'- 5'		Fill.
5'- 15'		Grey silty sand.



LOG OF PER-6R

Client: Hess	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/10/2008 — DTW: 5'	Ground Elevation: Not Surveyed
Drilling Company: Summit Drilling			Measuring Point Elevation
Date Started: 10/10/08	Date Completed: 10/10/08	Well Diameter: 4"	
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING PER-6R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				0-5' - Topsoil, grass
	1				
	2				
	3				
	4				
	5				5'-7' - Red Brown Clay, Coarse to Fine Sand
	6				
	7				
	8				
	9				
	10				7'-20' - Red Brown Clay, Coarse to Fine Sand, Trace Fine Gravel
	11				
	12				
	13				
	14				
	15				
	16				End of boring at 20'. PVC Screen 1' to 20'. Riser - 0.5' - +2'
	17				
	18				
	19				
	20				

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email: info@summitdrilling.com

WELL LOG

WELL: PER6 DATE DRILLED: 04/11/2002 COORD #1: 26.31.926 PERMIT #1: 26-63936
COORD #2: PERMIT #2: COUNTY: Middlesex
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 2'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 13'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

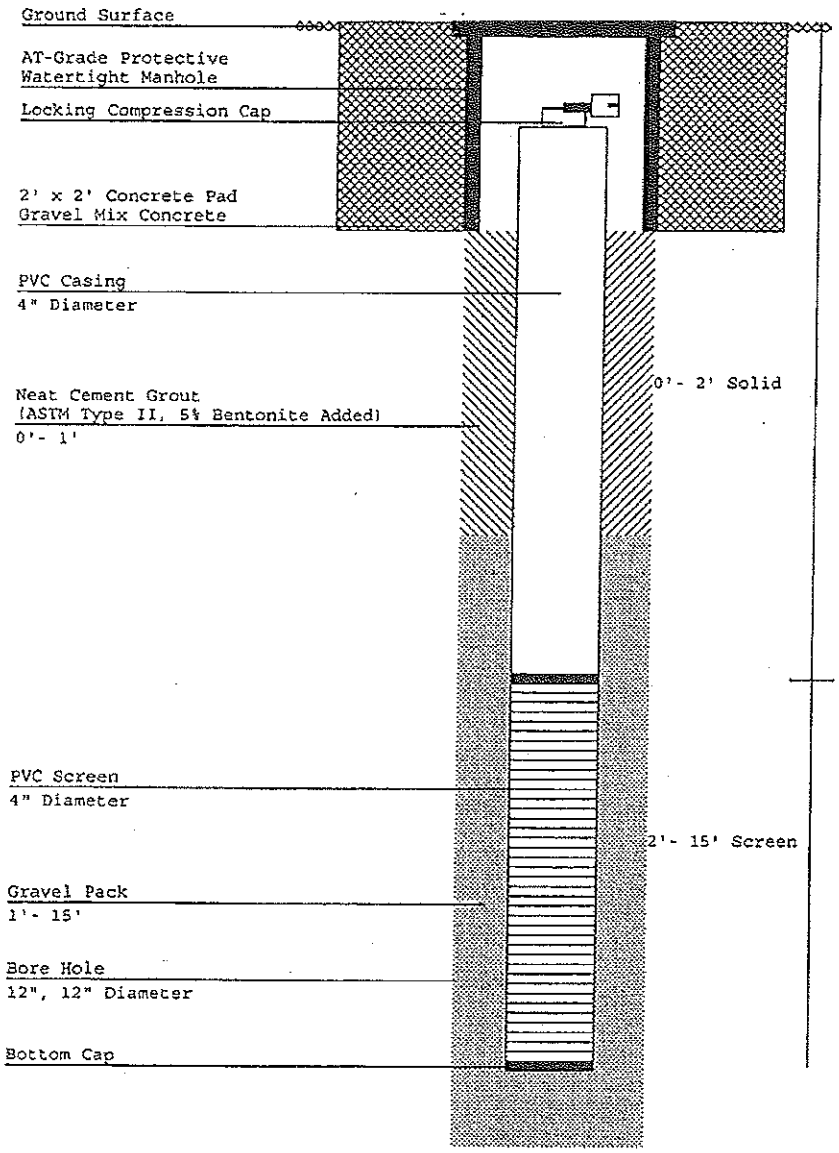
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 15' Grey silty sand.



LOG OF PER-6R

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	10/10/2008	5'	**Not Surveyed**
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			
10/10/08	**10/10/08** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			

SOIL BORING PER-6R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				0-5' - Topsoil, grass
	1				
	2				
	3				
	4				
	5				5'-7' - Red Brown Clay, Coarse to Fine Sand
	6				
	7				
	8				
	9				
	10				7'-20' - Red Brown Clay, Coarse to Fine Sand, Trace Fine Gravel
	11				
	12				
	13				
	14				
	15				
	16				End of boring at 20'. PVC Screen 1' to 20'. Riser - 0.5' - +2'
	17				
	18				
	19				
	20				

Summit DRILLING CO., INC.
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FAX: (732) 356-1009
http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: PER7 DATE DRILLED: 04/08/2002 COORD #1: 26.31.926 PERMIT #1: 26-63931
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 XSTREET: Port Reading Avenue
USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 13'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

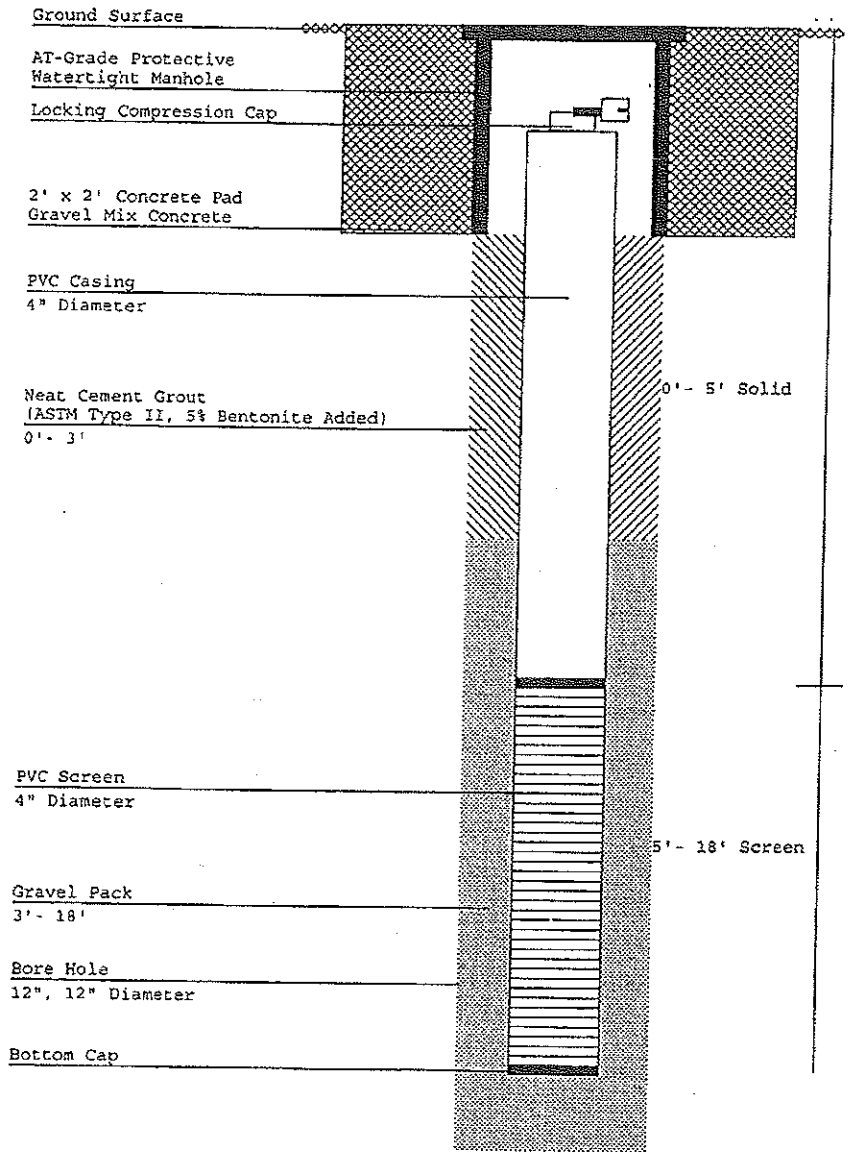
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 17' Gre silty sand.
17'- 18' Grey clay with peat.



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http://www.summitdrilling.com
email: info@summitdrilling.com

WELL LOG

WELL: PER8 DATE DRILLED: 04/08/2002 COORD #1: 26.31.926 PERMIT #1: 26-63932
COORD #2: PERMIT #2:
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading, NJ 07064-0000 COUNTY: Middlesex
XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, P.O. Box 500, 1 Hess Plaza, WB 6, Woodbridge, NJ 07095 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE 1: PVC
SCREEN TYPE 2:
DIAMETER: 4"
LENGTH 1: 12'
LENGTH 2:
SLOT SIZE: .010

DRILLING METHOD: Auger
SAMPLING METHOD:
HOLE DIA: 12", 12"
TOTAL DEPTH: 17'

SET WELL: 17'
GRAVEL PK SZ: Morie #2
DRILLER: John Murtha
SURFACE COMPLETION: M

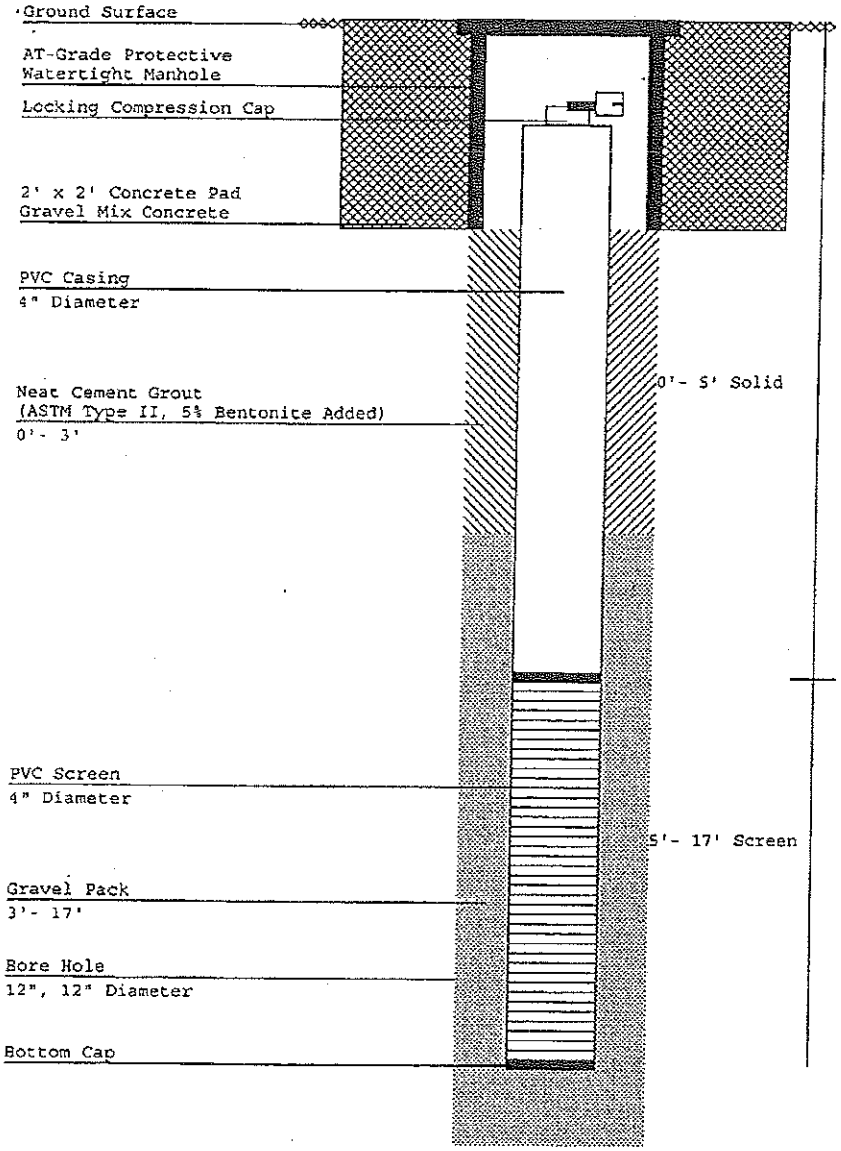
GAL PER MIN: 1/2
STAT H2O LVL: 5'
DEVELOPMENT METHOD: pump
DEVELOPMENT TIME: 1/2

CASING SEAL: Portland
OPEN HOLE:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

REMARKS / SOILS IDENTIFICATION

0'- 5' Fill.
5'- 17' Grey silty sand.



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WELL LOG

WELL: PL1 DATE DRILLED: 9/07/1994 COORD #: 26.31.926 PERMIT #: 26-37760 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

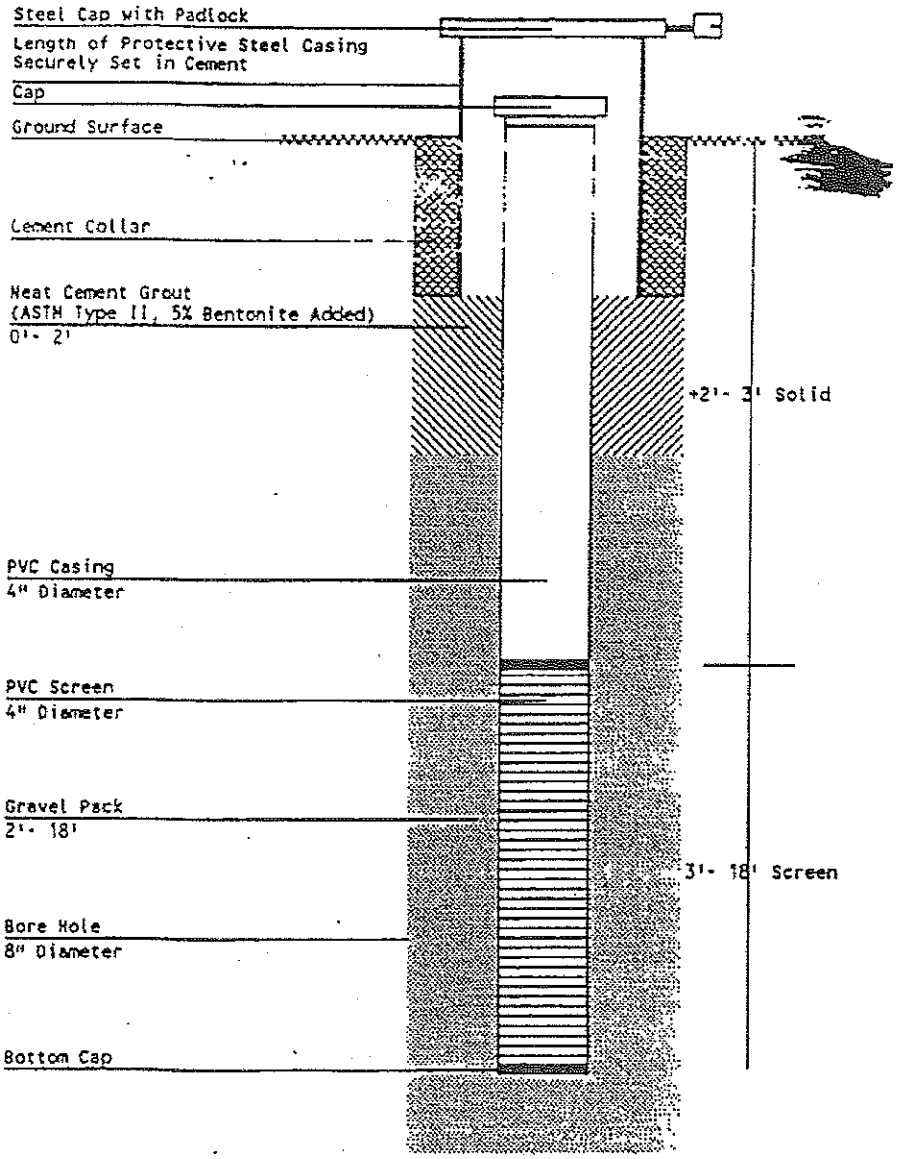
DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

GAL PER MIN: 1
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0' - 2'		Road stone.
2' - 18'		Yellow-brown sand trace silt trace clay.
18'		Brown-grey clay trace sand.



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FAX: (908) 356-1009

WELL LOG

WELL: PL2 DATE DRILLED: 9/07/1994 COORD #: 26.31.926 PERMIT #: 26-37761 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 14'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

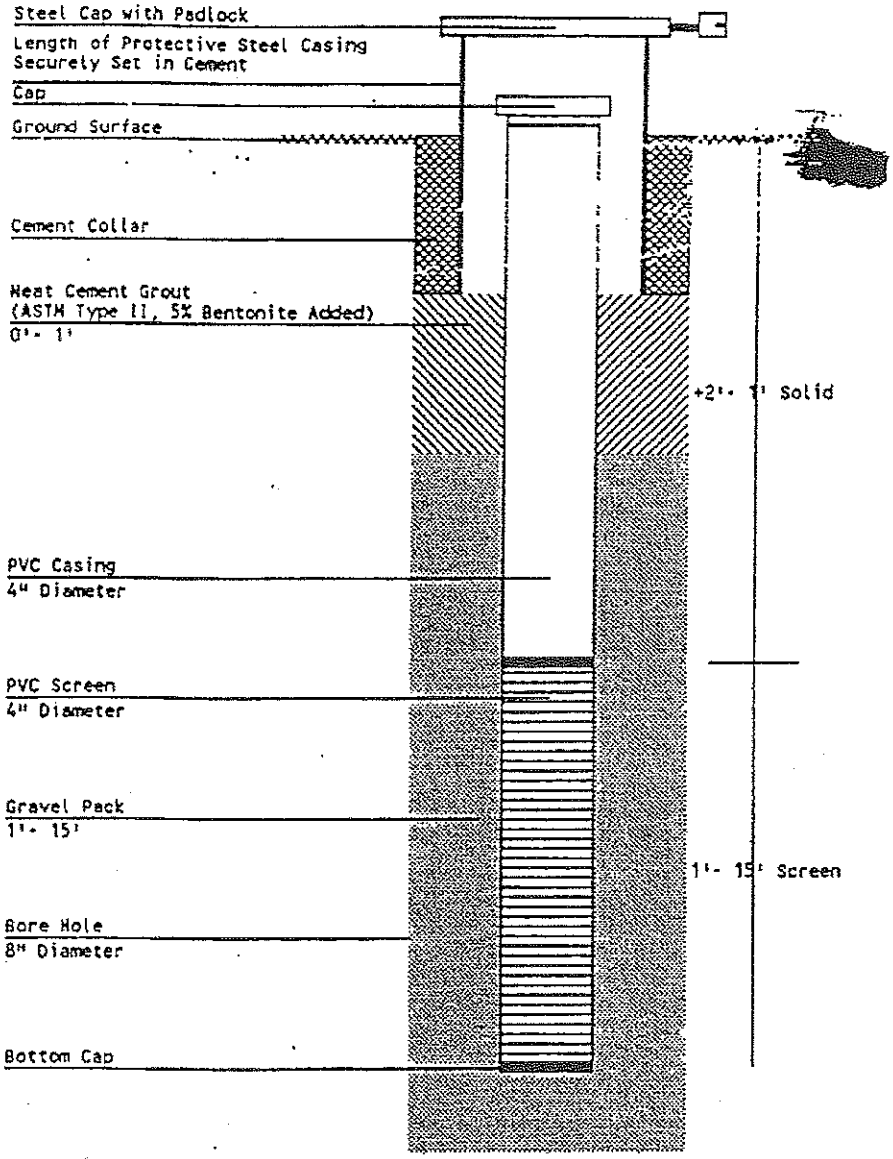
GAL PER MIN: 1-3
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER

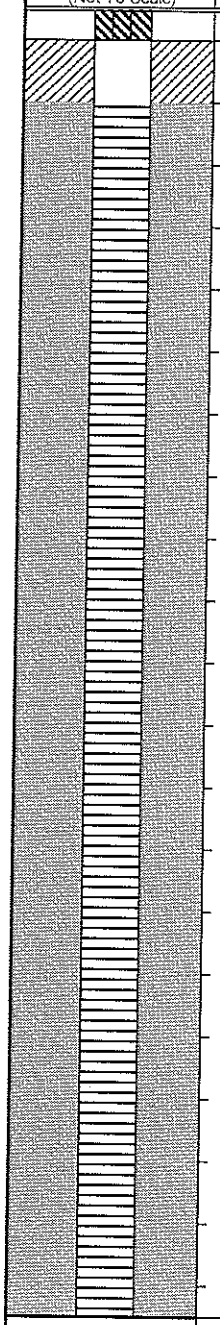
REMARKS / SOILS IDENTIFICATION

0' - 1' Road stone,
1' - 15' Yellow-brown medium sand trace [illegible]



LOG OF PL-3R

Client: Hess	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/10/2008 — DTW: 3'	Ground Elevation: Not Surveyed
Drilling Company: Summit Drilling		-	-
Date Started: 10/10/08	Date Completed: 10/10/08 — Well Diameter: 4"		Measuring Point Elevation
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING PL-3R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-3' - Red Stone
	2				
	3				
	4				
	5				
	6				
	7				3'-13' - Yellow-brown Sand Trace Silt, Trace Gravel, Trace Clay
	8				
	9				
	10				
	11				
	12				
	13				
	14				13'-20' - Grey-black Clay, Sand Trace Gravel
	15				
	16				
	17				
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20' . Riser - 0.5' - +2.5'

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FAX: (908) 356-1168

WELL LOG

WELL: PL3 DATE DRILLED: 9/08/1994 COORD #: 26.31.926 PERMIT #: 26-37762 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: M

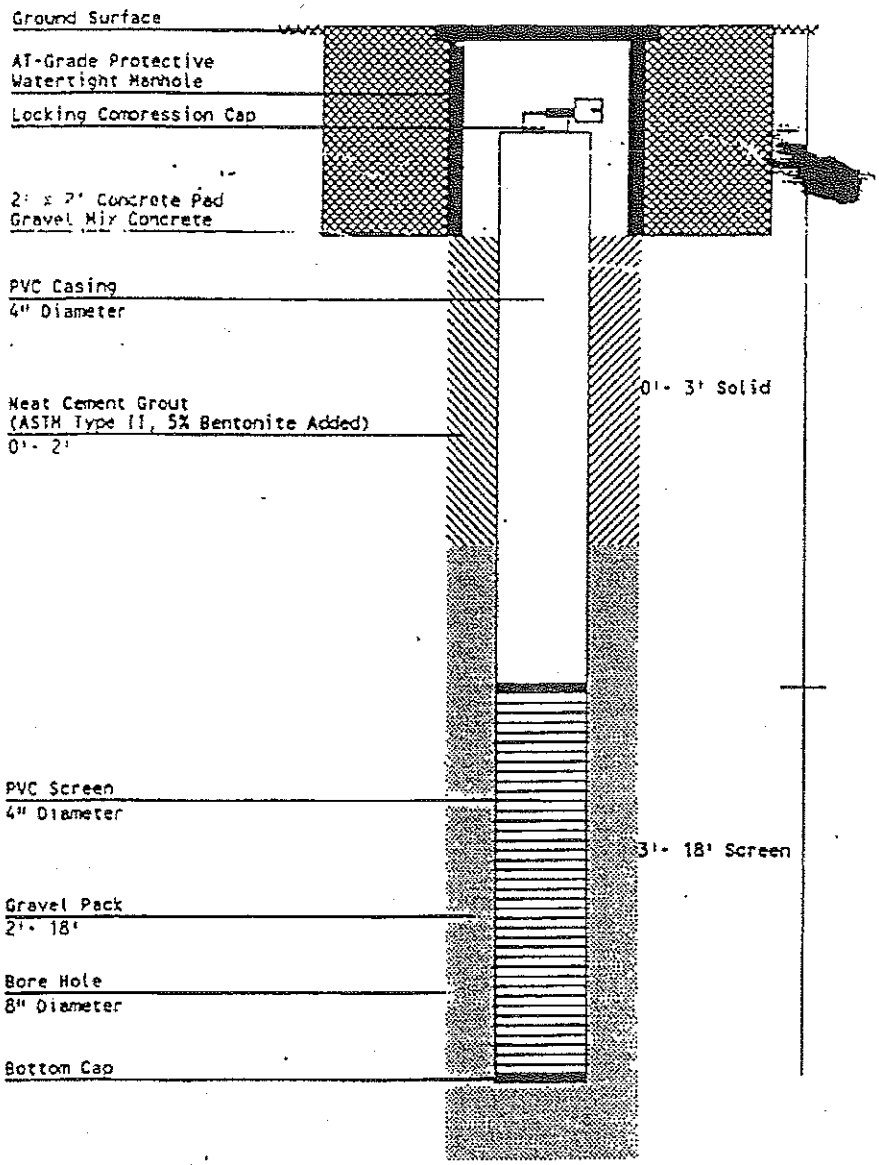
GAL PER MIN: 1-3
STAT H2O LVL:

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT METHOD: Pump
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	12-16-13-9
3' - 5'	10-10-7-5
5' - 7'	5-5-5-7
7' - 9'	7-7-9-8
11' - 13'	2-2-1-1
13' - 15'	1-1-1-2
15' - 17'	1-1-2-1

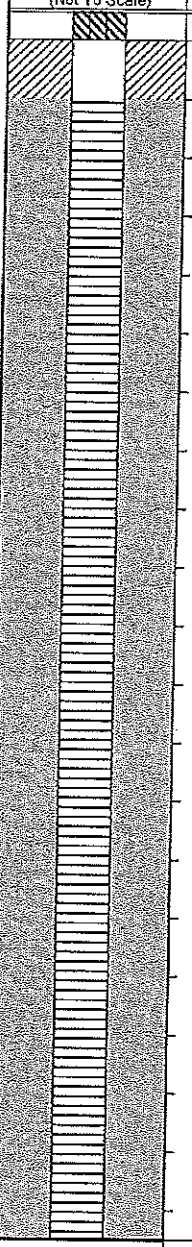
ROCKS / SOILS IDENTIFICATION

- 2' Road stone.
2' - 8' Yellow-brown medium sand trace silt trace clay.
8' - 18' Grey-black clay & sand trace silt.



LOG OF PL-4R

Client: Hess	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/10/2008 — DTW: 3'	Ground Elevation: Not Surveyed
Drilling Company: Summit Drilling			Measuring Point Elevation
Date Started: 10/10/08	Date Completed: 10/10/08	Well Diameter: 4"	
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING PL-4R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-2' - Red Stone, Fill
	2				
	3				
	4				2'-6' - Brown Fine to Medium Sand
	5				
	6				
	7				
	8				
	9				6'-10' - Grey Clay
	10				
	11				10'-20' - Grey Clay, Organic Material
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20' , Riser - 0.5' - +2.5'

Summit
ENVIRONMENTAL SERVICES

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Bridgewater, NJ 08807
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Toll Free (800) 242-6648
FAX (908) 356-1[illegible]

WELL LOG

WELL: PL4 DATE DRILLED: 9/22/1994 COORD #: 26.31.926 PERMIT #: 26-37763 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 3'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 14'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 15'

SET WELL: 15'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

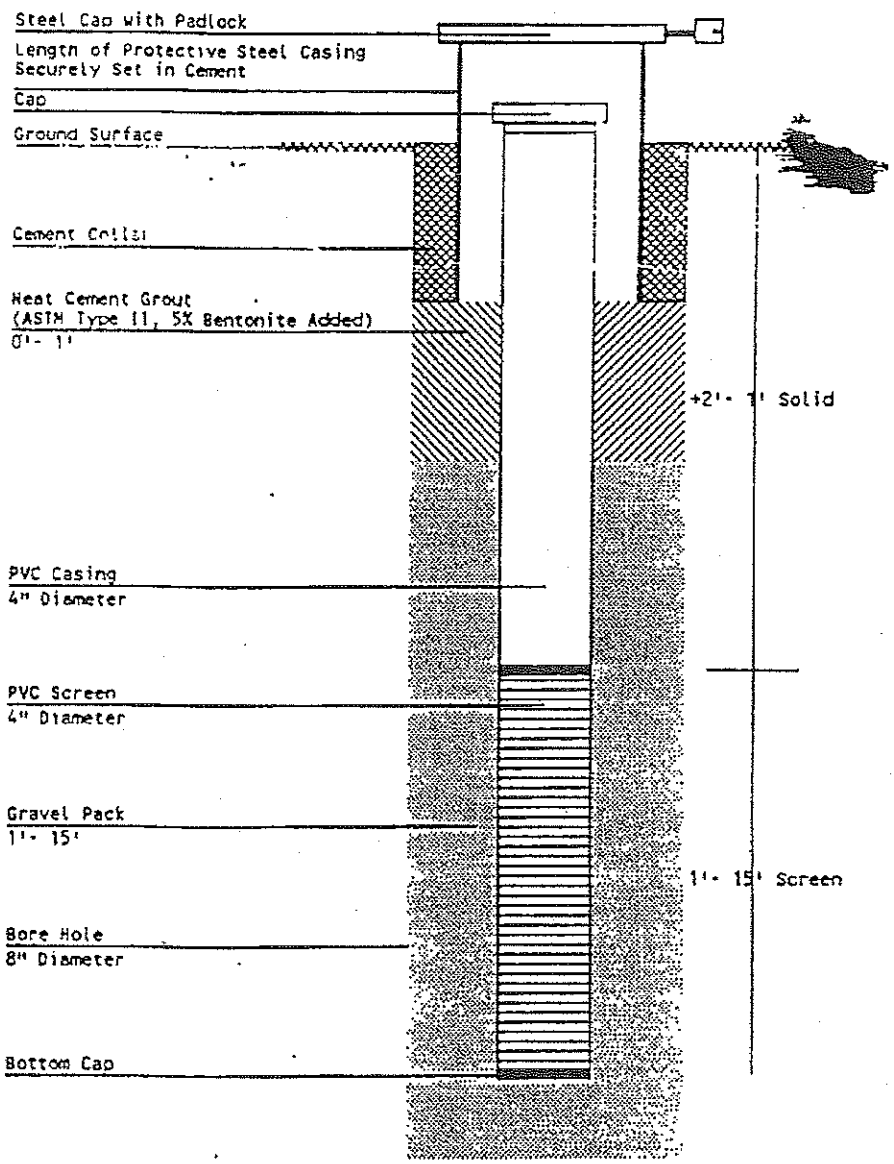
GAL PER MIN: 1-2
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
2' - 4'	8-10-11-8
4' - 6'	5-6-6-7
6' - 8'	6-8-9-7
8' - 10'	8-10-7-9
10' 12'	7-7-8-9
12' - 14'	10-7-7-8

MARKS / SOILS IDENTIFICATION

2' Road stone & fill.
2' - 6' Brown f/m sand.
6' - 10' Grey clay.
10' - 15' Grey clay some organic matter.



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WELL LOG

WELL: PL5 DATE DRILLED: 9/08/1994 COORD #: 26.31.926 PERMIT #: 26-37764 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

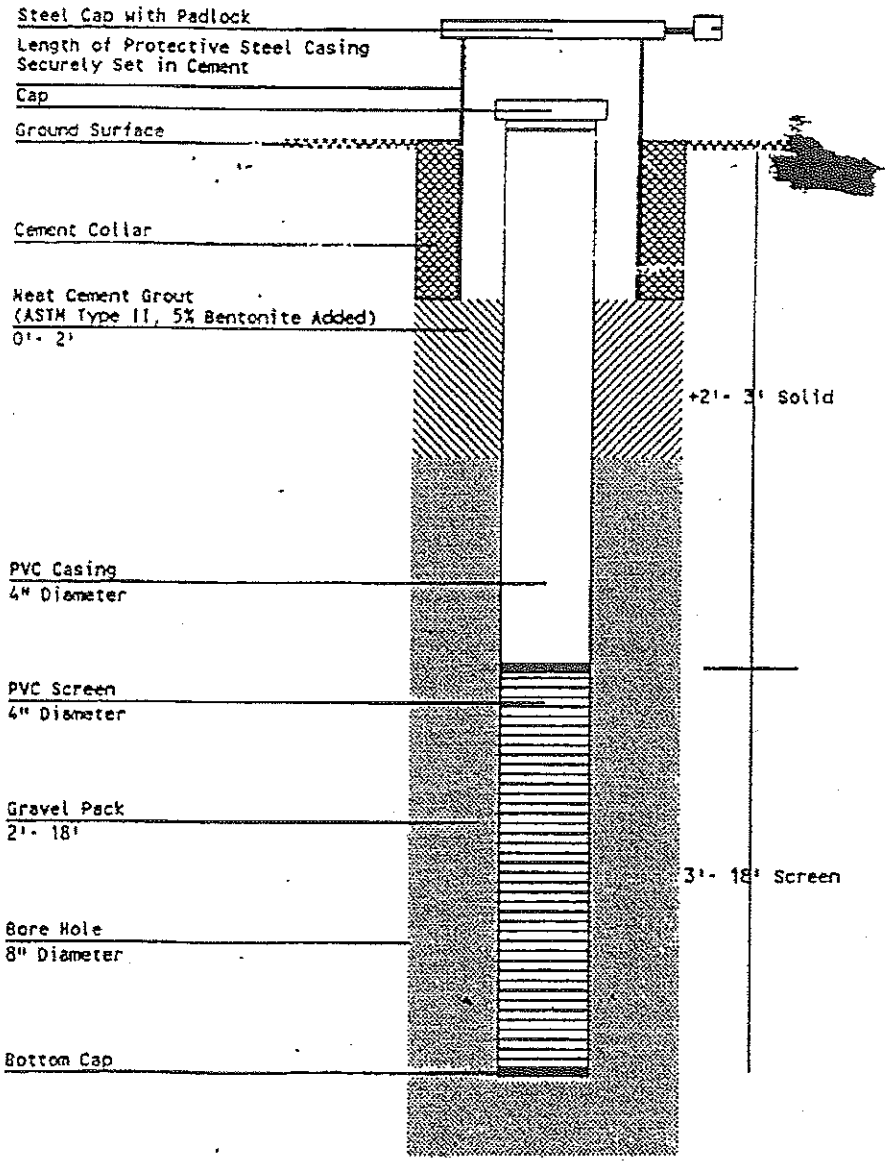
DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

GAL PER MIN: 1-2
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

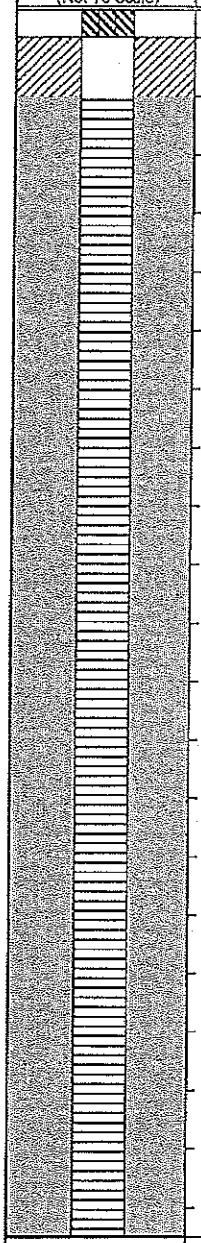
OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER	REMARKS / SOILS IDENTIFICATION
0' - 2'		Road stone.
2' - 7'		Yellow-brown medium sand trace silt trace clay
18'		Grey-black clay & sand trace silt trace small gravel.



LOG OF PL-6R

Client:	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Hess	n/a		Ground Elevation
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/9/2008 - / DTW: 3' -	Not Surveyed
Drilling Company: Summit Drilling			Measuring Point Elevation
Date Started: 10/9/08	Date Completed: 10/9/08 / Well Diameter: 4"		
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING PL-6R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-3' - Red Stone
	2				
	3				
	4				2'-11' - Yellow-brown Medium Sand, Trace Silt, Trace Gravel
	5				
	6				
	7				
	8				
	9				
	10				
	11				11'-20' - Grey-black Clay, Trace Silt, Trace Gravel
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20' . Riser - 0.5' - +2.5'

Summit Drilling Co. Inc.
Environmental Specialists
469 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1939

WELL LOG

WELL: PL6 DATE DRILLED: 9/08/1994 COORD #: 26.31.926 PERMIT #: 26-37765 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 4'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 12'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 14'

SET WELL: 14'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

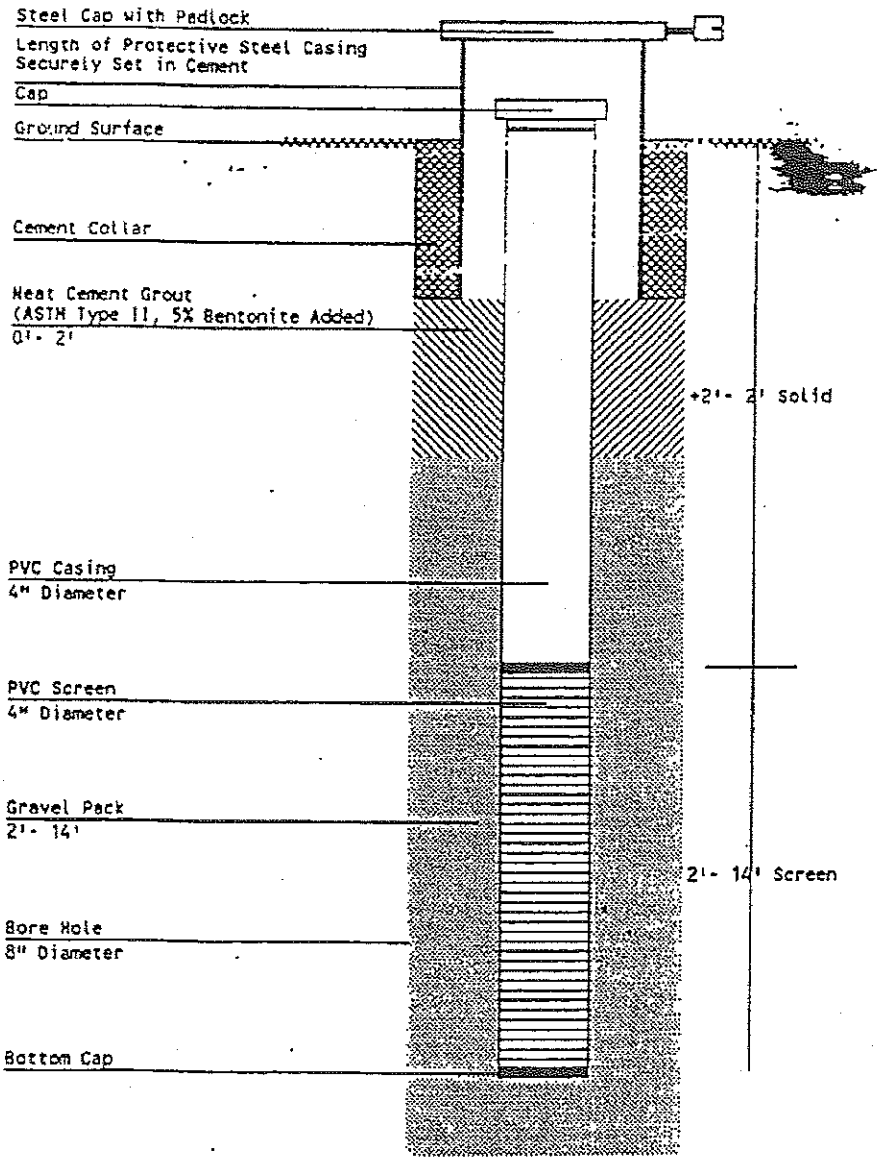
GAL PER MIN: 1-3
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	6-9-18-19
3' - 5'	7-8-9-8
5' - 7'	7-28-50/5"
7' - 9'	11-9-12-14
9' - 11'	8-10-[illegible]-9
[illegible] - 13'	13-15-19-17
[illegible] - 15'	10-7-7-9
15' - 17'	[illegible]0-11-7-8

S / SOILS IDENTIFICATION

0' - 3' Road stone.
3' - 11' Yellow-brown medium sand trace silt trace gravel.
11' - 14' Grey-black clay trace silt trace gravel.



Summit
DRILLING CO., INC.
ENVIRONMENTAL SPECIALIS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX (908) 356-1009

WELL LOG

WELL: PL7 DATE DRILLED: 9/09/1994 COORD #: 26.31.926 PERMIT #: 26-37766 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

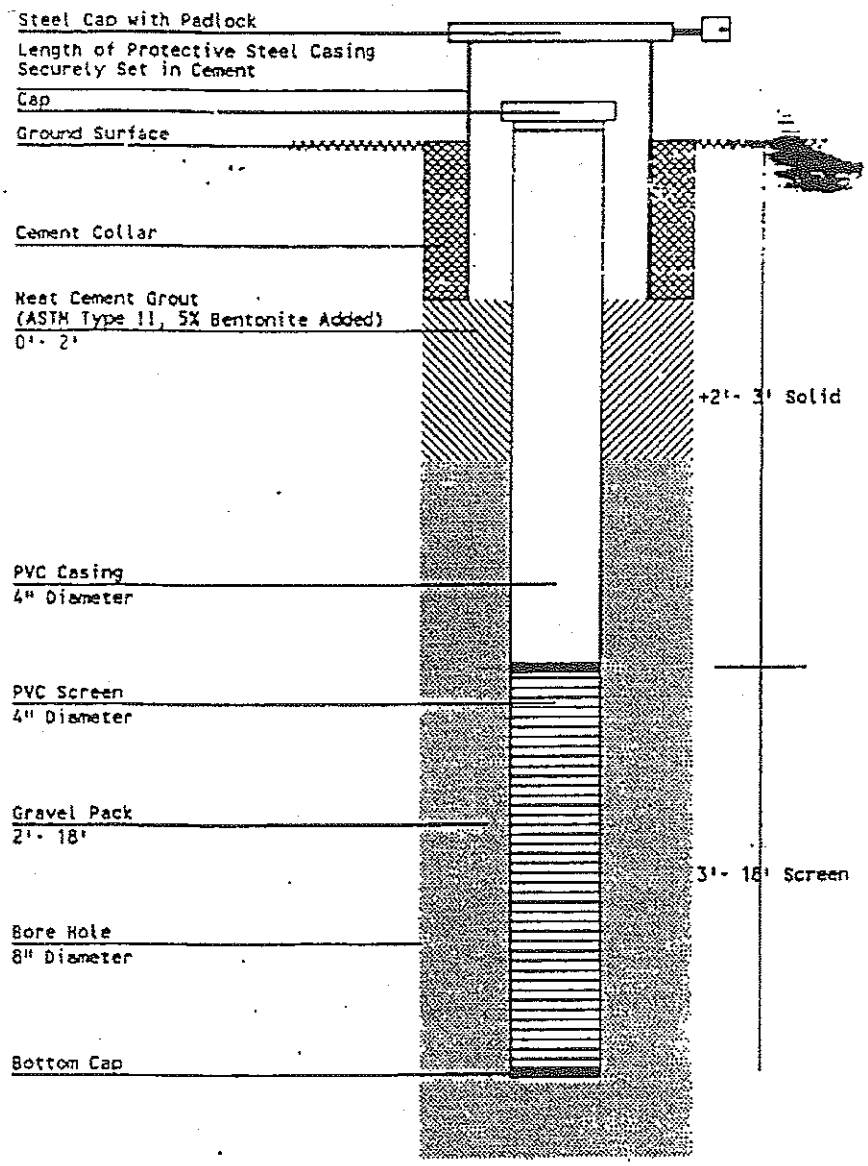
GAL PER MIN: 1-3
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	8-16-16-17
3' - 5'	27-24-21-23
5' - 7'	19-22-18-20
7' - 9'	8-9-11-12
9' - 11'	8-10-10-10
11' - 13'	8-9-7-4
13' - 15'	5-4-2-1
15' - 17'	11-9-6-9

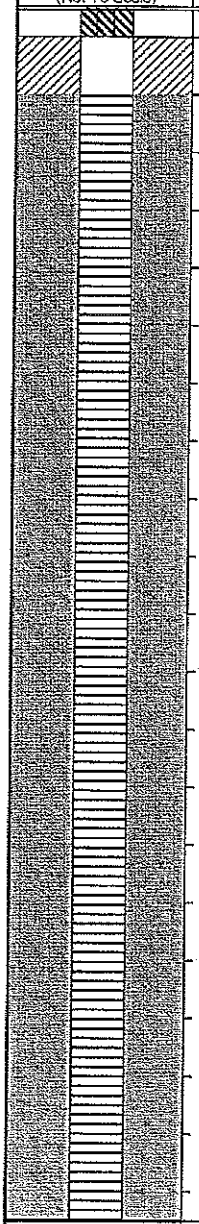
...KS , SOILS IDENTIFICATION

0' - 3' Road stone.
3' - 13' Yellow-brown sand trace silt trace gravel trace clay.
13' - 18' Grey-black clay & sand trace gravel.



LOG OF PL-8R

Client: **Hess**	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading**	Address: **750 Cliff Rd., Port Reading, NJ**	Date: 10/9/2008 — DTW: 3'	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/9/08**	Date Completed: **10/9/08**	Well Diameter: **4 '**	
Completion Depth: **20'**	Hydrogeologist/Engineer: **Philip Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-8R (Not To Scale)	DEPTH (ft below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-3' - Red Stone
	2				
	3				
	4				2-10 - Yellow-brown Medium Sand Trace Silt Trace Clay
	5				
	6				
	7				
	8				
	9				
	10				
	11				10'-20' - Brown Medium Sand Some Gravel
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				End of boring at 20 Steel Screen 1 to 20 Riser - 0 5 - +2 5

Summit Drilling Environmental Services
450 Union Avenue
Bridgewater, NJ 08807
Telephone (908) 722-4260
Toll Free (800) 242-6648
FAX (908) 356-1190

WELL LOG

WELL: PL8 DATE DRILLED: 9/09/1994 COORD #: 26.31.926 PERMIT #: 26-37767 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 18'

SET WELL: 18'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Totoski
SURFACE COMPLETION: S

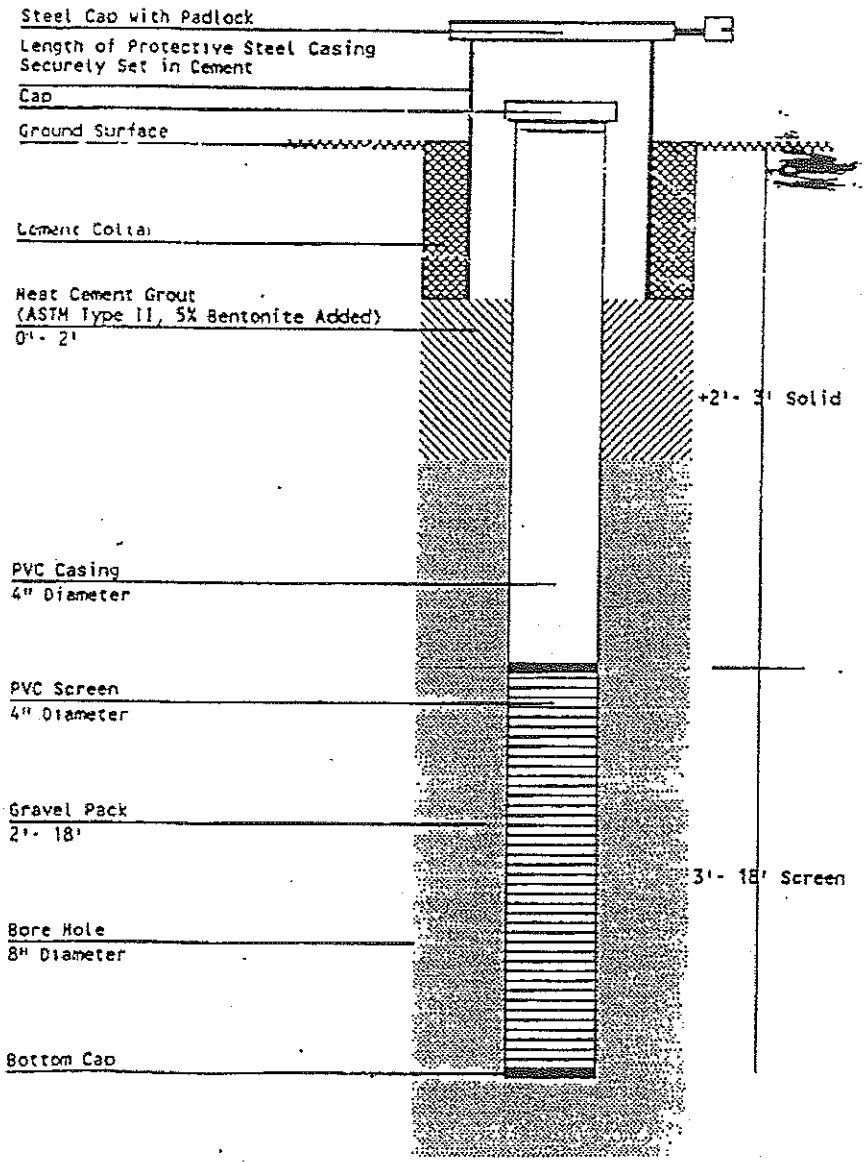
GAL PER MIN: 1-3
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
1' - 3'	5-8-9-13
3' - 5'	9-12-11-8
5' - 7'	8-7-2-2
7' - 9'	1-1-1-1
9' - 11'	2-2-1-1
11' - 13'	2-2-1-2
13' - 15'	1-3-2-3
15' - 17'	2-3-3-2

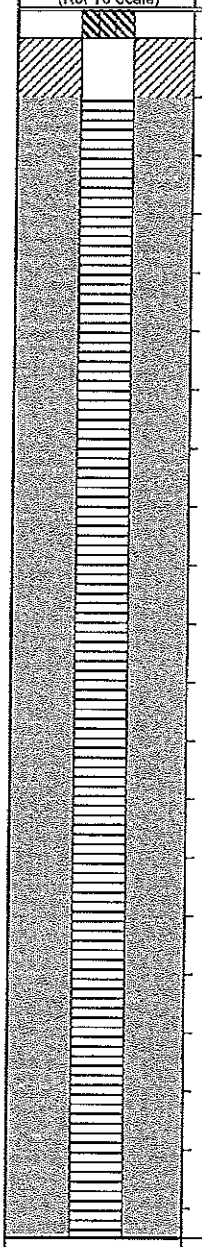
S / SOILS IDENTIFICATION

0' - 3' Road stone.
3' - 10' Yellow-brown medium sand trace silt trace clay.
10' - 18' Brown medium sand some gravel.



LOG OF PL-9R

Client: Hess	Incident # n/a	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: Port Reading	Address: 750 Cliff Rd., Port Reading, NJ	Date: 10/10/2008 — DTW: 3'	Ground Elevation: Not Surveyed
Drilling Company: Summit Drilling		-	Measuring Point Elevation
Date Started: 10/10/08	Date Completed: 10/10/08	Well Diameter: 4"	
Completion Depth: 20'	Hydrogeologist/Engineer: Philip Allegro/EnviroTrac	Permit #: n/a	

SOIL BORING PL-9R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-2' - Red Stone
	2				
	3				2'-5' - Grey Clay, Organic Material
	4				
	5				
	6				
	7				5'-12' - Brown Fine Sand
	8				
	9				
	10				
	11				
	12				
	13				
	14				12'-14' - Grey Clay with Some Organic Material
	15				
	16				14'-20' - Grey Clay, Trace Silt
	17				
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20'. Riser - 0.5' - +2.5'

Summit
489 Union Avenue
Bridgewater, NJ 08807
Telephone (908) 722-4266
Toll Free (800) 242-6648
FAX (908) 356-1066

WELL LOG

WELL: PL9 DATE DRILLED: 9/22/1994 COORD #: 26.31.926 PERMIT #: 26-37768 COUNTY: Middlesex
SITE: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 XSTREET:
OWNER: Amerada Hess Corp, 750 Cliff Road, , Port Reading, NJ 07064 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 4'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 17'

SET WELL: 17'
GRAVEL PK SZ: Morie #1
DRILLER: Steve Yotcoski
SURFACE COMPLETION: S

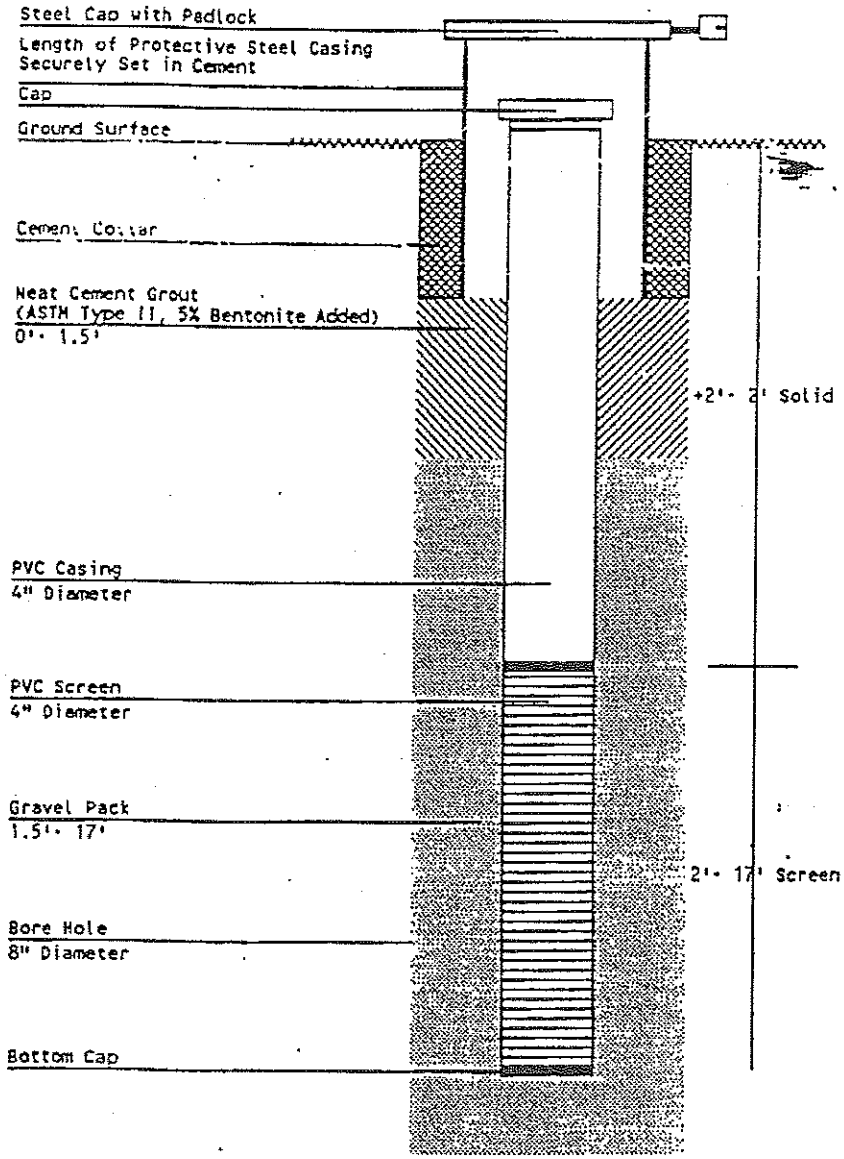
GAL PER MIN: 1-2
STAT H2O LVL:
DEVELOPMENT METHOD: Pump

OPEN HOLE:
CASING SEAL: Portland
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
0' - 2'	6-8-10-8
2' - 4'	6-5-4-7
4' - 6'	4-4-4-4
6' - 8'	1-1-2-1
8' - 10'	1-1-2-1
10' - 12'	1-1-1-1
12' - 14'	2-1-2-2
14' - 16'	3-2-1-1

S / SOILS IDENTIFICATION

0' - 2' Road stone.
2' - 5' Grey clay & organic material.
5' - 12' Brown f/m sand.
12' - 14' Grey clat some organic material.
14' - 17' Grey clay trace silt.

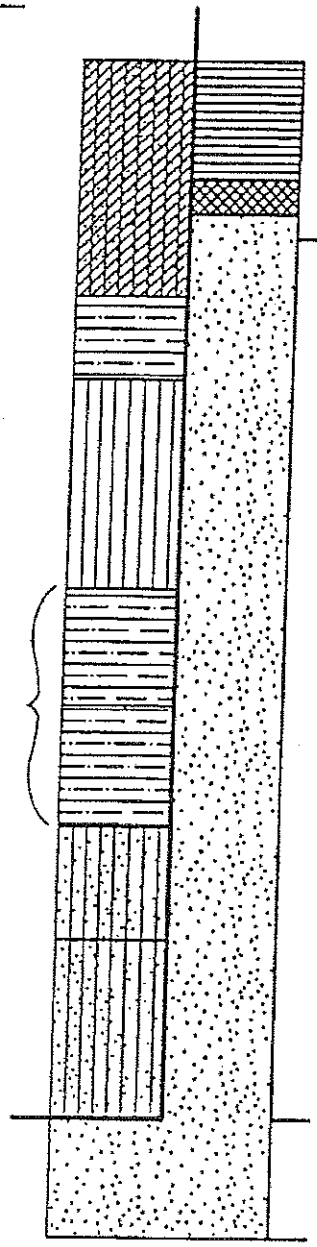


LOCATION: PORT READING REFINERY
WELL NO: TM-1
DRILLER: SUMMIT DRILLING CO., INC.

DATE INSTALLED: DEC. 15, 1998
INSTALLED BY: FOSTER WHEELER ENV. CORP.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-4' red fine SAND, some clay & silt no odor, no stain, dry	SC-SM
5	4'-5.5' gray CLAY no odor, no stain	CL
	5.5'-9' red SILT, some fine sand	ML
10	9'-11' split spoon taken 10-17/30-30 full recovery red SILT, some clay-moist, no odor, no stain	CL
	11'-13' split spoon taken 8-12/19-23, 50% recovery SAA	
15	13'-15' split spoon taken 12-85/100, red fine SAND, some silt & trace of clay no odor, no stain, wet at 14'	SM
	18' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-2.5' Bentonite seal
2.5'-20.0' sand filter pack
3.0'-18.0' .010 slot schedule 40 PVC screen

20' bottom of well

WELL CONSTRUCTED OF 4" O.D. SCHEDULE 40 PVC

LOCATION: PORT READING REFINERY

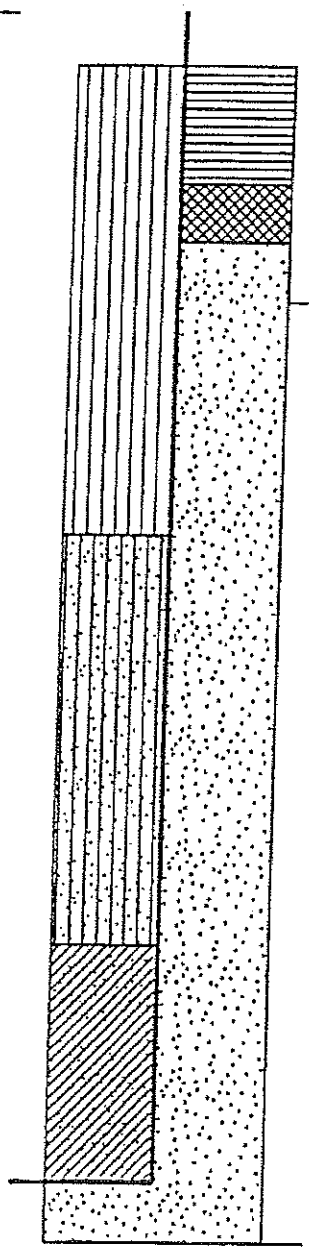
WELL NO: TM-2 **DATE INSTALLED:** DEC. 14, 1998

DRILLER: SUMMIT DRILLING CO., INC. **INSTALLED BY:** FOSTER WHEELER ENV. CORP.

NOTE: ALL PID READINGS AT THIS LOCATION WERE 0 PPM.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-8' light brown-brown SILT, trace sand & gravel, grading to light brown-brown silt with trace sand, no odor, no stain	ML
5		
	8'-15' wet light brown-brown fine-coarse SAND, some silt and gravel, water encountered 8.5-9.0 b.l.s., no odor, no stain	SM
10		
15	15'-19' wet, light brown-brown CLAY and SAND, no odor, no stain	SC
	19' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-3.0' Bentonite seal

3.0'-20.0' sand filter pack

4.0'-19.0' .010 slot schedule 40 PVC screen

20' bottom of well

WELL CONSTRUCTED OF 4"O.D. SCHEDULE 40 PVC

LOCATION: PORT READING REFINERY

WELL NO: TM-3

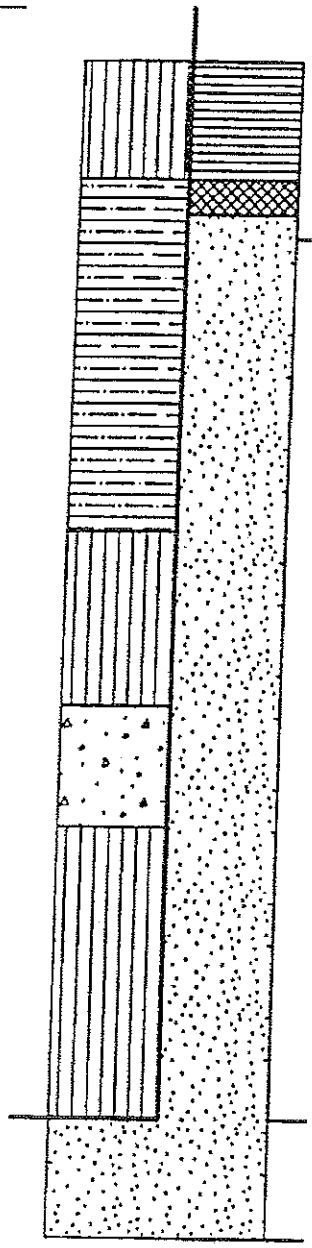
DRILLER: SUMMIT DRILLING CO., INC.

DATE INSTALLED: DEC. 15, 1998

INSTALLED BY: FOSTER WHEELER ENV. CORP.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-2' brown SILT	ML
	2'-8 gray-black CLAY with some fine sand grading to brown clay, some fine sand, no odor, no stain	CL
5		
	8'-11' red SILT with trace clay, no odor, no stain	OL
	11'-13' partly graded GRAVEL, some coarse sand no odor, no stain	GP
	13'-18' red CLAY, some silt wet at 15', no odor, no stain	OL
15		
	18' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-2.5' Bentonite seal

2.5'-20.0' sand filter pack

3.0'-18.0' .010 slot schedule 40 PVC screen

20' bottom of wel

WELL CONSTRUCTED OF 4"O.D. SCHEDULE 40 PVC

LOCATION: PORT READING REFINERY

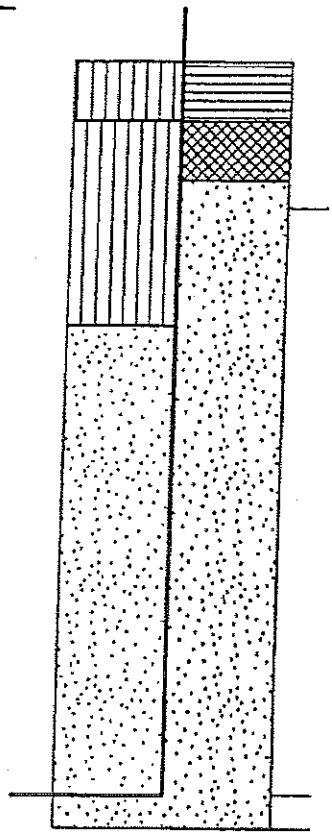
WELL NO: TM-4 **DATE INSTALLED:** DEC. 14, 1998

DRILLER: SUMMIT DRILLING CO., INC. **INSTALLED BY:** FOSTER WHEELER ENV. CORP.

NOTE: ALL PID READINGS AT THIS LOCATION WERE 0 PPM.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-1' light brown-brown SILT, some sand, trace of gravel, no odor, no stain	ML
	1'-4.5' dark brown-black CLAY, organic material with some silt, no odor, no stain	OL
5	4.5'-12.5' wet light brown fine-coarse SAND, some gravel no odor, no stain	SP
	12.5' bottom of borehole	

WELL CONST. DETAILS



0.0'-1.0' grout

1.0'-2.0' Bentonite seal

2.0'-13.0' sand filter pack

2.5'-12.5' .010 slot schedule 40 PVC screen

13' bottom of well

WELL CONSTRUCTED OF 4"O.D. SCHEDULE 40 PVC

15

20

25

LOCATION: PORT READING REFINERY

WELL NO: TM-5

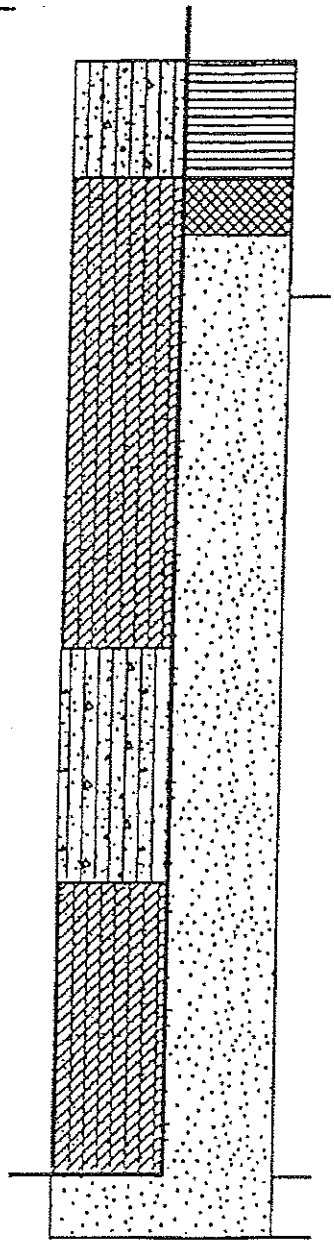
DRILLER: SUMMIT DRILLING CO., INC.

DATE INSTALLED: DEC. 15, 1998

INSTALLED BY: FOSTER WHEELER ENV. CORP.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-2' GRAVEL, SILT, SAND (FILL)	GM
	2'-10' red SAND with some silt & clay, split spoon 7'-9' 28-25/90-79 50% recovery SAND with some silt & clay no odor, no stain, moist	SM-SC
5		
10	10'-14' GRAVEL, SILT, SAND mix moist-wet, split spoon 10'-12' 10-18/22-35, GRAVEL, SILT, SAND mix, dry-moist, split spoon 12'-14', SAA- moist-wet, no odor, no stain	GM-GC
15	14'-19' red SAND with some silt & clay, no odor, no stain	SM-SC
	19' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-3.0' Bentonite seal

3.0'-20.0' sand filter pack

4.0'-19.0' .010 slot schedule 40 PVC screen

20' bottom of well

WELL CONSTRUCTED OF 4"O.D. SCHEDULE 40 PVC

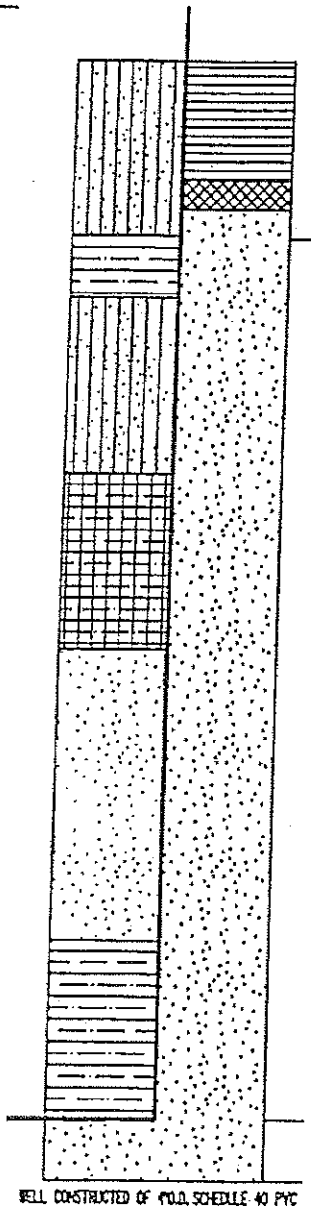
LOCATION: PORT READING REFINERY

WELL NO: TM-6 **DATE INSTALLED:** DEC. 16, 1998

DRILLER: SUMMIT DRILLING CO., INC. **INSTALLED BY:** FOSTER WHEELER ENV. CORP.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-3' dark brown-red fine-medium SAND with some silt & trace gravel, moderate odor, stained soil at 3', dry. PID: 89 ppm	SM
	3'-4' red CLAY with silt, trace fine sand, small gravel, dry, no odor, no stain	CL
5	4'-7' black fine-med. SAND, some silt, trace small gravel, moderate-strong odor, some staining, PID: 840 ppm	SM
	7'-10' black-red CLAY, some silt, mild odor, stained at 7', wet at 9', PID: 32ppm. split spoon 7'-9', 100% recovery 10-8/15-17, upper 8' dark SILT, some fine sand, 8'-12' black-brown SILT & CLAY, organic matter, 12'-24' red CLAY, some silt, bottom of spoon is wet	ML-CL
	10'-15' black fine-medium SAND with some small gravel, trace silt, wet, no odor, no stain, PID: 0 ppm split spoon 10'-12' 6-9/5-6, 75% recovery, top 10' same as bottom of 7'-9' spoon, bottom 6'-8' are fine-medium SAND, some small gravel, trace silt, no odor, no stain, wet	SP
15	15'-18' dark CLAY, some fine-medium sand, wet, no odor, no stain	CL
	18' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-2.5' Bentonite seal

2.5'-19.0' sand filter pack

3.0'-18.0' .010 slot schedule 40 PVC screen

19' bottom of well

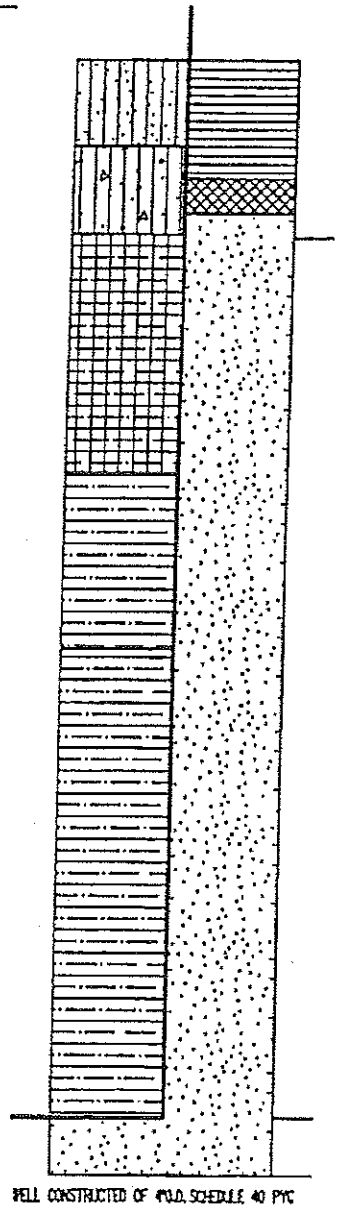
LOCATION: PORT READING REFINERY

WELL NO: TM-7 **DATE INSTALLED:** DEC. 16, 1998

DRILLER: SUMMIT DRILLING CO., INC. **INSTALLED BY:** FOSTER WHEELER ENV. CORP.

DEPTH (ft)	DESCRIPTION	USCS
0	0'-1.5' dark brown-gray fine-coarse SAND with some silt, moderate odor, slight stain. PID: 30-126 ppm	SM
	1.5'-3' fine-medium SAND, some gravel, trace silt, moderate odor, slight stain, PID: 121 ppm	GC
	3'-7' dark red & black SILT with trace clay & organic matter, grading to light red clay & silt, dry, no odor, no stain	ML/CL
5	7'-10' light gray, tan, red CLAY, some silt, trace large gravel, grading to light red-light brown clay, some fine sand. split spoon 7'-9' 16-61/33-27 1.5' recovery, light gray, tan, red CLAY, some silt, trace large gravel, dry, no odor, no stain. split spoon 12'-14' 16-27/41-50, light red-light brown CLAY, some fine sand, wet at bottom of spoon, no odor, no stain	CL
10	10'-18' gray CLAY with trace fine sand, wet, no odor, no stain	CL
15		
	18' bottom of borehole	
20		
25		

WELL CONST. DETAILS



0.0'-2.0' grout

2.0'-2.5' Bentonite seal

2.5'-19.0' sand filter pack

3.0'-18.0' .010 slot schedule 40 PVC screen

19' bottom of well

WELL CONSTRUCTED OF 4"I.D. SCHEDULE 40 PVC

~~FR-3~~ TR1

EMS Environmental, Inc.	Boring No:MW-3	Page 1 of 1 11/18/93
Location: Hess Pt. Reading Refiner	Drilling Method: Air Rotary	
Project/Facility No. Truck Racks	Casing Type: 4-in. PVC	

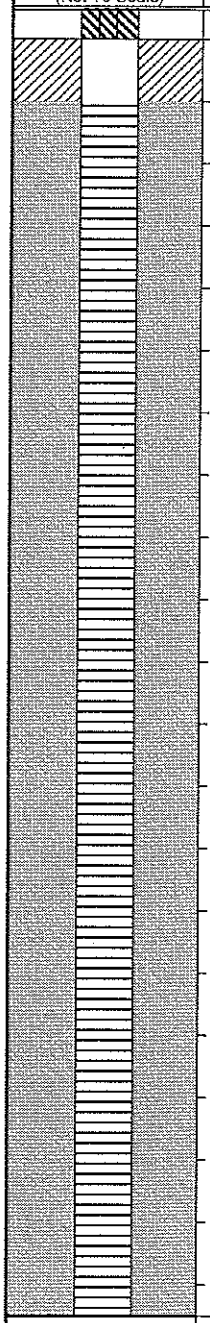
Depth	Description	PID	Blows	Well Detail
	0-2" Asphalt 2"-8" Cobbles 8"-3' br-r c-f sand, silt clay, pebbles, cobbles	0		bent-onite
5	3'-17' r-br silty clay and gravel, tr f-sand		05 06 08 13	case
10	same as above	0		sand
15	same as above yel-br silty f-sand, wet	0		scrn
20				
25				
30				
35				
40				

Notes: Used 4 bags sand, 1/2 pail bentonite, developed 20 gal.

Drilling Co. Summit Driller DJG Geologist AMB

LOG OF TR-2R

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	n/a			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	750 Cliff Rd., Port Reading, NJ	10/9/2008	3'	Not Surveyed
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			
10/9/08	10/9/08 / 4"			
Completion Depth:	Hydrogeologist/Engineer			
20'	Philip Allegro/EnviroTrac	Permit #:	n/a	

SOIL BORING TR-2R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-1' - Concrete, Gravel
	2				
	3				
	4				1'-5' - Fill
	5				
	6				
	7				
	8				
	9				5'-17' - Red-brown Silty Clay, Medium to Fine Sand
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				17'-20' - Yellow-brown Clay, Medium to Fine Sand
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20' . Riser - 0.5' - +2.5'

LOG OF TR-3R

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	n/a			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	750 Cliff Rd., Port Reading, NJ	10/9/2008	3'	Not Surveyed
Drilling Company:		-	-	
Summit Drilling				Measuring Point Elevation
Date Started:	Date Completed: / Well Diameter			
10/9/08	10/9/08 / 4"			
Completion Depth:	Hydrogeologist/Engineer			
20'	Philip Allegro/EnviroTrac	Permit #:	n/a	

SOIL BORING TR-3R (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				0-1' - Grey Silt, Sand with Fine to Coarse to Fine Gravel
	2				
	3				1'-3' - Brown Sandy Silt, Trace Clay, Fine Gravel
	4				
	5				3'-8' - Red-brown Clayey Silt, Trace Fine Gravel
	6				
	7				
	8				
	9				8'-10' - Red-brown Silty Clay, Little Fine Gravel
	10				
	11				
	12				
	13				
	14				
	15				
	16				10'-17' - Red-brown Silty Clay, Little Fine Gravel
	17				17'-20' - Grey Silty Clay, Trace Fine Gravel
	18				
	19				
	20				End of boring at 20'. Steel Screen 1' to 20' . Flush Mount Well

Summit DRILLING CO., INC.
ENVIRONMENTAL SPECIALISTS

489 Union Avenue
Bridgewater, NJ 08807
Telephone: (908) 722-4266
Toll Free: (800) 242-6648
FAX: (908) 356-1009

2544 O Morningside Dr
West Columbia, SC 29169
Telephone: (803) 739-9653
Toll Free: (800) 242-6648
FAX: (803) 796-9698

TR-4

WELL LOG

WELL: MW2 DATE DRILLED: 11/18/1993 COORD U: 26.31.926 PERMIT #: 26-35173 COUNTY: Middlesex
SITE: Port Reading Refinery, , 750 Cliff Road, Port Reading,, NJ 07064-0000 XSTREET: Port Reading Avenue
OWNER: Amerada Hess Corporation, 1 Hess Plaza, , Woodbridge, NJ 07095-0000 USE: Monitor

INNER CASING: PVC
DIAMETER: 4"
LENGTH: 6.5'

OUTER CASING:
DIAMETER:
LENGTH:

SCREEN TYPE: PVC
DIAMETER: 4"
LENGTH: 15'
SLOT SIZE: .020

DRILLING METHOD: Air Rotary
SAMPLING METHOD: S/S
HOLE DIAMETER: 8"
TOTAL DEPTH: 22'

SET WELL: 22'
GRAVEL PK SZ: Morie #1
DRILLER: Dan Grahamar, Jr.
SURFACE COMPLETION: M

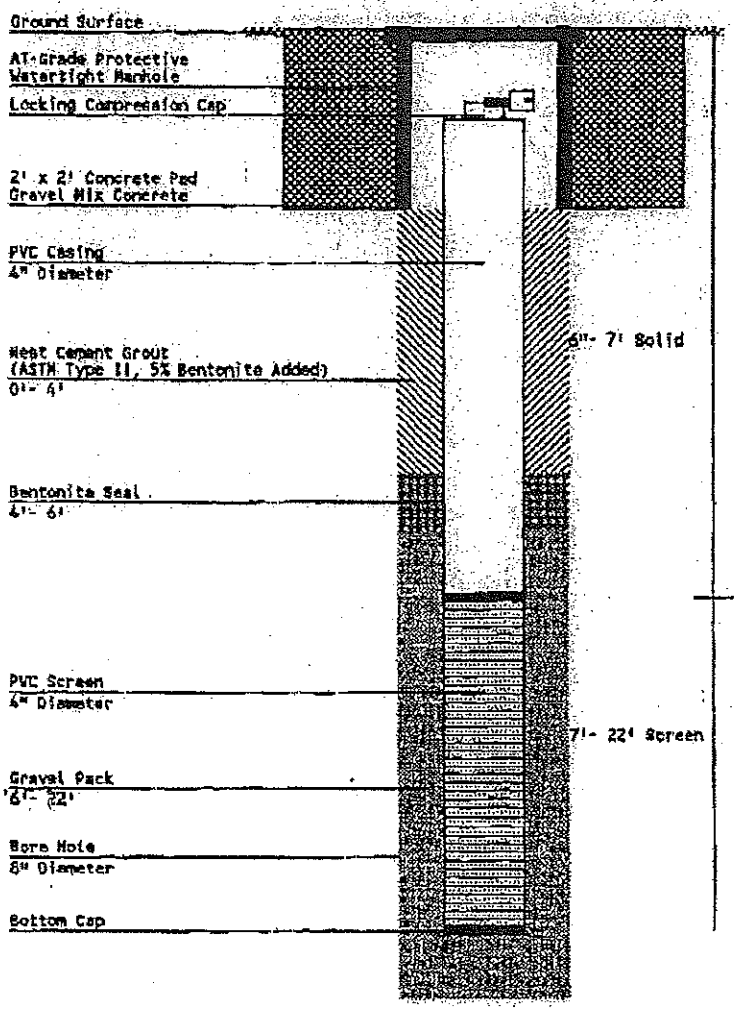
GAL PER MIN: SLW RECHG.
STAT H2O LVL: 10'
DEVELOPMENT METHOD: Bail

OPEN HOLE:
CASING SEAL: Portland & Pellets
DEVELOPMENT TIME: 1 Hour
GEOLOGIC FORMATION:

DEPTH BELOW SURFACE FROM - TO	BLOWS PER 6" ON SAMPLER
5' - 7'	4-12-17-21
7' - 9'	16-16-17-22

REMARKS / SOILS IDENTIFICATION

Reference #26-35016.
0' - 1' Concrete & gravel.
1' - 5' Fill.
5' - 17' Red-brown silty clay little m/f sand trace c/f gravel.
17' - 22' Yellow-brown clayey m/f sand.



TR-4

EMS Environmental, Inc.	Boring No:MW-2	Page 1 of 1 11/18/93
Location: Hess Pt. Reading Refiner	Drilling Method: Air Rotary	
Project/Facility No. Truck Racks	Casing Type: 4-in. PVC	

Depth	Description	PID	Blows	Well Detail
	0-3" Concrete			
	sand, silt, clay, gravel fill (moist)	518		bent-onite
5	R-B silty clay and gravel compact, dry	295	04 12 17 21	case
10	same	157	16 16 17 22	sand
15				scrn
	yel-r sandy clay, wet			
20				
	gray clay			
25				
30				
35				
40				

Notes: Kept well screen below top unsaturated fill layer because conc. higher in fill than in clay below.

Drilling Co. Summit Driller DJG Geologist AMB

LOG OF TR-5

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	-	-	
Drilling Company:				Measuring Point Elevation
Summit Drilling				
Date Started:	Date Completed: / Well Diameter			14.09
10/7/10	**10/8/10** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			

SOIL BORING TR-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0 - 5' - Air Knife
	5				
	6				
	7				5'-8' - Red-brown Clayey Silt, Trace Fine Gravel
	8				
	9				
	10				8'-10' - Red-brown Silty Clay, Little Fine Gravel
	11				
	12				
	13				
	14				
	15				
	16				10'-17' - Red-brown Silty Clay, Little Fine Gravel
	17				
	18				
	19				
	20				17'-20' - Grey Silty Clay, Trace Fine Gravel End of boring at 20'. PVC Screen 1' to 20' . Flush Mount Well

LOG OF TR-6

Client:	Incident #	Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Hess	**n/a**			Ground Elevation
Site Name:	Address:	Date	DTW	
Port Reading	**750 Cliff Rd., Port Reading, NJ**	-	-	
Drilling Company:				Measuring Point Elevation
Summit Drilling				
Date Started:	Date Completed: / Well Diameter			12.9
10/7/10	**10/8/10** / **4"**			
Completion Depth:	Hydrogeologist/Engineer	Permit #:	n/a	
20'	**Philip Allegro/EnviroTrac**			

SOIL BORING TR-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0 - 5' - Air Knife
	5				
	6				
	7				5'-8' - Red-brown Clayey Silt, Trace Fine Gravel
	8				
	9				
	10				8'-10' - Red-brown Silty Clay, Little Fine Gravel
	11				
	12				
	13				
	14				
	15				
	16				10'-17' - Red-brown Silty Clay, Little Fine Gravel
	17				
	18				
	19				
	20				17'-20' - Grey Silty Clay, Trace Fine Gravel End of boring at 20'. PVC Screen 1' to 20' . Flush Mount Well

Appendix III:

Temporary Well Logs

Boring Log of TR-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/13/2009 / DTW: 8.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/13/09**	Date Completed: **10/13/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **14'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7			163	
	8				
	9				
	10				
	11				
	12				
	13				
	14				5'-14' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4			250	0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 — DTW: 2.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			234	
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 7.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4			10	0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 5.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 6.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			608	
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / -	DTW: 2.6 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **6'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				5'-6' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 8.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6			654	
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 5.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			163	
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/14/2009 / DTW: 6.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/14/09**	Date Completed: **10/14/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			150	
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-11

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 / DTW: 4.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-11 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-12

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 - / DTW: 5.5 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-12 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-13

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 - / DTW: 6.3 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-13 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			300	
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-14

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 / DTW: 6.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-14 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			760	
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-15

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 - / DTW: 1.1 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-15 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-16

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 / DTW: 4.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-16 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of TR-TW-17

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/21/2009 / DTW: 6.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/21/09**	Date Completed: **10/21/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TR-TW-17 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silty Clay, Medium to Fine Sand

Boring Log of AD-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009 / DTW: 6.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AD-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			21	
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009	DTW: 2.9
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AD-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9			5	
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009	DTW: 7.0
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AD-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009 — DTW: 2.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AD-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009	DTW: 4.0
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AD-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009 — DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AD-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009 / DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AD-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009 — DTW: 1.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AD-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of AD-TW-9

Client: **Hess Corporation**		Incident #	Depth to Water (feet from surface)
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**		Date: 10/15/2009 — DTW: 3.9
Drilling Company: **Summit Drilling**			Date: - — DTW: -
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**		Permit #: n/a

SOIL BORING AD-TW-9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			150	
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand

Site Elevation Datum

Ground Elevation

Not Surveyed

Measuring Point Elevation

N

l, Some Coarse Gravel

Boring Log of AD-TW-10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/15/2009	DTW: 1.8
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/15/09**	Date Completed: **10/15/09**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AD-TW-10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Coarse Sand, Some Coarse Gravel

Boring Log of TM-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/16/2009 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/16/09**	Date Completed: **10/16/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **8'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				5'-8' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/16/2009 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/16/09**	Date Completed: **10/16/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/16/2009 / DTW: 3.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/16/09**	Date Completed: **10/16/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/16/2009 / DTW: 1.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/16/09**	Date Completed: **10/16/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 - / DTW: 1.5 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / DTW: 3.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	SAMPLES: Collection Depth	SAMPLES: OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			20	
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / DTW: 3.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7			15	
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 - / DTW: 2.5 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			30	
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 - / DTW: 3.3 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			250	
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-11

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 7.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-11 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-12

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-12 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-13

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 4.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-13 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TM-TW-14

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 1.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TM-TW-14 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown Silt, Some Fine Sand

Boring Log of TF-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 - / DTW: 2.2 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6			34	
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of TF-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 - / DTW: 2.2 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of TF-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of TF-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 / -	DTW: 1.7 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of TF-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/20/2009 - / DTW: 2.1 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/20/09**	Date Completed: **10/20/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / -	DTW: 2.9 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / -	DTW: 3.3 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / DTW: 3.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / DTW: 4.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/19/2009 / -	DTW: 2.5 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/19/09**	Date Completed: **10/19/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 4.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 -	DTW: 3.5 -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 - / DTW: 2.5 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **5'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				

Boring Log of PL-TW-10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **5'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				
	5				0-5' - Vacuum Excavation

Boring Log of PL-TW-11

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **5'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-11 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				
	5				0-5' - Vacuum Excavation

Boring Log of PL-TW-12

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **5'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-12 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				
	5				0-5' - Vacuum Excavation

Boring Log of PL-TW-13

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-13 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-14

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/22/2009 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/22/09**	Date Completed: **10/22/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-14 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-15

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/23/2009 / DTW: 1.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/23/09**	Date Completed: **10/23/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-15 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-16

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/23/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/23/09**	Date Completed: **10/23/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-16 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-17

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/23/2009 - / DTW: 1.5 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/23/09**	Date Completed: **10/23/09**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-17 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-18

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/23/2009 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/23/09**	Date Completed: **10/23/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-18 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of PL-TW-19

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/23/2009 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/23/09**	Date Completed: **10/23/09**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING PL-TW-19 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of NLF-1

Client: **Hess Corporation**	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: - / DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/27/09**	Date Completed: **10/27/09** / Well Diameter		
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING NLF-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2	NLF-1-0-2	0-2	0	
	3				
	4	NLF-1-2-4	2-4	0	
	5				
	6	NLF-1-4-6	4-6	0	
	7				
	8	NLF-1-6-8	6-8	0	
	9				
	10	NLF-1-8-10	8-10	0	0-10 Light Brown Gravelly Sands

Boring Log of NLF-2

Client: **Hess Corporation**	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: - / DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/27/09**	Date Completed: **10/27/09** / Well Diameter		
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING NLF-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2	NLF-2-0-2	0-2	0	
	3				
	4	NLF-2-2-4	2-4	0	
	5				
	6	NLF-2-4-6	4-6	0	
	7				
	8	NLF-2-6-8	6-8	0	
	9				
	10	NLF-2-8-10	8-10	0	0-10 Light Brown Gravelly Sands

Boring Log of NLF-3

Client: **Hess Corporation**	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: - / DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/27/09**	Date Completed: **10/27/09** / Well Diameter		
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING NLF-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2	NLF-3-0-2	0-2	0	
	3				
	4	NLF-3-2-4	2-4	0	
	5				
	6	NLF-3-4-6	4-6	0	
	7				
	8	NLF-3-6-8	6-8	0	
	9				
	10	NLF-3-8-10	8-10	0	0-10 Light Brown Gravelly Sands

Boring Log of NLF-4

Client: **Hess Corporation**	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: - / DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/27/09**	Date Completed: **10/27/09** / Well Diameter		
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING NLF-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2	NLF-4-0-2	0-2	0	
	3				
	4	NLF-4-2-4	2-4	0	
	5				
	6	NLF-4-4-6	4-6	0	
	7				
	8	NLF-4-6-8	6-8	0	
	9				
	10	NLF-4-8-10	8-10	0	0-10 Light Brown Gravelly Sands

Boring Log of NLF-5

Client: **Hess Corporation**	Incident #	Depth to Water (ft. from measuring pt.)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: - / DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/27/09**	Date Completed: **10/27/09** / Well Diameter		
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING NLF-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2	NLF-5-0-2	0-2	0	
	3				
	4	NLF-5-2-4	2-4	0	
	5				
	6	NLF-5-4-6	4-6	0	
	7				
	8	NLF-5-6-8	6-8	0	
	9				
	10	NLF-5-8-10	8-10	0	0-10 Light Brown Gravelly Sands

Boring Log of HS14-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010 / DTW: 3.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of HS14-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010 / DTW: 2.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of HS14-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010 / DTW: 3.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of HS14-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010 / DTW: 4.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown sand, Trace Gravel and Silt

Boring Log of AB-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010	DTW: 5.1
Drilling Company: **Summit Drilling**		-	-
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AB-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Grey silty sand

Boring Log of AB-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010	DTW: 5.5
Drilling Company: **Summit Drilling**		-	-
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AB-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Grey silty sand

Boring Log of AB-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010	DTW: 1.0
Drilling Company: **Summit Drilling**		-	-
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AB-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Grey silty sand

Boring Log of AB-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/17/2010	DTW: 1.6
Drilling Company: **Summit Drilling**		-	-
Date Started: **9/17/10**	Date Completed: **9/17/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING AB-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Grey silty sand

Boring Log of HS9-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/20/2010 / DTW: 6.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/20/10**	Date Completed: **9/20/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS9-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS9-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 6.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS9-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS9-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 8.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS9-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS9-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 6.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS9-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS6-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 3.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS6-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS6-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS6-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS6-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS6-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS6-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS6-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS4-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 4.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS4-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS4-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 3.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS4-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS4-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/21/2010 / DTW: 4.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/21/10**	Date Completed: **9/21/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS4-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown sand, Trace Gravel and Silt

Boring Log of HS8-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 — DTW: 2.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 6.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 5.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 5.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 6.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 1.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS8-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 3.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS8-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Red-brown silty sand

Boring Log of HS2-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 1.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS2-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS2-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 1.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS2-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS2-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/22/2010 / DTW: 1.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/22/10**	Date Completed: **9/22/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS2-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS16-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 7.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS16-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AU-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 6.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AU-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of AU-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 5.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AU-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of AU-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 6.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AU-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of AU-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 7.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AU-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of AU-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/23/2010 / DTW: 6.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/23/10**	Date Completed: **9/23/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AU-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of CR-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 4.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING CR-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of CR-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 4.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING CR-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of CR-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING CR-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of BR-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 7.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING BR-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of BR-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 2.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING BR-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of BR-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 6.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING BR-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Reddish-brown medium silt, trace sand, trace gravel

Boring Log of HS18-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS18-TW-2

Client: **Hess Corporation**		Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**		Date: 9/29/2010 — DTW: 2.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter **1-inch schedule 40 PVC**		
Completion Depth: **10'**		Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS18-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS18-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 3.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 2.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 1.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 1.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 3.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 9/29/2010 / DTW: 1.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **9/29/10**	Date Completed: **9/29/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS5-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS5-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 6.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 7.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 6.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 5.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 6.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 4.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 7.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9			20	
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of AOC15-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/4/2010 / DTW: 5.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/4/10**	Date Completed: **10/4/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9			100	
	10				5'-10' - Brown medium sand, trace silt, trace gravel

Boring Log of DS-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 / DTW: 4.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				5'-6' - Light-brown gravelly sand
	6				
	7	DS-SS-1	7.5 -8.0	20	6'-8' - Light-brown gravelly sand - Oil Stained
	8				
	9				
	10				8'-10' - Light-brown gravelly sand

Boring Log of DS-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010	DTW: 4.5
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING DS-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9	DS-SS-2	9.5 -10.0	10	
	10				5'-10' - Light-brown gravelly sand

Boring Log of DS-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 / DTW: 3.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				5'-6' - Light-brown gravelly sand
	6				
	7	DS-SS-3	7.5 -8.0	20	6'-8' - Light-brown gravelly sand - Oil Stained
	8				
	9				
	10				8'-10' - Light-brown gravelly sand

Boring Log of DS-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010	DTW: 4.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	-	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter **1-inch schedule 40 PVC**		
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a		

SOIL BORING DS-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5	DS-SS-4	5.5 -6.0	0	5'-6' - Black gravelly sand
	6				
	7				
	8				
	9				
	10				6'-10' - Light-brown gravelly sand

Boring Log of DS-TW-5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 - / DTW: 4.8 -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5	DS-SS-5	5.5 -6.0	0	5'-6' - Black gravelly sand
	6				
	7				
	8				
	9				
	10				6'-10' - Light-brown gravelly sand

Boring Log of DS-TW-6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 / DTW: 3.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				5'-6' - Light-brown gravelly sand
	6				
	7	DS-SS-6	7.5 -8.0	0	6'-8' - Light-brown gravelly sand - Oil Stained
	8				
	9				
	10				8'-10' - Light-brown gravelly sand

Boring Log of DS-TW-7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 — DTW: 3.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5	DS-SS-7	5.5 -6.0	0	
	6				
	7				
	8				
	9				
	10				5'-10' - Light-brown gravelly sand

Boring Log of DS-TW-8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/5/2010 / DTW: 3.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/5/10**	Date Completed: **10/5/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING DS-TW-8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5	DS-SS-8	5.5 -6.0	0	5'-7' - Black gravelly sand
	6				
	7				7'-8' - Dark gray clay
	8				
	9				
	10				8'-10' - Dark gray peat

Boring Log of HS11-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS11-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS11-TW-2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 2.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS11-TW-2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS11-TW-3

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010	DTW: 2.1
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter **1-inch schedule 40 PVC**	Ground Elevation **Not Surveyed**
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	Measuring Point Elevation

SOIL BORING HS11-TW-3 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS11-TW-4

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS11-TW-4 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace gravel

Boring Log of HS1-TW-1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/6/2010 / DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/6/10**	Date Completed: **10/6/10**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS1-TW-1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8				
	9				
	10				5'-10' - Yellow-brown medium sand, trace silt, trace clay

Boring Log of TF-TW6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/24/2011 / DTW: 2.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/24/11**	Date Completed: **10/24/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING TF-TW6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	SAMPLES: Collection Depth	SAMPLES: OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6			13	
	7				
	8				
	9				
	10				5'-10' - Medium brown sand with some gravel

Boring Log of TF-TW7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/24/2011	DTW: 2.1
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/24/11**	Date Completed: **10/24/11**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

Ground Elevation: **Not Surveyed**

Measuring Point Elevation

SOIL BORING TF-TW7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				
	6				
	7				
	8			0.5	
	9				
	10				5'-10' - Medium brown sand with some gravel

Boring Log of AOC6-TW1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/24/2011 / DTW: 1.6	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/24/11**	Date Completed: **10/24/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC6-TW1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5				Soil too wet to screen with PID
	6				
	7				
	8				
	9				
	10				5'-10' - Medium brown sand with medium gravel

Boring Log of AOC6-TW2

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 3.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **20'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC6-TW2 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			0.5	
				0.5	
	6			0.5	
				0.5	
	7			0.5	
				0.5	
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	
				0.5	
	11			0.5	
				0.5	5'-12' - Medium brown sand with gravel
	12			2.8	
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				12'-20' - Dark gray clay

Boring Log of HS18-TW5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 1.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			45	
				54	
	6			13	
				39	
	7			21	
	8			15	
	9				
	10			2	5'-10' - Medium brown sand with gravel

Boring Log of HS18-TW6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 — DTW: 2.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		Date: - — DTW: -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **20'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			103	
				103	
	6			30	
				30	
	7			5	
				5	
	8			5	
				5	
	9			5	
				5	
	10			3	
				3	
	11			3	
				3	
	12			3	
				3	5'-13' - Fine brown sand with gravel
	13			1	
				1	
	14			1	
				1	
	15			1	
				1	
	16			1	
				1	
	17			1	
				1	
	18			1	
				1	
	19			1	
				1	
	20			1	13'-20' - Dark gray clay with some organic
				1	

Boring Log of HS18-TW7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 0.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			6	
				6	
	6			6	
				6	
	7			6	
				6	
	8			6	
				6	
	9			6	
				6	
	10			6	5'-10' - Medium brown sand with gravel
				6	

Boring Log of HS18-TW8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 — DTW: 1.9	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			5	
				5	
	6			5	5'-6.5' - Medium brown sand with gravel
				2	
	7			2	
				2	
	8			2	
				2	
	9			2	
				2	
	10			2	6.5'-10' - Medium brown sand with silt
				2	

Boring Log of HS18-TW9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / -	DTW: 1.7 / -
Drilling Company: **Summit Drilling**			Ground Elevation: **Not Surveyed**
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	Measuring Point Elevation
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	SAMPLES: Collection Depth	SAMPLES: OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			193	
				193	
	6			55	
				55	
	7			55	
				2	
	8			2	
				2	
	9			2	
				2	
	10			2	5'-10' - Medium brown sand with gravel
				2	

Boring Log of HS18-TW10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 1.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			0.5	
				0.5	
	6			0.5	
				0.5	
	7			0.5	
				0.5	
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	5'-10' - Medium brown sand with gravel
				0.5	

Boring Log of HS18-TW11

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 1.3	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW11 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			5.5	
				5.5	
	6			0.5	
				0.5	
	7			0.5	
				0.5	
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	5'-10' - Medium brown sand with gravel
				0.5	

Boring Log of HS18-TW12

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 1.2	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW12 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			150	
				150	
	6			209	
				209	
	7			209	
				209	
	8			10	
				10	
	9			10	
				10	
	10			10	5'-10' - Medium brown sand with gravel
				10	

Boring Log of HS18-TW13

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 — DTW: 1.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS18-TW13 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			150	
				150	
	6			209	
				209	
	7			209	
				209	
	8			10	
				10	
	9			10	
				10	
	10			10	5'-10' - Medium brown sand with gravel
				10	

Boring Log of AOC15C-TW9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011	DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**			Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15C-TW9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			0.5	
				0.5	
	6			0.5	5'-6.5' - Medium Light brown sand with gravel
				0.5	
	7			0.5	
				0.5	
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	6.5'-10' - Black silty sand mix
				0.5	

Boring Log of AOC15C-TW10

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 6.1	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15C-TW10 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			0.5	
				0.5	
	6			0.5	
				0.5	
	7			0.5	
				0.5	5'-8' - Medium Light brown sand with gravel
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	8'-10' - Black silty sand mix
				0.5	

Boring Log of AOC15C-TW11

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011 / DTW: 7.4	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING AOC15C-TW11 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			0.5	
				0.5	
	6			0.5	
				0.5	
	7			0.5	
				0.5	5'-8' - Medium Light brown sand with gravel
	8			0.5	
				0.5	
	9			0.5	
				0.5	
	10			0.5	8'-10' - Black silty sand mix
				0.5	

Boring Log of HS5-SB1

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/25/2011	DTW: -
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/25/11**	Date Completed: **10/25/11**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **20'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

Ground Elevation: **Not Surveyed**

Measuring Point Elevation

SOIL BORING HS5-SB1 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0			10	
	1			12.3	
	2			133	
	3			191	
	4			15	
	5			2.5	0.5'-5' - Dark brown sand with gravel
				2.5	
	6			2.5	
				2.5	
	7			2.5	
				2.5	
	8			2.5	
				2.5	
	9			2.5	
				2.5	
	10			2.5	
				2.5	
	11			2.5	
				2.5	
	12			2.5	
				2.5	
	13			2.5	
				2.5	
	14			2.5	
				2.5	
	15			2.5	
				2.5	
	16			2.5	
				2.5	
	17			2.5	
				2.5	5'-18' - Dark brown sand with gravel - Very wet
	18			0.5	
				0.5	
	19			0.5	
				0.5	
	20			0.5	18'-20' - Dark gray clay
				0.5	

Boring Log of HS14-TW5

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011	DTW: 0.8
Drilling Company: **Summit Drilling**		-	-
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **20'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

Ground Elevation: **Not Surveyed**

Measuring Point Elevation

SOIL BORING HS14-TW5 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			15	
				15	
	6			15	
				15	
	7			15	
				15	5'-8' - Light brown sand
	8			2	
				2	
	9			2	
				2	8'-10' - Peat
	10			13	
				13	
	11			13	
				13	
	12			13	
				13	
	13			13	
				13	10'-14' - Oil stained fine sand
	14			11	
				11	
	15			11	
				11	
	16			11	
				11	
	17			11	
				11	
	18			11	
				11	
	19			11	
				11	
	20			11	14'-20' - Dark gray clay
				11	

Boring Log of HS14-TW6

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011 — DTW: 1.5	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		-	Measuring Point Elevation
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW6 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			10	
				10	
	6			10	
				10	
	7			10	
				10	5'-8' - Black silty sand
	8			2.8	
				2.8	
	9			2.8	
				2.8	
	10			2.8	8'-10' - Black silty clay
				2.8	

Boring Log of HS14-TW7

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011	DTW: -	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**				Measuring Point Elevation
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter **1-inch schedule 40 PVC**	
Completion Depth: **20'**	Hydrogeologist/Engineer **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW7 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			1.5	
				1.5	
	6			1.5	
				1.5	
	7			1.5	
				1.5	
	8			1.5	
				1.5	5'-9' - Light brown sand
	9			205	
				205	
	10			205	
				205	
	11			205	
				205	
	12			205	
				205	
	13			205	
				205	9'-14' - Light brown sand - Heavy product
	14			30	
				30	
	15			30	
				30	
	16			30	
				30	
	17			30	
				30	
	18			30	
				30	
	19			30	
				30	
	20			30	14'-20' - Peat
				30	

Boring Log of HS14-TW8

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011 / DTW: 2.7	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW8 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			20	
				20	
	6			20	
				20	
	7			20	
				20	
	8			20	
				20	
	9			108	
				108	
	10			108	5'-10' - Medium Light brown sand with gravel
				108	

Boring Log of HS14-TW9

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011 / DTW: 2.0	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING HS14-TW9 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0				
	1				
	2				
	3				
	4				0-5' - Vacuum Excavation
	5			1	
				1	
	6			1	
				1	
	7			1	
				1	
	8			1	
				1	
	9			1	
				1	
	10			1	5'-10' - Medium Light brown sand with gravel
				1	

Boring Log of SLF-TW35

Client: **Hess Corporation**	Incident #	Depth to Water (feet from surface)	Site Elevation Datum
Site Name: **Port Reading Refinery**	Address: **750 Cliff Road, Woodbridge, NJ**	Date: 10/26/2011 / DTW: 1.8	Ground Elevation: **Not Surveyed**
Drilling Company: **Summit Drilling**		- / -	Measuring Point Elevation
Date Started: **10/26/11**	Date Completed: **10/26/11**	Well Diameter: **1-inch schedule 40 PVC**	
Completion Depth: **10'**	Hydrogeologist/Engineer: **Phil Allegro/EnviroTrac**	Permit #: n/a	

SOIL BORING SLF-TW35 (Not To Scale)	DEPTH (ft. below grade)	SAMPLES: Sample ID	Collection Depth	OVM (ppm)	SOIL DESCRIPTION
	0			43	
				43	
	1			43	
				68	
	2			68	
				68	
	3			68	
				42	
	4			42	
				42	
	5			42	
				7	
	6			7	
				7	
	7			7	0'-8' - Brown fine sand
				5	
	8			5	
				5	
	9			5	
				5	8'-10' - Peat
	10			5	

Appendix IV:

Laboratory Data Packages- Fingerprint Analysis

GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG
Specializing in Hydrocarbon Contamination of
Ground Water and Soils

11619 S. Hudson Place
Tulsa, OK 74137-8532
envirodog@aol.com

(O) 918-660-3424
(H) 918-298-9849
Fax 918-660-4160

November 11, 1998

RECEIVED
FEB 13 2012

Brian Finnegan
Amerada-Hess Corporation
One Hess Plaza
Woodbridge, NJ 07095

Subject: Port Reading Refinery Samples

Attached are the gas chromatograms of the two liquid hydrocarbon samples (PL-1 and PL-5) you recently submitted to us for fingerprinting and age dating.

Sample PL-1 is a very highly degraded crude oil with a very highly degraded diesel/fuel oil component superimposed on the crude oil fraction. Both the crude oil and the diesel/fuel oil components have been in the subsurface (subject to degradation) for a minimum of 18 years or more. Other than the diesel/fuel oil presence, no refined products are present.

Sample PL-5 is a very highly degraded crude oil only. The crude oil has been in the subsurface (subject to degradation) for a minimum of 18 years or more. No refined hydrocarbon products are present in the sample.

Gene W. Schmidt

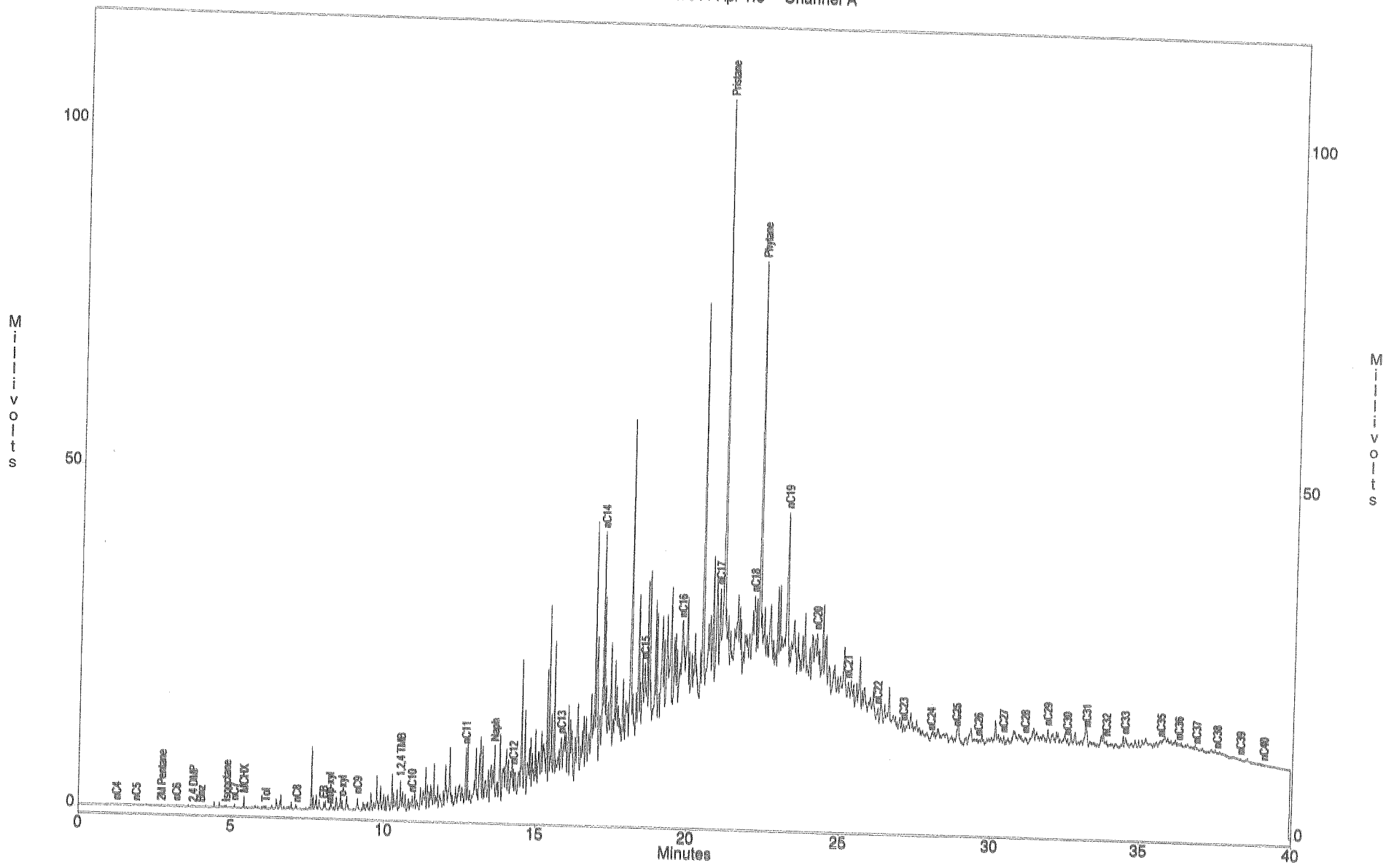
Gene W. Schmidt

GWS:vaw

Attachments

Amerada Hess Port Reading Refinery
Sample ID : PL-1
Acquired : Nov 10, 1998 15:59:26

c:\ezchrom\chrom\98111\pl-1.3 -- Channel A



Amerada Hess Port Reading Refinery
Sample ID : PL-1
Acquired : Nov 10, 1998 15:59:26

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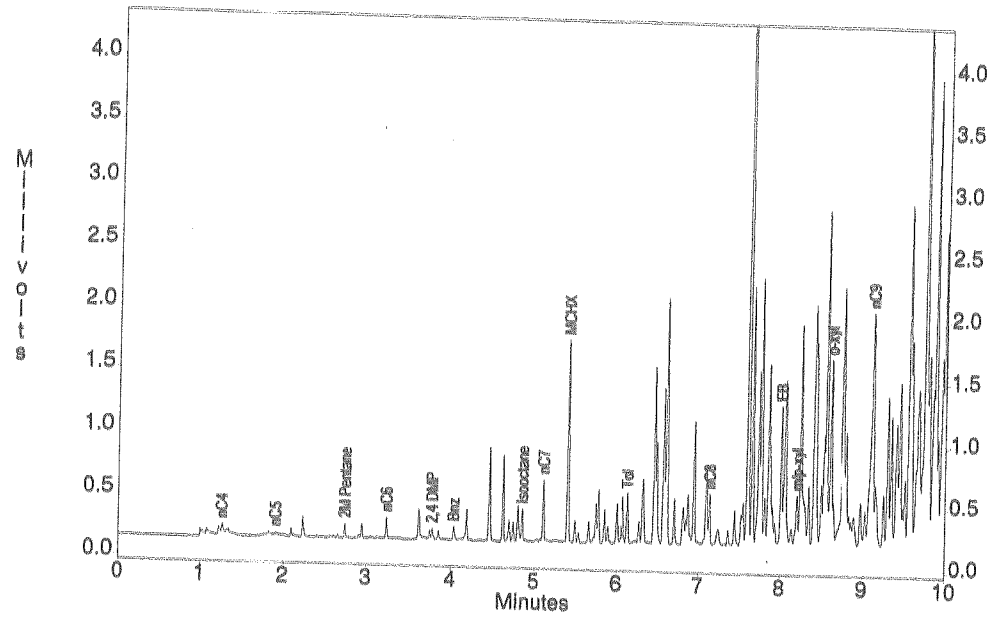

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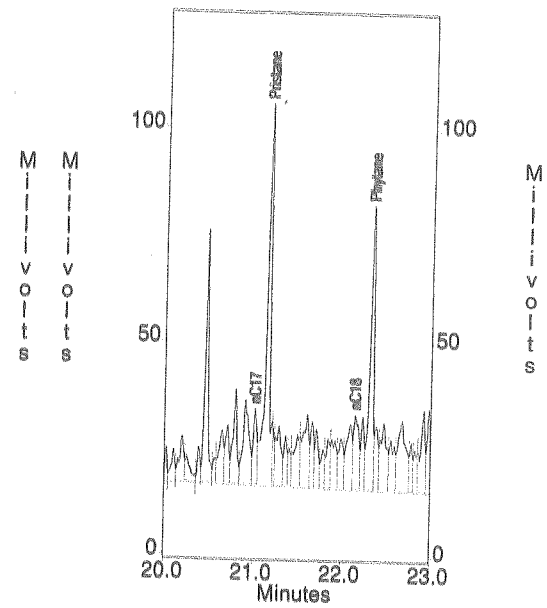

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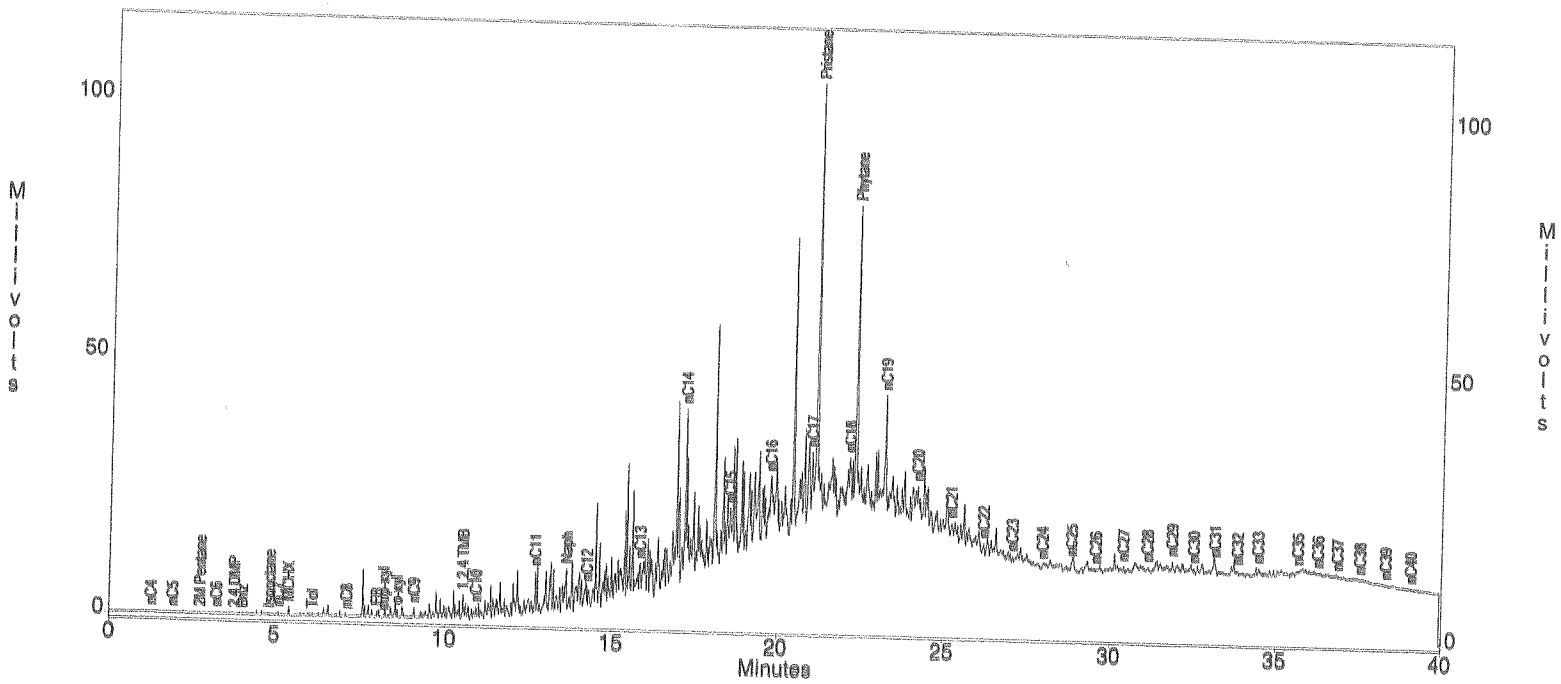
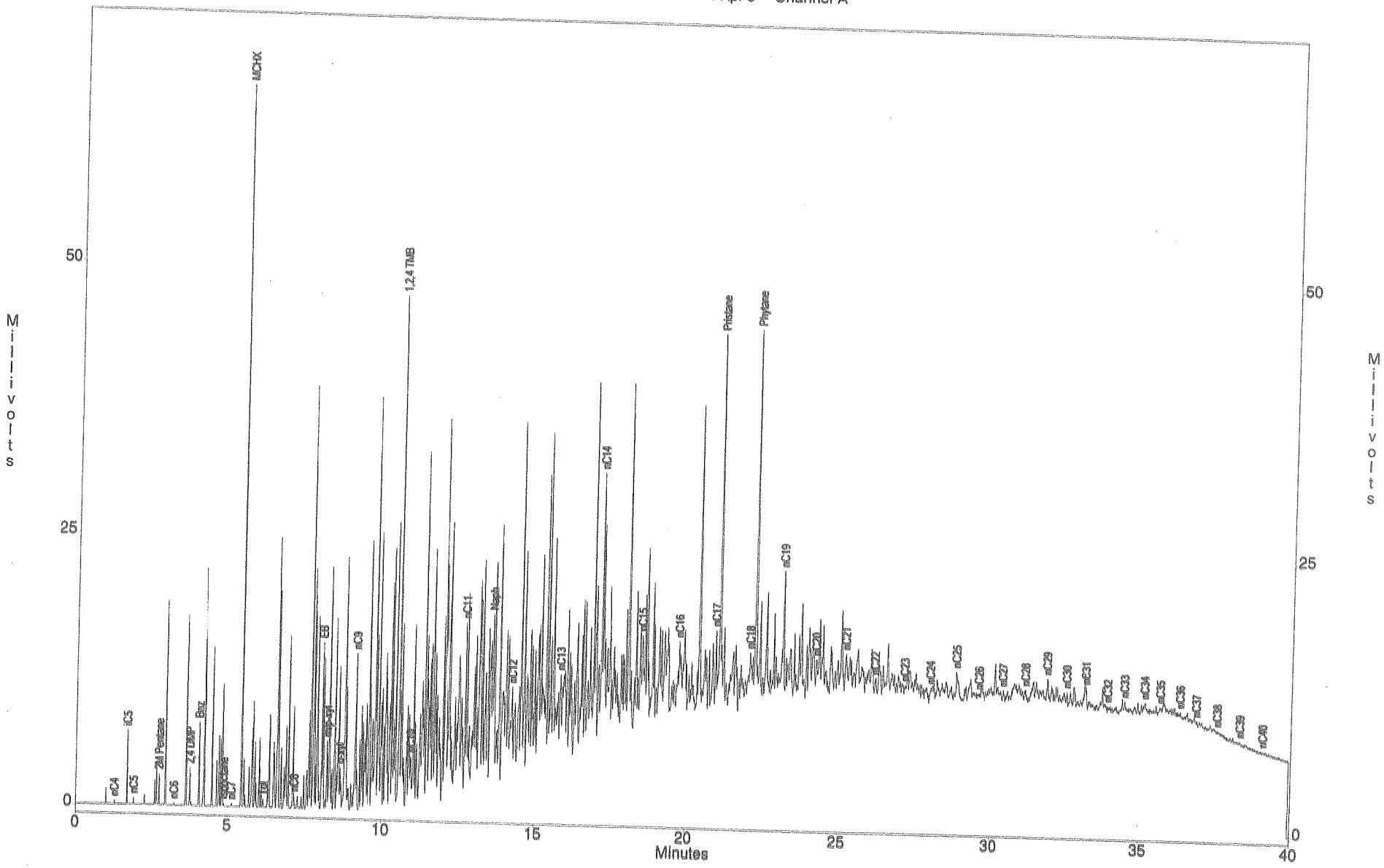


Channel A Results

Peak	Height
nC4	97
1C5	0
nC5	33
MTBE	0
2M Pentane	114
nC6	170
olefin a	0
olefin b	0
olefin c	0
2,4 DMP	88
Bnz	107
Isooctane	260
nC7	497
MCHX	1622
Tol	402
nC8	409
EB	1119
m/p-xyl	402
o-xyl	1494
nC9	1865
1,2,4 TMB	4483
nC10	2085
nC11	8272
Naph	8240
nC12	4316
nC13	6884
nC14	33276
nC15	9336
nC16	12022
nC17	17667
Pristane	89279
nC18	17342
Phytane	66404
nC19	30230
nC20	13225
nC21	6849
nC22	3646
nC23	1804
nC24	982
nC25	2130
nC26	793
nC27	1225
nC28	1056
nC29	1873
nC30	674
nC31	497
nC32	665
nC33	940
nC34	0
nC35	300
nC36	283
nC37	192
nC38	218
nC39	282
nC40	192

Amerada Hess Port Reading Refinery
Sample ID : PL-5
Acquired : Nov 10, 1998 12:08:23

c:\ezchrom\chrom\98111\pl-5 -- Channel A



Amerada Hess Port Reading Refinery
Sample ID : PL-5
Acquired : Nov 10, 1998 12:08:23

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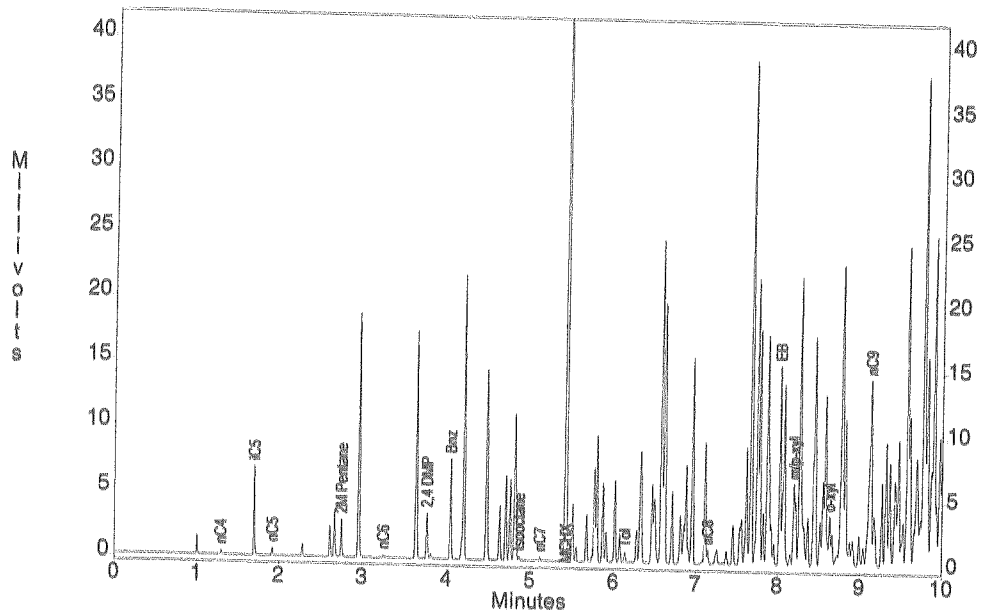

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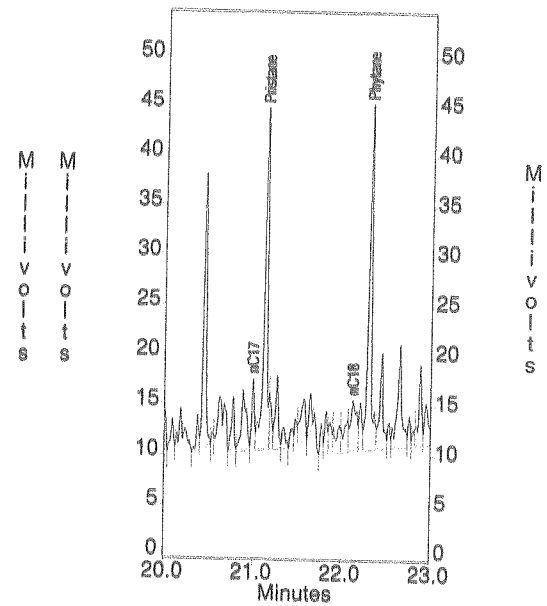

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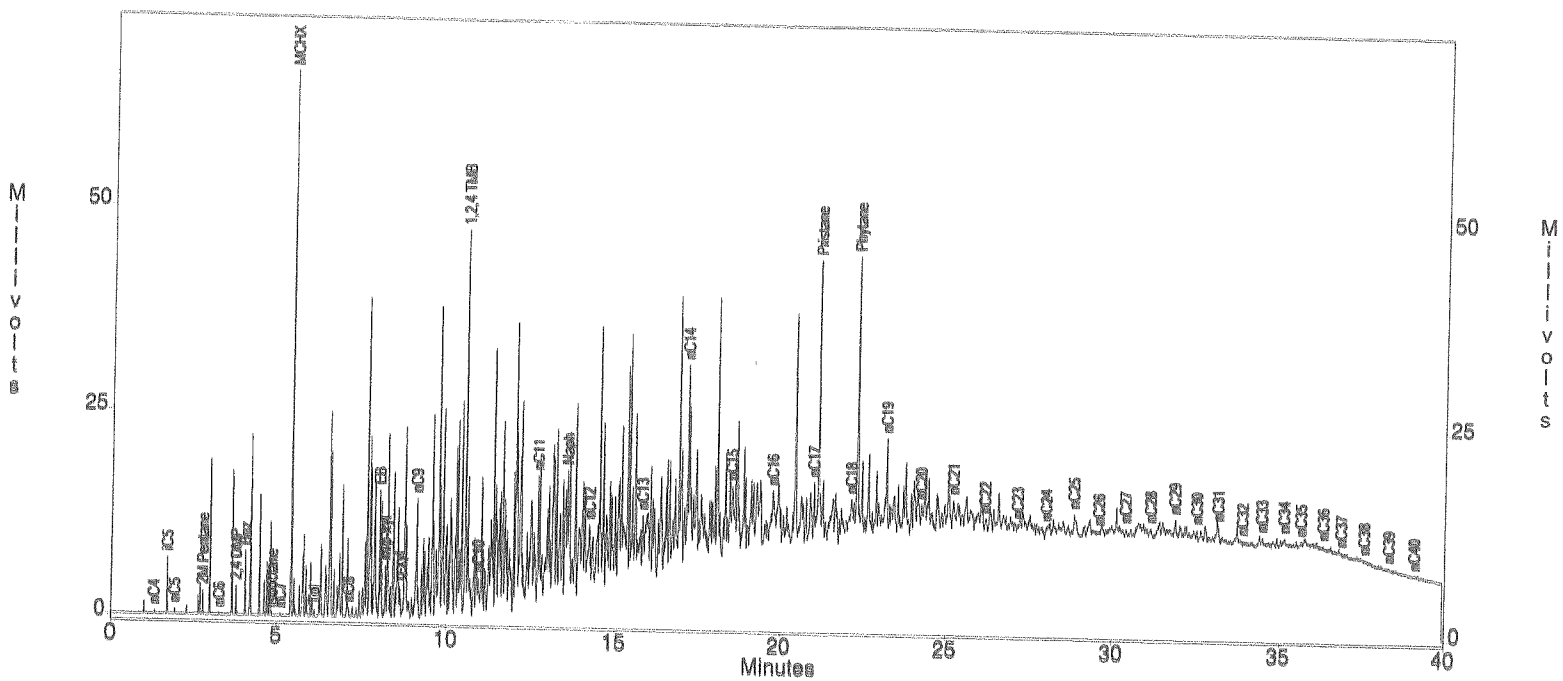
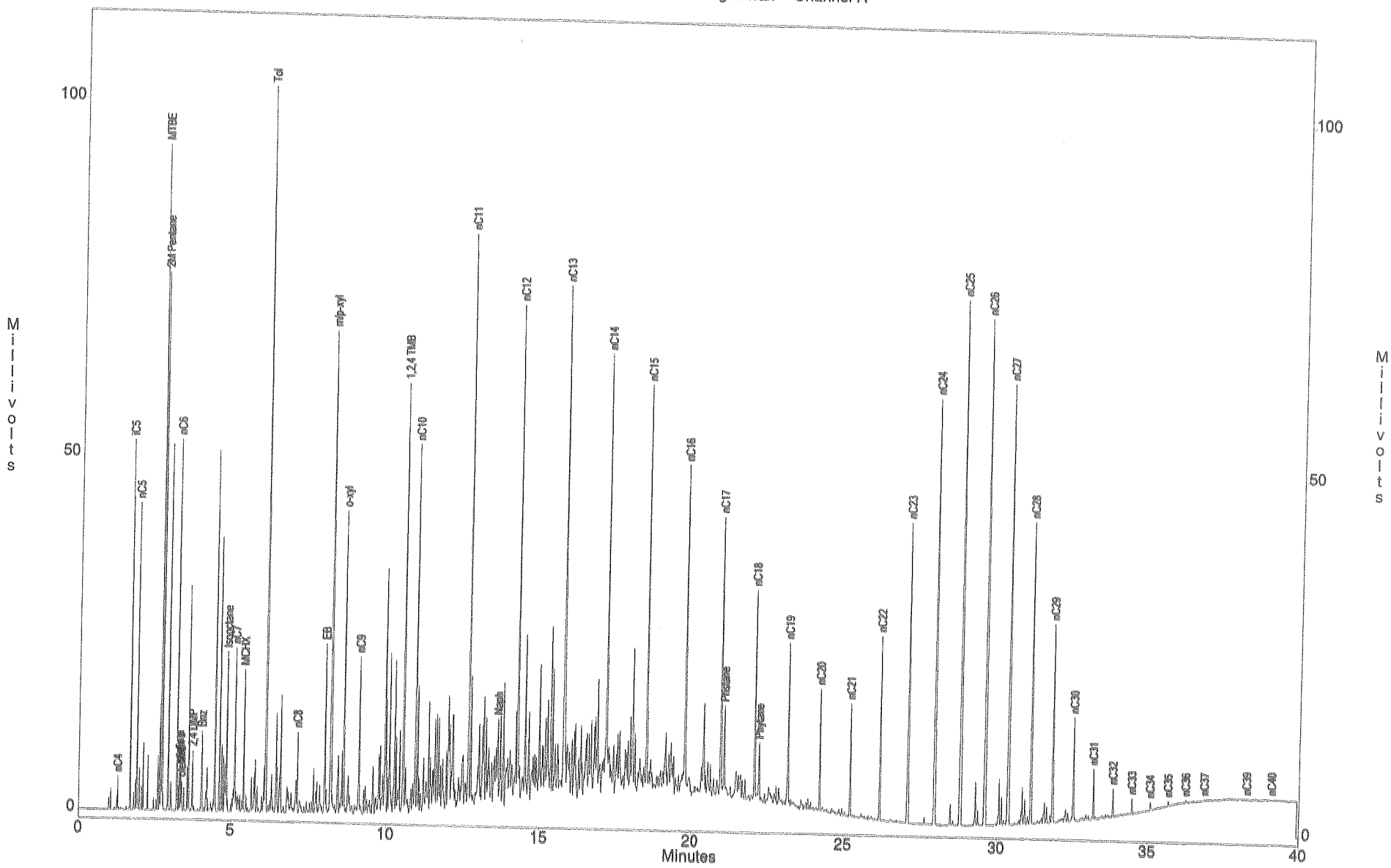


Channel A Results

Peak	Height
nC4	322
iC5	6844
nC5	575
MTBE	0
2M Pentane	2840
nC6	168
olefin a	0
olefin b	0
olefin c	0
2,4 DMP	3452
Bnz	7692
Isooctane	305
nC7	252
MCHX	66331
Tol	740
nC8	1099
EB	15342
m/p-xyl	6267
o-xyl	3817
nC9	14376
1,2,4 TMB	46942
nC10	4251
nC11	15627
Naph	15486
nC12	7974
nC13	6920
nC14	24701
nC15	7983
nC16	2804
nC17	7066
Pristane	34232
nC18	5037
Phytane	34589
nC19	11635
nC20	3337
nC21	3305
nC22	1294
nC23	833
nC24	1402
nC25	2824
nC26	842
nC27	1102
nC28	1111
nC29	1958
nC30	1135
nC31	653
nC32	390
nC33	788
nC34	678
nC35	509
nC36	434
nC37	269
nC38	211
nC39	258
nC40	217

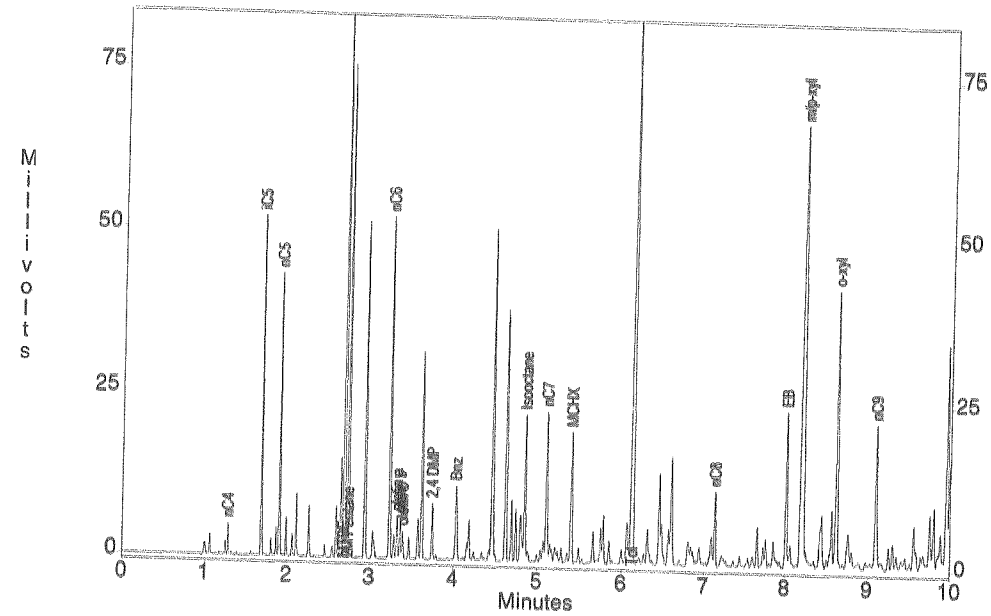
Amerada Hess Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 10, 1998 14:04:41

c:\ezchrom\chrom\98111\gaslwax -- Channel A

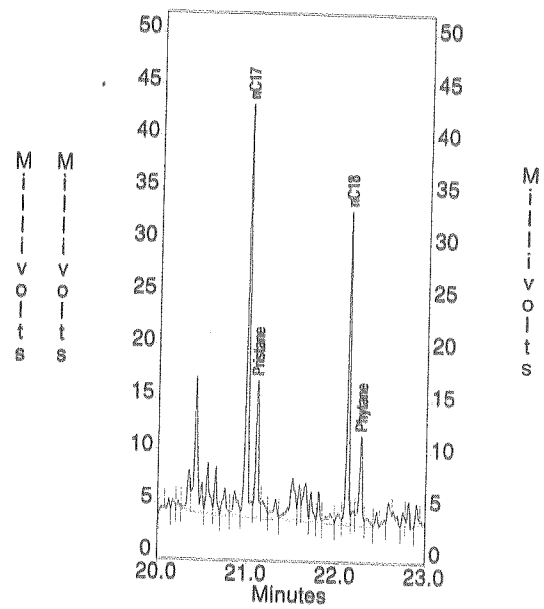


Amerada Hess Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 10, 1998 14:04:41

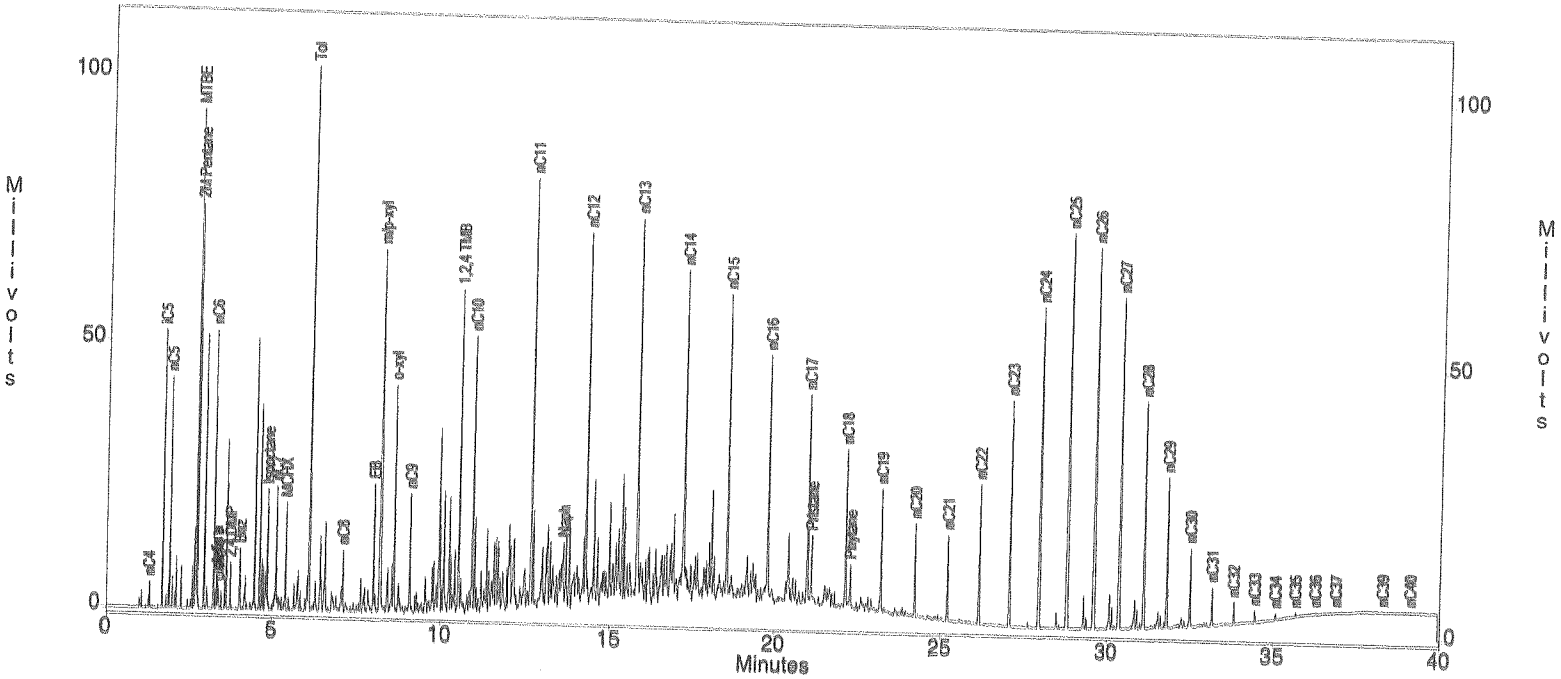
c:\ezchrom\chrom\98111\gasiwax -- Channel A



c:\ezchrom\chrom\98111\gasiwax -- Channel A



c:\ezchrom\chrom\98111\gasiwax -- Channel A



Channel A Results

Peak	Height
nC4	4701
iC5	52062
nC5	43182
MTBE	93627
2M Pentane	75688
nC6	52257
olefin a	6335
olefin b	6069
olefin c	4190
2,4 DMP	8523
Bnz	11281
Isooctane	22511
nC7	23071
MCHX	20075
Tol	102087
nC8	11434
EB	23927
m/p-xyl	67985
o-xyl	42637
nC9	22190
1,2,4 TMB	60548
nC10	51791
nC11	80766
Naph	12256
nC12	70241
nC13	72276
nC14	57492
nC15	56176
nC16	46417
nC17	39420
Pristane	12991
nC18	29826
Phytane	8441
nC19	22964
nC20	17278
nC21	15975
nC22	25946
nC23	42238
nC24	59936
nC25	73950
nC26	71261
nC27	61960
nC28	42386
nC29	27934
nC30	14195
nC31	7028
nC32	3975
nC33	2182
nC34	1184
nC35	735
nC36	332
nC37	165
nC38	0
nC39	102
nC40	111

	Amerada Hess Port Reading Refinery												
	TGI Job 98111												
	Peak Heights												
	Sample Id	nC17/ pris	nC5/ m-p xyl	olefins/ nC6	olefins/ 2,4DMP	isooctane/ 2,4DMP	benz/ 2,4DMP	MCHx/ nC7	benz/ tol.	nC4...10/ nC11...25	nC11...25/ nC26...40		
	PL-1	0.20	0.08	0.00	0.00	2.95	1.22	3.26	0.27	0.03	18.28		
	PL-5	0.21	0.09	0.00	0.00	0.09	2.23	263.22	10.39	0.20	9.73		
	Gas/Dies/Wax std	3.03	0.64	0.32	1.95	2.64	1.32	0.87	0.11	0.29	3.04		

Amerada Hess Port Reading Refinery															
TGI Job 98111															
Peak Heights															
Sample Id	nC4	IC5	nC5	MTBE	2M Pentane	nC6	olefin a	olefin b	olefin c	2,4 DMP	Bnz	Isooctane	nC7	MCHX	Tol
PL-1	97	0	33	0	114	170	0	0	0	88	107	260	497	1622	402
PL-5	322	6844	575	0	2840	168	0	0	0	3452	7692	305	252	66331	740
Gas/Dies/Wax std	4701	52062	43182	93627	75688	52257	6335	6069	4190	8523	11281	22511	23071	20075	102087

nC8	EB	m/p-xyl	o-xyl	nC9	1,2,4 TMB	nC10	nC11	Naph	nC12	nC13	nC14	nC15	nC16	nC17	Pristane	nC18	Phytane	nC19
409	1119	402	1494	1865	4483	2085	8272	8240	4316	6884	33276	9336	12022	17667	89279	17342	66404	30230
1099	15342	6267	3817	14376	46942	4251	15627	15486	7974	6920	24701	7983	2804	7066	34232	5037	34589	11635
11434	23927	67985	42637	22190	60548	51791	80766	12256	70241	72276	57492	56176	46417	39420	12991	29826	8441	22964

nC20	nC21	nC22	nC23	nC24	nC25	nC26	nC27	nC28	nC29	nC30	nC31	nC32	nC33	nC34	nC35	nC36	nC37	nC38	nC39	nC40
13225	6849	3646	1804	982	2130	793	1225	1056	1873	674	497	665	940	0	300	283	192	218	282	192
3337	3305	1294	833	1402	2824	842	1102	1111	1958	1135	653	390	788	678	509	434	269	211	258	217
17278	15975	25946	42238	59936	73950	71261	61960	42386	27934	14195	7028	3975	2182	1184	735	332	165	0	102	111

ACCUTEST®

CHAIN OF CUSTODY

FRESH PONDS CORPORATE VILLAGE, BUILDING B
2235 ROUTE 130, DAYTON, NJ 08810
908-329-0200 FAX: 908-329-3499/3480

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Amerada Hess Corporation
ADDRESS: One Hess Plaza
CITY, STATE, ZIP: Woodbridge NJ 07095
SEND REPORT TO:
PHONE #: (732) 750-7016

FACILITY INFORMATION

PROJECT NAME
LOCATION
PROJECT NO.
FAX #

ANALYTICAL INFORMATION

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	Hydrocarbon Fingerprint	Age-Dark	LAB USE ONLY
	PL-1	11/4/98		BLF	Oil	1					X	X	X	
	PL-5	11/4/98		BLF	Oil	1					X	X	X	

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

DATA TURNAROUND INFORMATION

- ☐ 21 DAYS STANDARD
- ☐ 14 DAYS *RUSH*
- ☐ 7 DAYS *EMERGENCY*
- ☐ OTHER

APPROVED BY:

21 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ NJ REDUCED
- ☐ NJ Full
- ☐ FULL CLP
- ☐ DISK DELIVERABLE
- ☐ OTHER (SPECIFY)
- ☐ COMMERCIAL "A"
- ☐ COMMERCIAL "B"
- ☐ STATE FORMS

COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	11-10-98/1035	1. [signature]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.	SEAL #	PRESERVE WHERE APPLICABLE ☐	ON ICE ☐ TEMPERATURE ____ C

FOSTER WHEELER ENVIRONMENTAL CORPORATION

November 5, 1998

Mr. Gene Schmidt
GW/S Environmental Consulting
11619 South Hudson Place
Tulsa, OK 74137-8532

Subject: Hydrocarbon Fingerprinting and Age Analysis

Dear Mr. Schmidt:

Hydrocarbon samples from two wells at the Amerada Hess (Port Reading) Corporation Refinery were sent to Torkelson Geochemistry on November 5, 1998. A map of the well locations is provided for your reference. Bruce Torkelson, of Torkelson Geochemistry, and I agreed by telephone to forward the chromatographic results to you as soon as possible.

The samples sent to Torkelson are from hydrocarbon present in wells PL-1 and PL-5. Please identify the type and age of hydrocarbon in these wells to help determine possible sources. The results can be sent to my attention at One Hess Plaza, Woodbridge, NJ 07095.

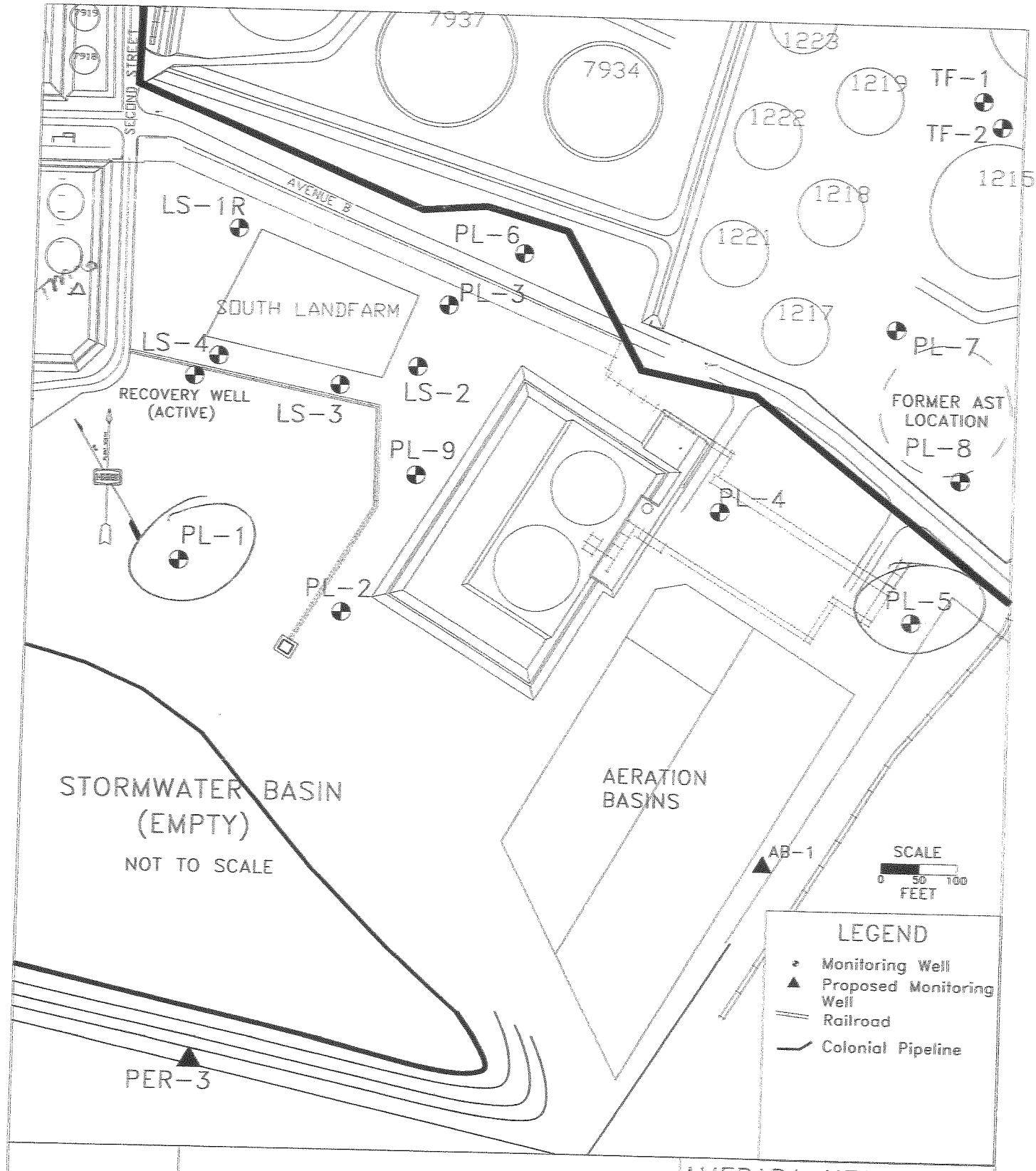
If you have any questions or require any additional information, please call me at (732) 750-7016.

Sincerely,

Brian Finnegan
Project Geologist

S:/BrianF/letters98/letter3

1 HESS PLAZA, WOODBRIDGE, NJ 07095
TEL: 908-750-6616 FAX: 908-750-6105



FWENC

FIGURE: 8.2 | DRAWN BY: BCF | DATE: 9/29/98 | SCALE: AS SHOWN

AMERADA HESS CORP.
Port Reading Refinery
750 Cliff Road
Port Reading, NJ

GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG
Specializing in Hydrocarbon Contamination of
Ground Water and Soils

11619 S. Hudson Place
Tulsa, OK 74137-8532
envirodog@aol.com

(O) 918-660-3424
(H) 918-298-9849
Fax 918-660-4160

May 7, 1999

RECEIVED
FEB 1

Brian Finnegan
Foster Wheeler Environmental Corporation
1 Hess Plaza
Woodbridge, NJ 07095

Subject: Port Reading Refinery Samples (TM-6)

Attached are the gas chromatograms of the liquid hydrocarbon sample (TM-6) you recently submitted to us for fingerprinting and age dating.

Sample TM-6 is a mixture of refined gasoline components to which MTBE has not been added and a small amount of a very highly degraded distillate (probably a diesel/fuel oil). The gasoline fraction (86 percent of the sample) is probably not a finished gasoline.

The highly degraded distillate fraction (about 14 percent) has a nC17/pristane ratio of about .18 which means the distillate has been in the subsurface (subjected to biodegradation) for a minimum of 18 years or more. The gasoline component fraction has been more recently released to the subsurface.

The TM-6 sample does not contain any crude oil as did the two samples from wells PL-1 and PL-5. However, the TM-6 sample and the PL-1 and PL-2 samples all contain a small amount of distillate (diesel/fuel oil) of about the same age as that in the TM-6 sample.

Gene W. Schmidt

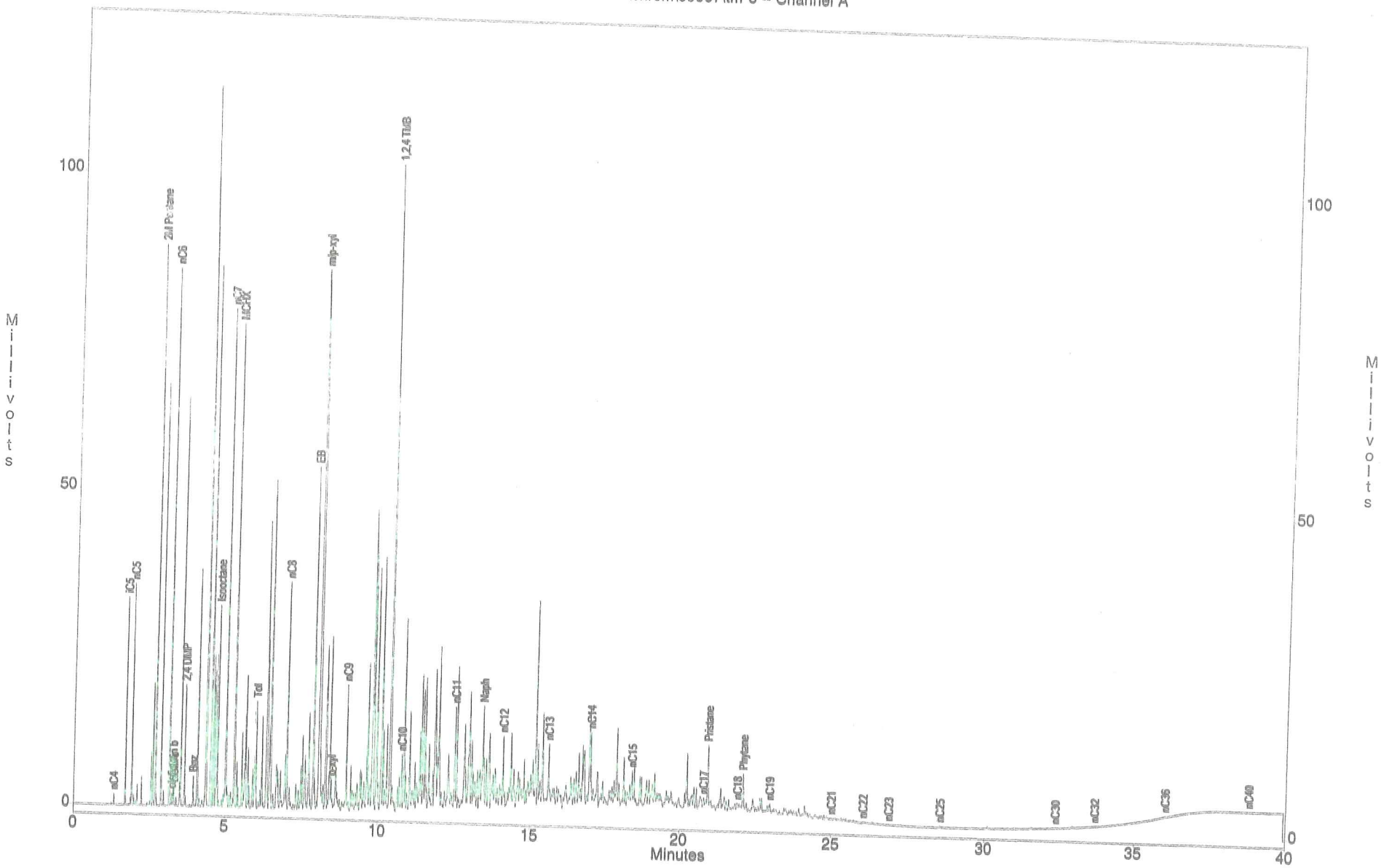
Gene W. Schmidt

GWS/jml

Attachments

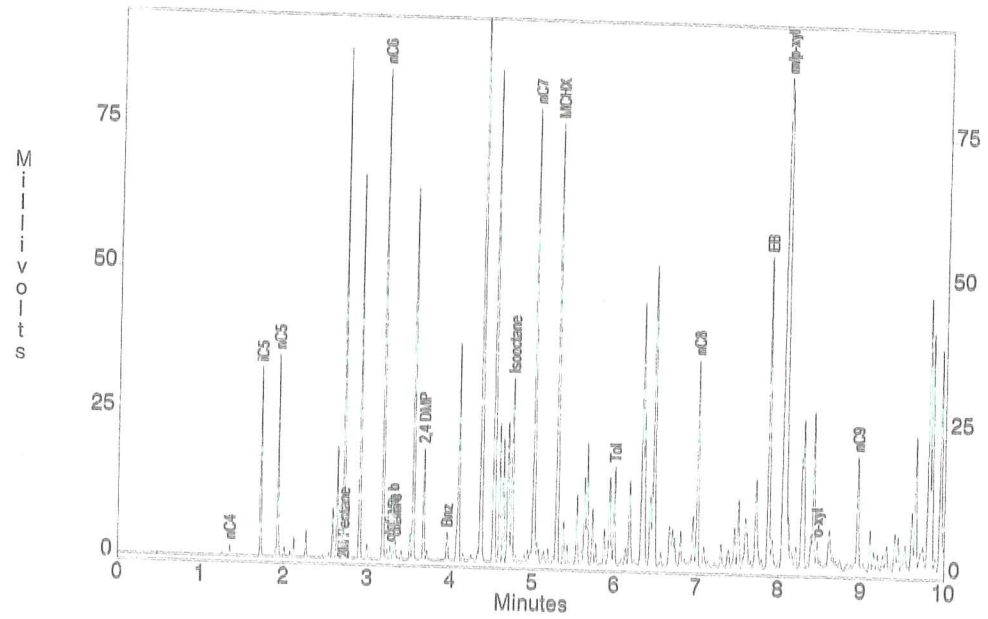
Amerada Hess Port Reading Refinery
Sample ID : TM-6
Acquired : May 03, 1999 13:51:30

c:\ezchrom\chrom\99067\tm-6 -- Channel A



Amerada Hess Port Reading Refinery
Sample ID : TM-6
Acquired : May 03, 1999 13:51:30

c:\ezchrom\chrom\99067\tm-6 -- Channel A



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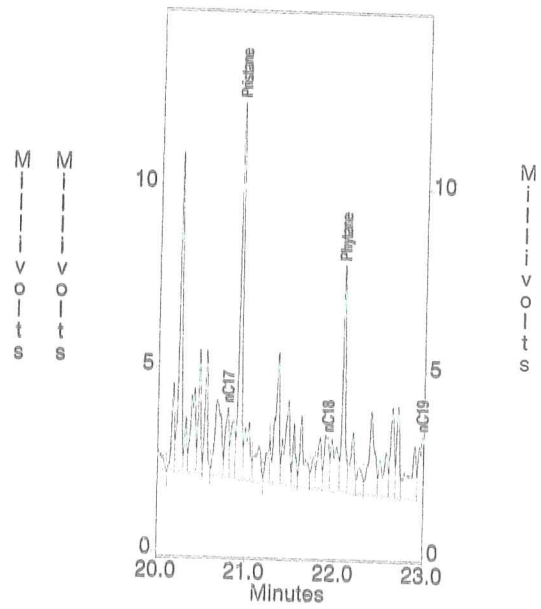

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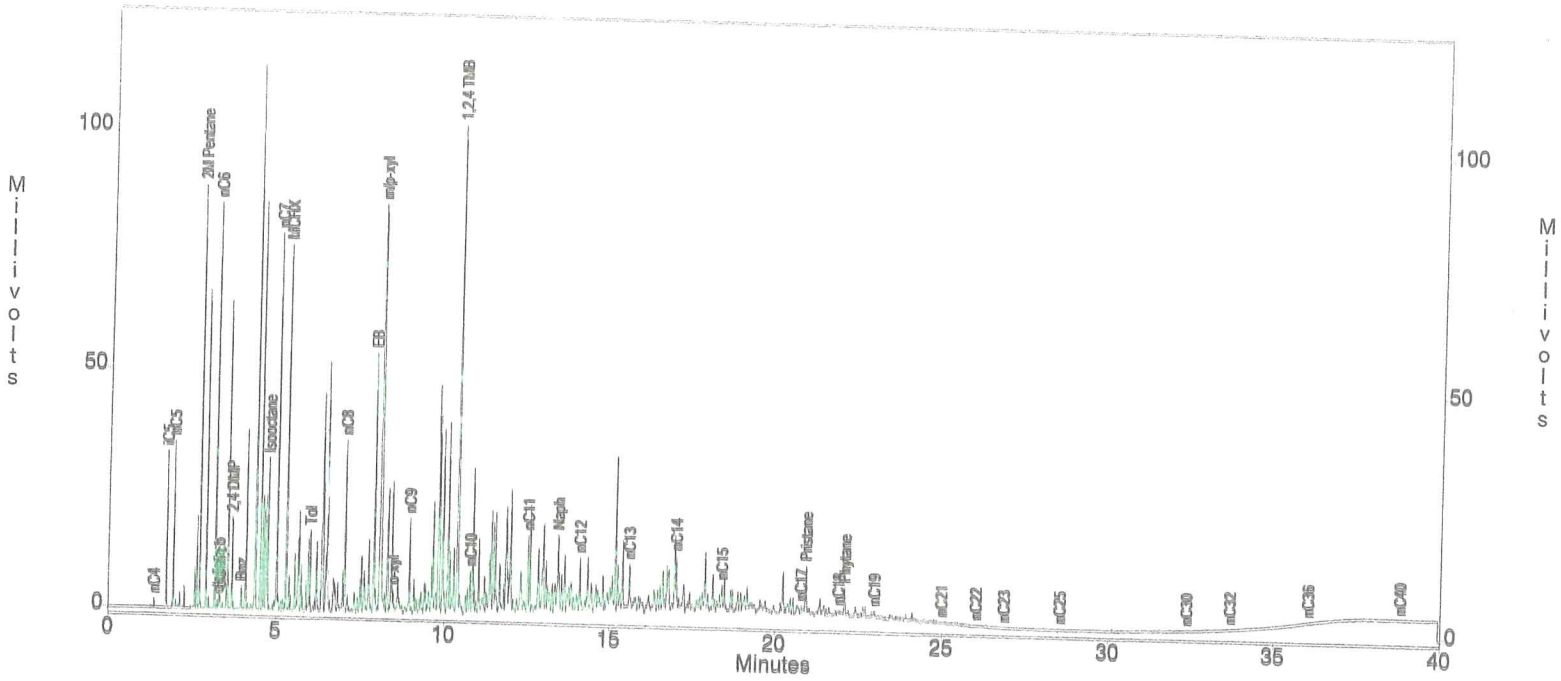
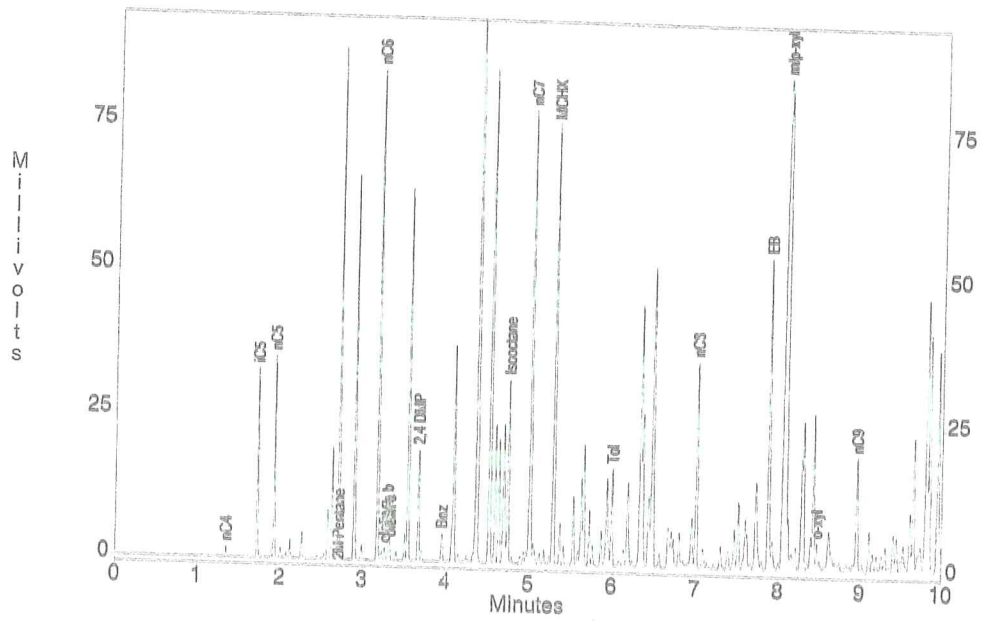


Channel A Results

Peak	Height
nC4	1727
iC5	32644
nC5	34815
MTBE	0
2M Pentane	88387
nC6	84697
olefin a	2082
olefin b	4736
olefin c	3062
2,4 DMP	19063
Bnz	4794
Isooctane	31709
nC7	78577
MCHX	76233
Tol	16773
nC8	35673
EB	53982
m/p-xyl	85083
o-xyl	4833
nC9	19663
1,2,4 TMB	101925
nC10	8775
nC11	15848
Naph	16014
nC12	11173
nC13	9465
nC14	11728
nC15	5486
nC16	0
nC17	1888
Pristane	10270
nC18	1423
Phytane	6153
nC19	1747
nC20	0
nC21	307
nC22	135
nC23	47
nC24	0
nC25	170
nC26	0
nC27	0
nC28	0
nC29	0
nC30	38
nC31	0
nC32	38
nC33	0
nC34	0
nC35	0
nC36	106
nC37	0
nC38	0
nC39	0
nC40	25

Amerada Hess Port Reading Refinery
Sample ID : TM-6
Acquired : May 03, 1999 13:51:30

c:\ezchrom\chrom\99067\tm-6 -- Channel A



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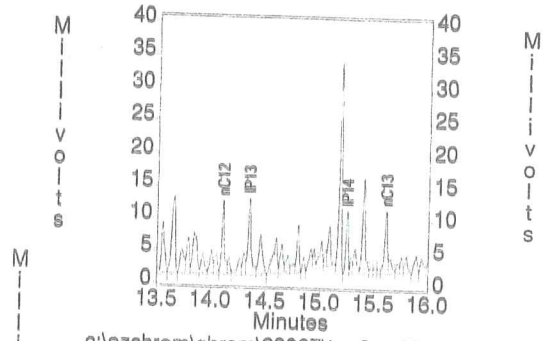

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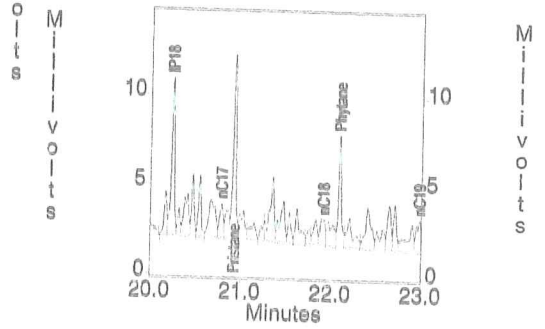

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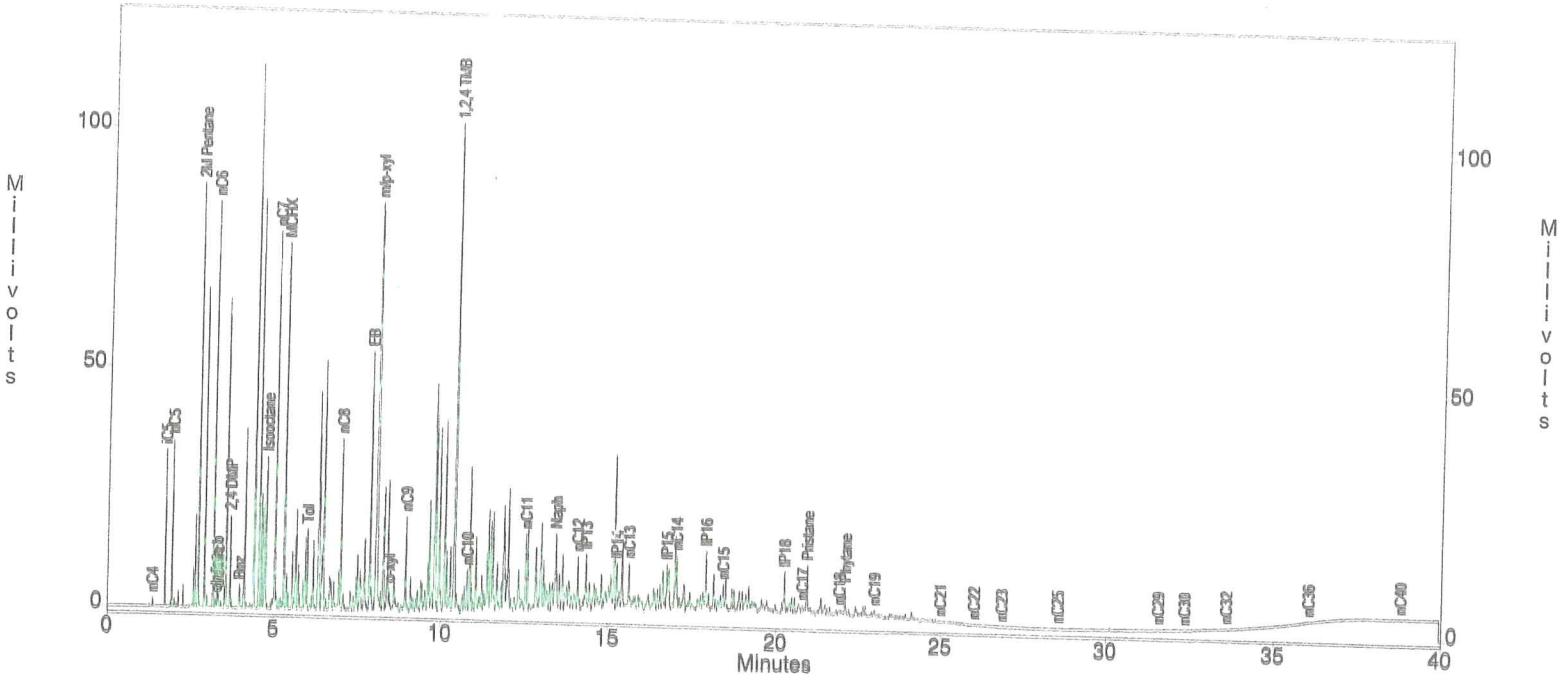
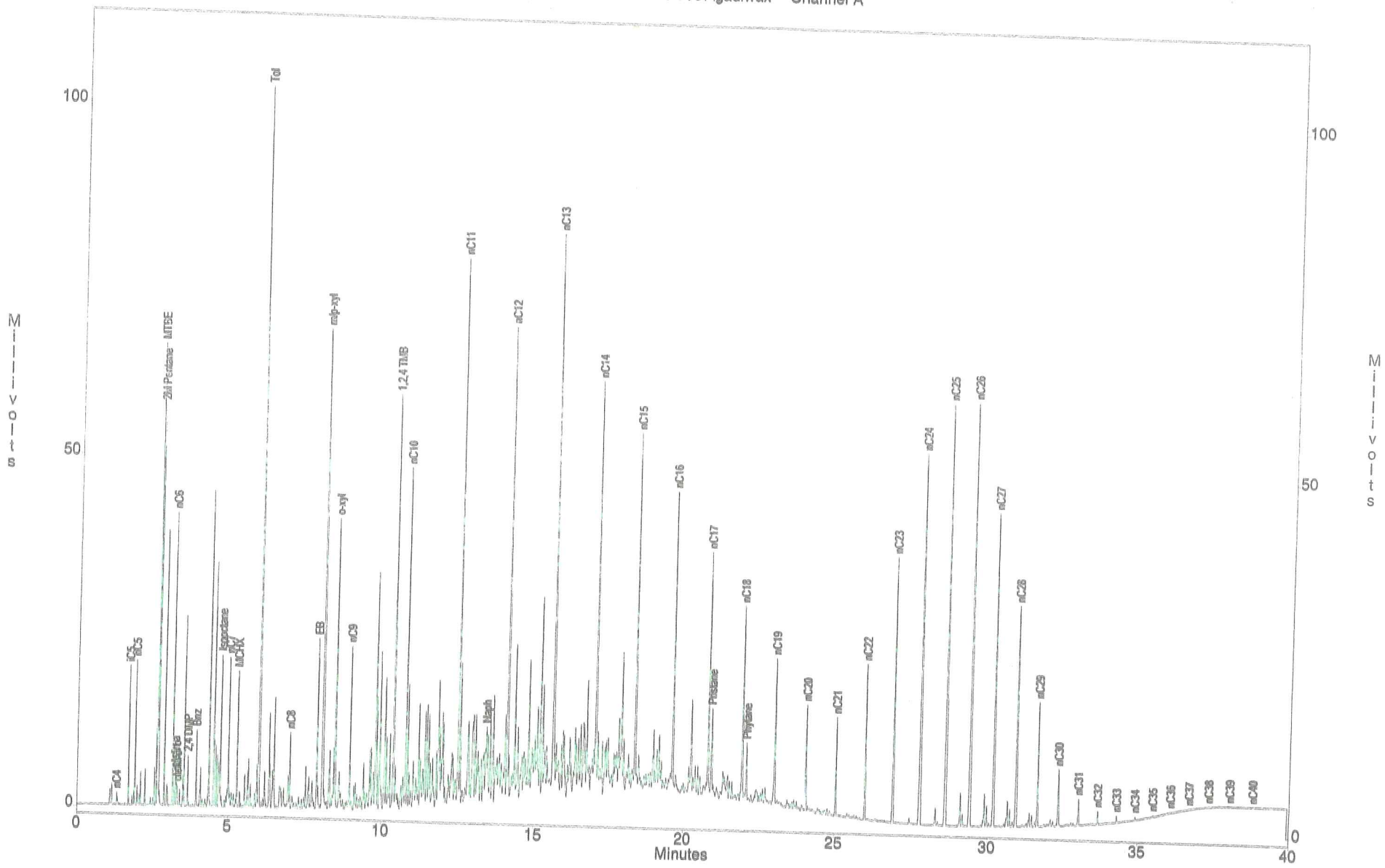


Channel A Results

Peak	Height
nC4	1727
iC5	32644
nC5	34815
MTBE	0
2M Pentane	88387
nC6	84697
olefin a	2082
olefin b	4736
olefin c	3062
2,4 DMP	19063
Bnz	4794
Isooctane	31709
nC7	78577
MCHX	76233
Tol	16773
nC8	35673
EB	53982
m/p-xyl	85083
o-xyl	4833
nC9	19663
1,2,4 TMB	101925
nC10	8775
nC11	15848
Naph	16014
nC12	11173
IP13	11640
IP14	9506
nC13	9465
IP15	9769
nC14	11728
IP16	12476
nC15	5486
nC16	0
IP18	8696
nC17	1888
Pristane	10270
nC18	1423
Phytane	6153
nC19	1747
nC20	0
nC21	307
nC22	135
nC23	47
nC24	0
nC25	170
nC26	0
nC27	0
nC28	0
nC29	190
nC30	38
nC31	0
nC32	44
nC33	0
nC34	0
nC35	0
nC36	106
nC37	0
nC38	0
nC39	0
nC40	25

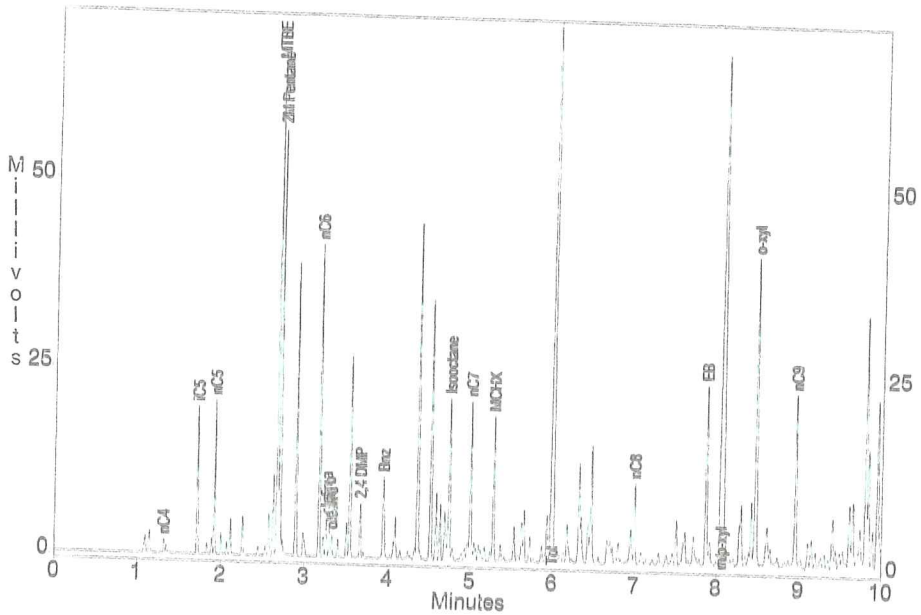
Amerada Hess Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : May 03, 1999 14:42:31

c:\ezchrom\chrom\99067\gadiwax -- Channel A

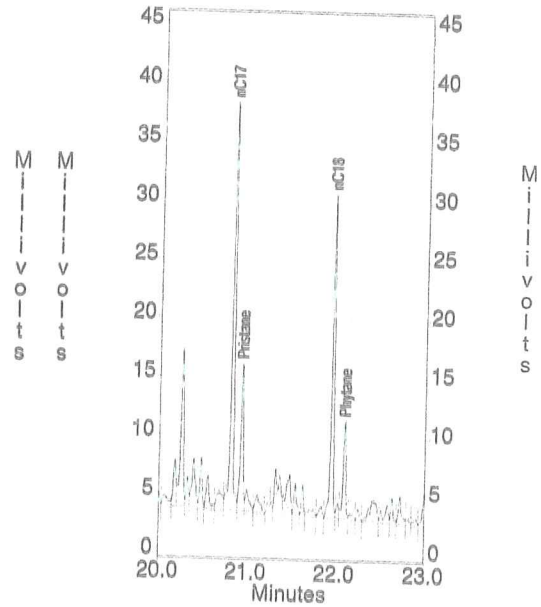


Amerada Hess Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : May 03, 1999 14:42:31

c:\ezchrom\chrom\99067\gadiwax -- Channel A



c:\ezchrom\chrom\99067\gadiwax -- Channel A



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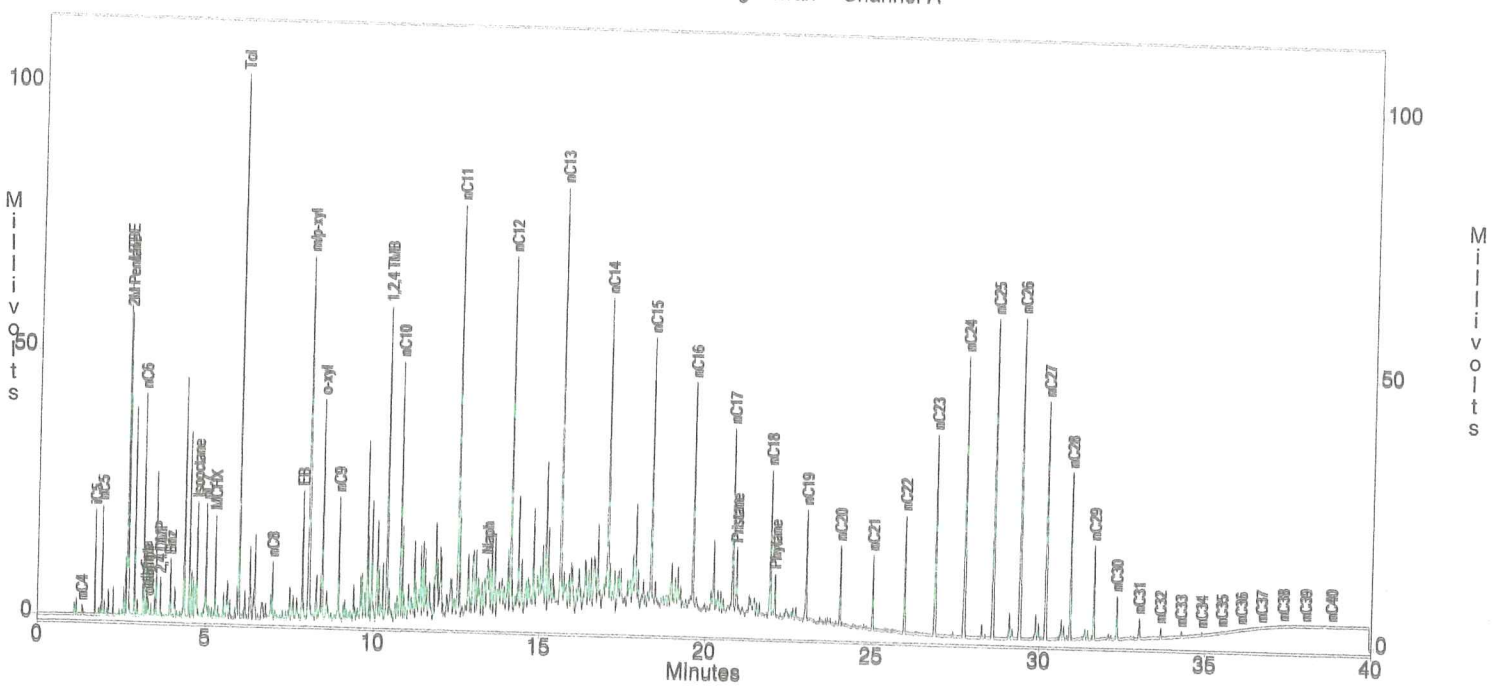
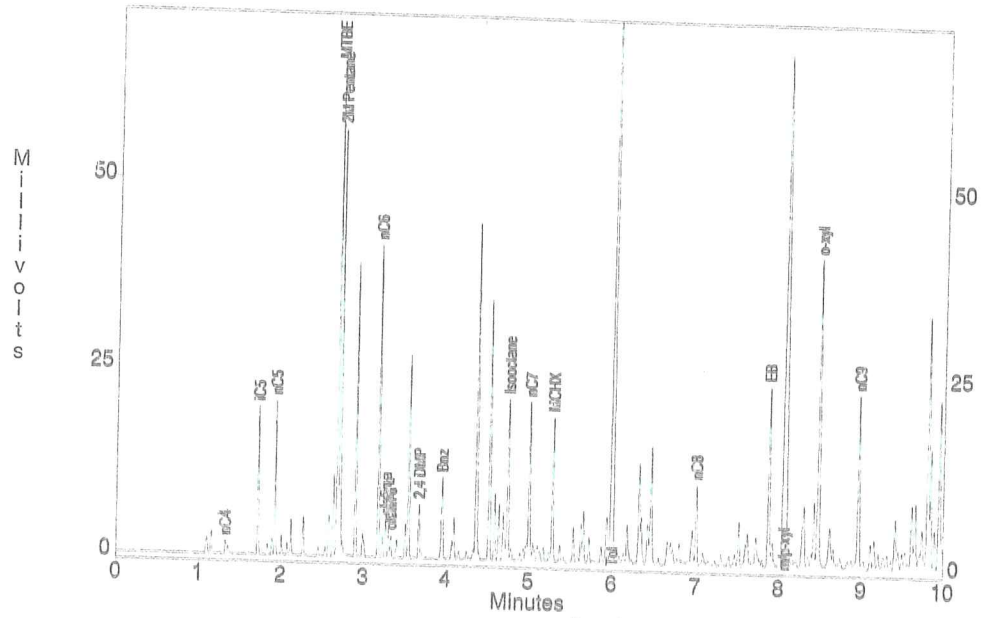


Channel A Results

Peak	Height
nC4	1694
iC5	19677
nC5	20484
MTBE	65600
2M Pentane	56936
nC6	41628
olefin a	4879
olefin b	4279
olefin c	2943
2,4 DMP	7148
Bnz	10772
Isooctane	21516
nC7	21176
MCHX	19291
Tol	102399
nC8	10737
EB	24102
m/p-xyl	68157
o-xyl	41299
nC9	23146
1,2,4 TMB	58781
nC10	48348
nC11	77306
Naph	10465
nC12	66931
nC13	79589
nC14	58191
nC15	50563
nC16	42572
nC17	34700
Pristane	12549
nC18	27509
Phytane	8275
nC19	20831
nC20	14892
nC21	13903
nC22	21971
nC23	37562
nC24	52534
nC25	59814
nC26	60044
nC27	44388
nC28	31152
nC29	17530
nC30	7825
nC31	3678
nC32	1791
nC33	910
nC34	440
nC35	203
nC36	105
nC37	54
nC38	58
nC39	34
nC40	28

Amerada Hess Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : May 03, 1999 14:42:31

c:\ezchrom\chrom\99067\gadiwax -- Channel A



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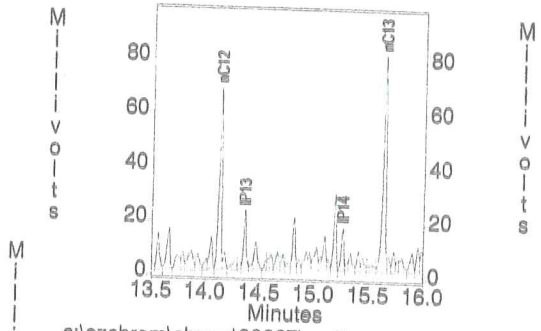

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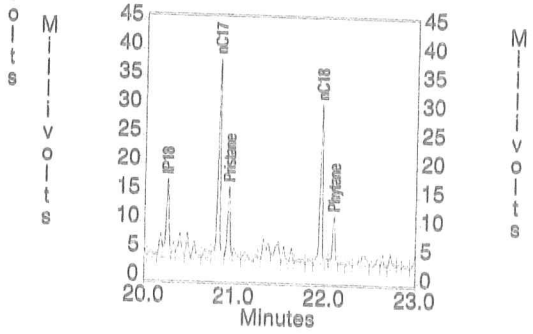

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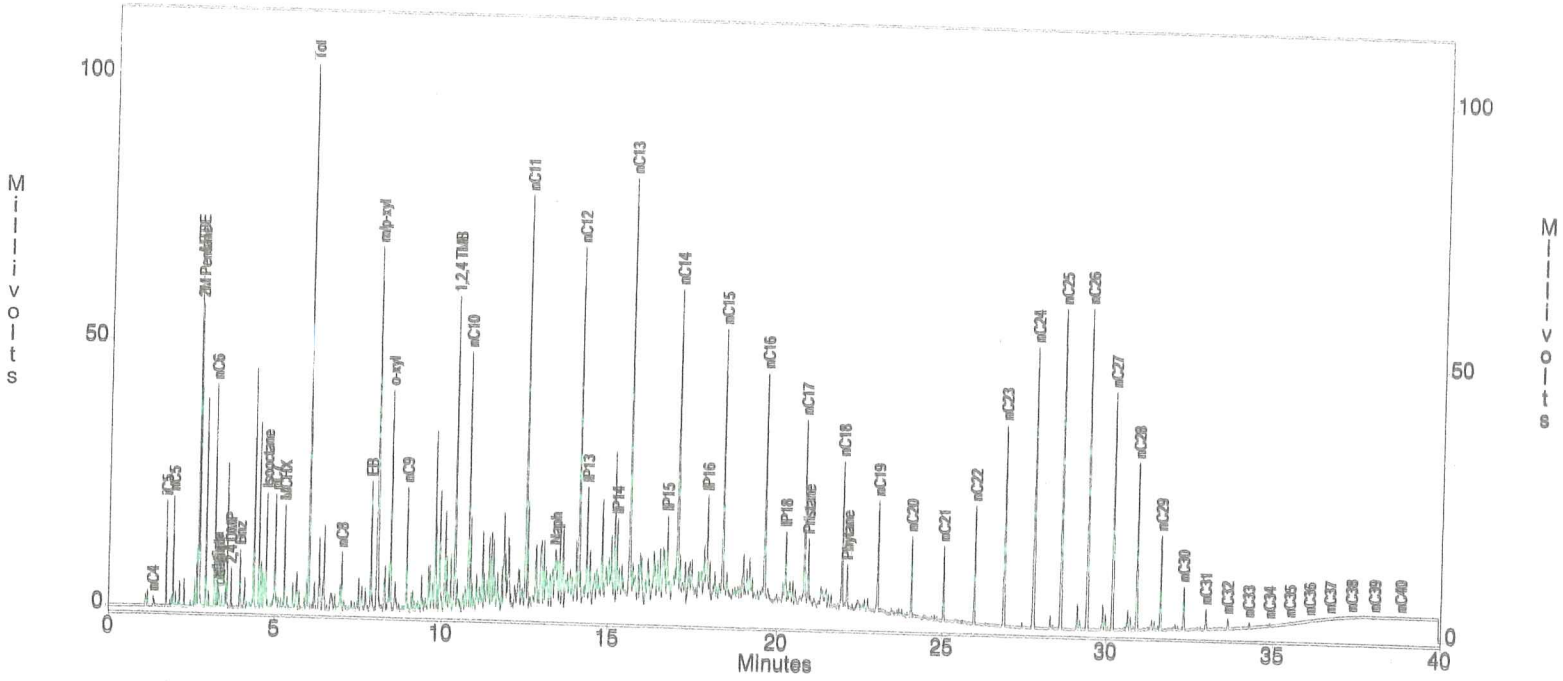

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nC13	79589
IP15	14667
nC14	58191
IP16	19650
nC15	50563
nC16	42572
IP18	13436
nC17	34700
Pristane	12549
nC18	27509
Phytane	8275
nC19	20831
nC20	14892
nC21	13903
nC22	21971
nC23	37562
nC24	52534
nC25	59814
nC26	60044
nC27	44388
nC28	31152
nC29	17530
nC30	7825
nC31	3678
nC32	1791
nC33	910
nC34	440
nC35	203
nC36	105
nC37	54
nC38	58
nC39	34
nC40	28

ACCUTEST

CHAIN OF CUSTODY

FRESH PONDS CORPORATE VILLAGE, BUILDING B
2235 ROUTE 130, DAYTON, NJ 08810
732-329-0200 FAX: 732-329-3499/3480

ACCUTEST JOB #:

ACCUTEST QUOTE #:

CLIENT INFORMATION

NAME: Amerada Hess Corporation
ADDRESS: One Hess Plaza
CITY: Woodbridge STATE: NJ ZIP: 07095
SEND REPORT TO: Brian Finnegan
PHONE #: (732) 750-7016

FACILITY INFORMATION

PROJECT NAME: Port Reading Refinery
LOCATION: TM-6
PROJECT NO.:
FAX #:

ANALYTICAL INFORMATION

Fingerprint (Hydrocarbon)
Age Analysis

MATRIX CODES

DW - DRINKING WATER
GW - GROUND WATER
WW - WASTE WATER
SO - SOIL
SL - SLUDGE
OI - OIL
LIQ - OTHER LIQUID
SOL - OTHER SOLID

ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	COLLECTION DATE	COLLECTION TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	PRESERVATION HCl	NaOH	HNO3	H2SO4	NONE	Fingerprint (Hydrocarbon)	Age Analysis	LAB USE ONLY
	TM-6	4/27/99	1030	JJ	Aq	1					X	X	X	

DATA TURNAROUND INFORMATION

- ☐ 21 DAYS STANDARD
- ☐ 14 DAYS *RUSH*
- ☐ 7 DAYS *EMERGENCY*
- ☐ OTHER _____

APPROVED BY: _____

21 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

DATA DELIVERABLE INFORMATION

- ☐ NJ REDUCED
- ☐ NJ Full
- ☐ FULL CLP
- ☐ DISK DELIVERABLE
- ☐ OTHER (SPECIFY) _____
- ☐ COMMERCIAL "A"
- ☐ COMMERCIAL "B"
- ☐ STATE FORMS

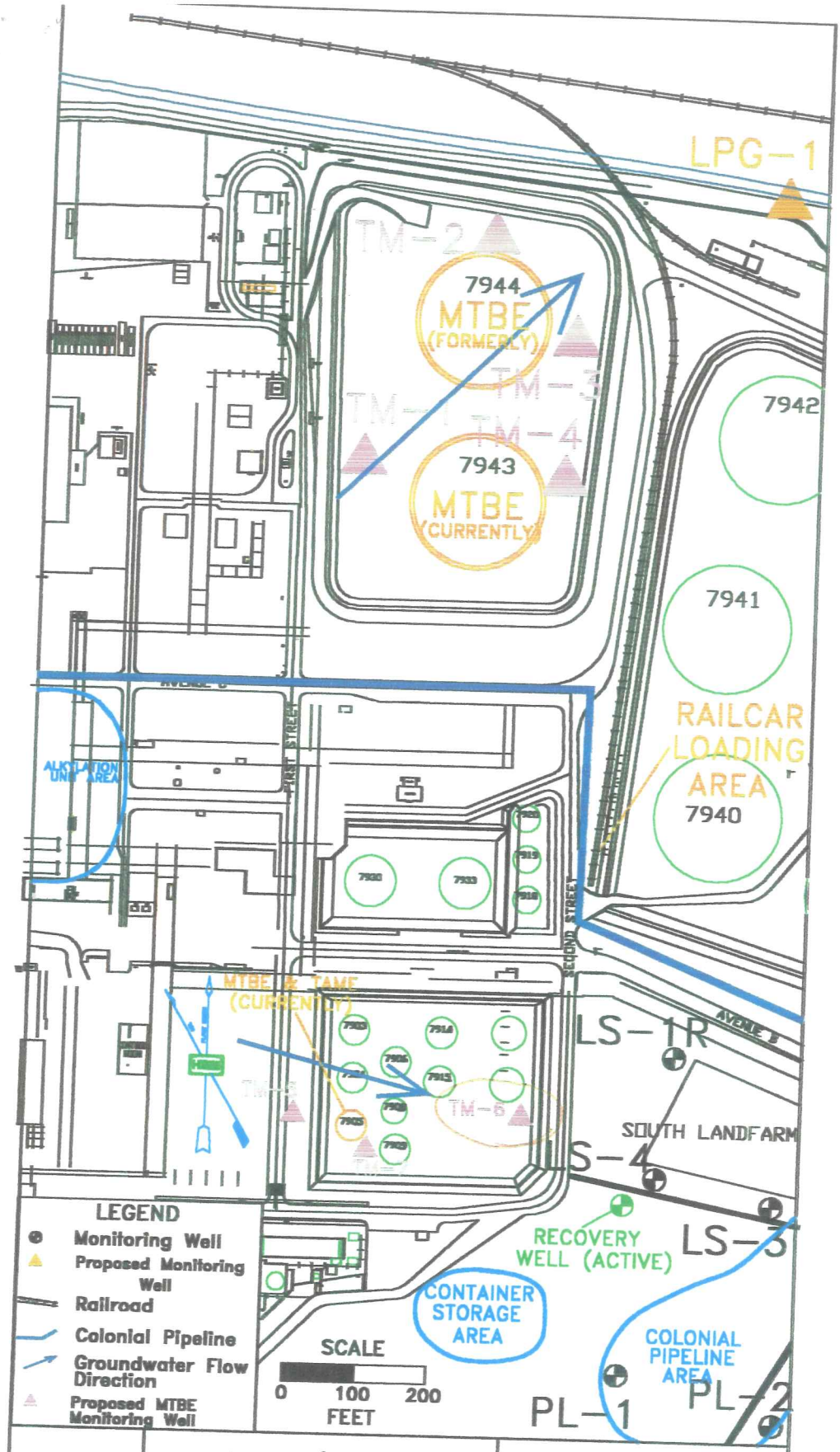
COMMENTS/REMARKS

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:
1.	5-3-99/1205	1. [illegible]	2.		2.
RELINQUISHED BY: 3.	DATE TIME:	RECEIVED BY: 3.	RELINQUISHED BY: 4.	DATE TIME:	RECEIVED BY: 4.
RELINQUISHED BY: 5.	DATE TIME:	RECEIVED BY: 5.			

SEAL #

PRESERVE WHERE APPLICABLE ☐ ON ICE ☐ TEMPERATURE _____ C



FWENC

MTBE/TAME MONITORING WELL LOCATIONS

FIGURE:	DRAWN BY:	DATE:	SCALE:
1	NW	10/28/98	AS SHOWN

AMERADA HESS CORP.
Port Reading Refinery
750 Cliff Rd.
Port Reading, NJ

S:\Figures\Ptreadng\mtbe.dwg

GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG
Specializing in Forensics of Petroleum Hydrocarbon Contamination of Groundwater and Soils

11619 S.Hudson Place
Tulsa, OK 74137-8532
envirodog@aol.com

(O) 918-581-3021
(H) 918-298-9849
Fax 918-581-3015

September 4, 2008

Bill Croeling
Enviro Trac
400 E. Corporate Court
South Plainfield, NJ 07080

RECEIVED
FEB 1

HESS PORT READING

Attached are the gas chromatograms (GC) for the petroleum sample, PL-5 (LPH), collected on 8/25/08 and received by us on 8/26/08 for our analytical and forensic examination.

The PL-5 (LPH) sample is a very highly degraded crude oil. The sample is entirely (100 percent) crude oil as no other refined petroleum products are present. This is confirmed by the fact that no nC6 olefins are present (they only are present in refined petroleum and not in crude oil).

The PL-5 2008 sample is nearly the same as the PL-5 sample collected in 1998 (see attached GC). The attached Isoprenoid Plot confirms that the 2008 and the 1998 samples are "genetically" related and, therefore, most likely the same material. No more recent (since 1998) releases of crude oil or petroleum products are present (the 1998 sample was already near maximum biodegradation, therefore, additional biodegradation was not possible as seen by the 2008 GC compared to the 1998 GC).

Gene W. Schmidt

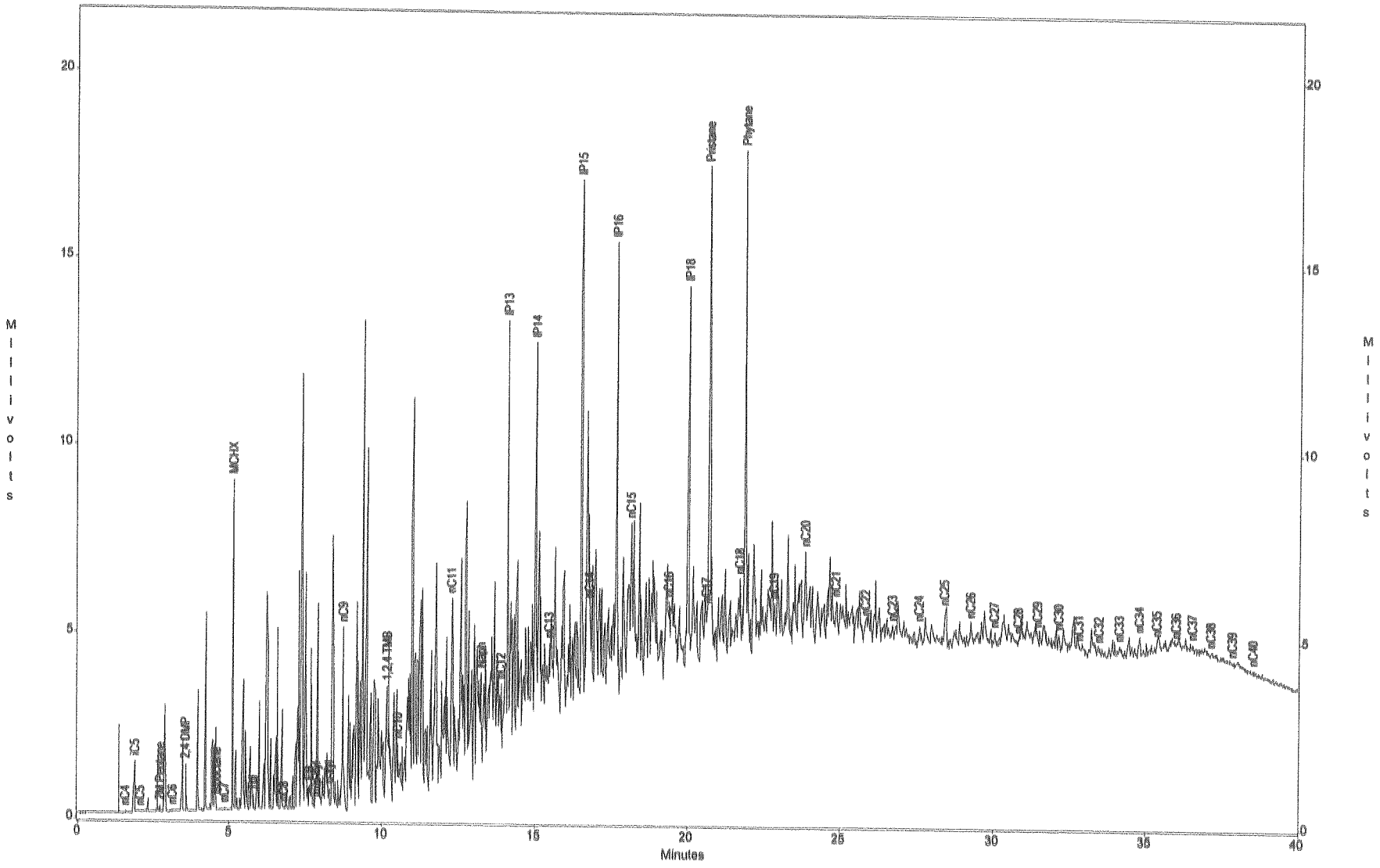
Gene W. Schmidt
GWS/trs

Attachments

Torkelson Geochemistry, Inc.

Hess Port Reading, 750 Cliff Road, Port Reading, NJ
Sample ID : PL-5 (LPH)
Acquired : Aug 27, 2008 14:56:16

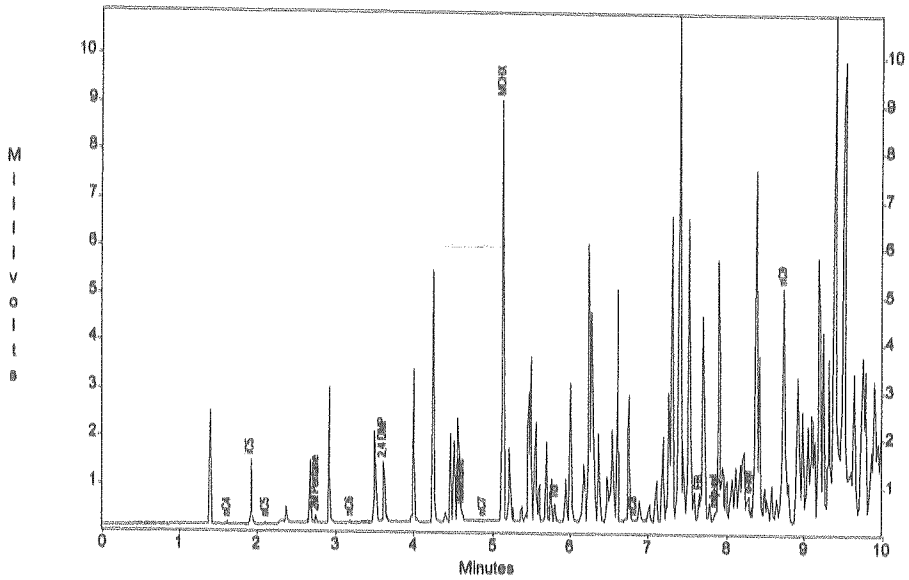
c:\ezchrom\chrom\08151\pl-5 -- Channel A



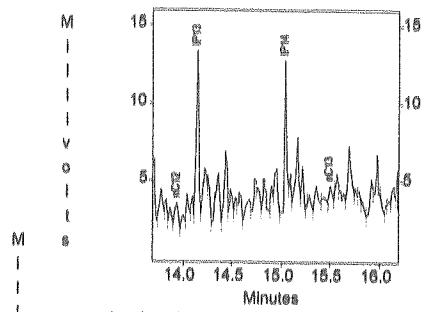
Torkelson Geochemistry, Inc.

Hess Port Reading, 750 Cliff Road, Port Reading, NJ
Sample ID : PL-5 (LPH)
Acquired : Aug 27, 2008 14:56:16

c:\ezchrom\chrom\08151\pl-5 -- Channel A



c:\ezchrom\chrom\08151\pl-5 -- Channel A



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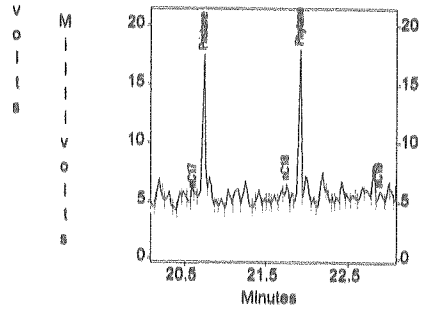

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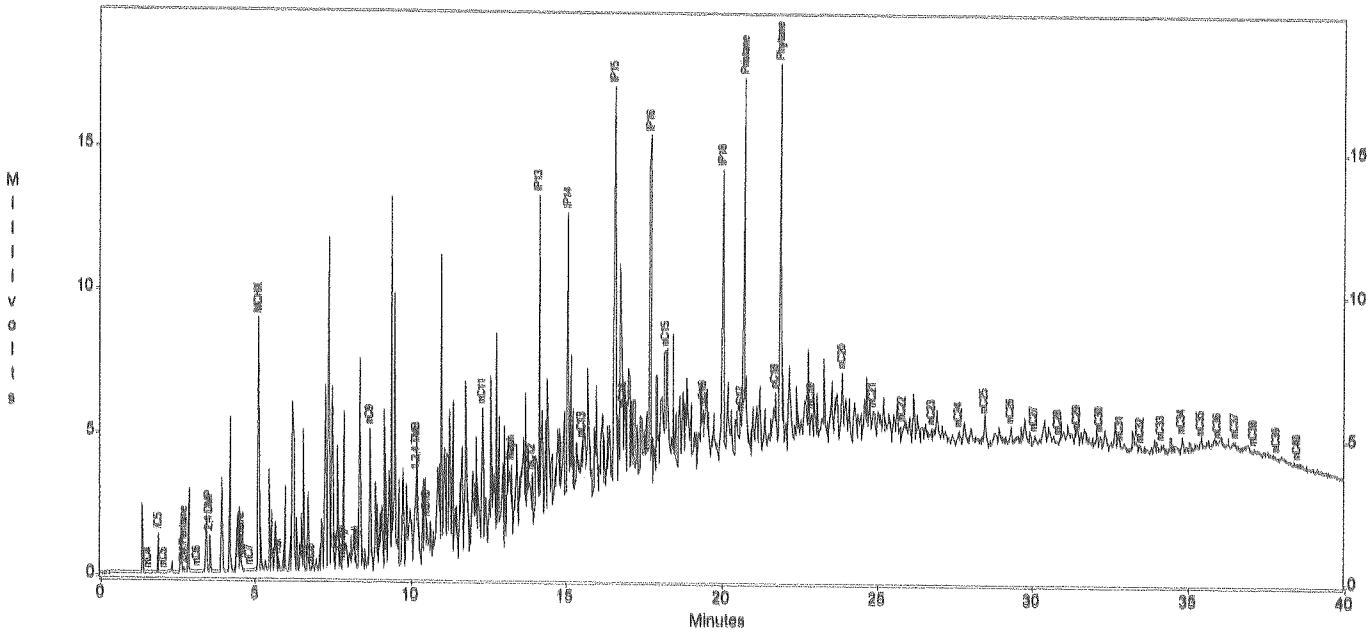


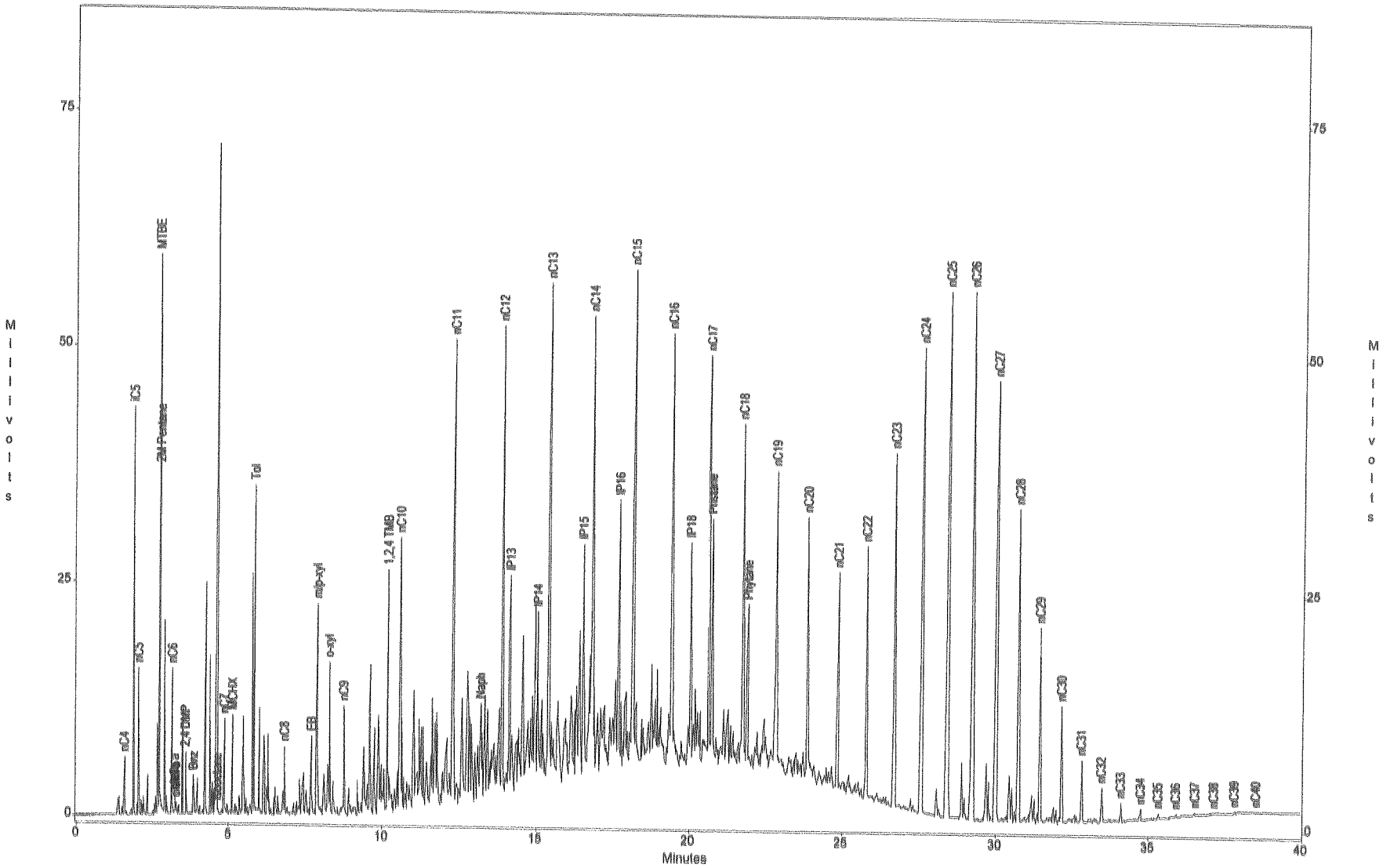
Channel A Results

Peak	Area	Height
nC4	18	18
IC5	1156	1358
nC5	16	10
MTBE	0	0
2M Pentane	163	148
nC6	16	11
olefin a	0	0
olefin b	0	0
olefin c	0	0
2,4 DMP	1317	1234
Bnz	0	0
Isooctane	320	260
nC7	30	24
MCHX	10751	8829
Tol	538	364
nC8	111	51
EB	934	627
m/p-Xyl	281	201
o-Xyl	1364	955
nC9	10960	4911
1,2,4 TMB	10104	3134
nC10	4468	1491
nC11	7477	4483
Naph	7636	2677
nC12	5118	1968
IP13	21390	11558
IP14	17601	10407
nC13	5400	2096
IP15	25315	13741
nC14	4628	2407
IP16	26770	12094
nC15	9516	4018
nC16	4258	2035
IP18	26373	10386
nC17	3669	1732
Pristane	37044	13536
nC18	7535	2382
Phytane	34596	13829
nC19	6782	1569
nC20	13180	2852
nC21	3372	1399
nC22	2108	790
nC23	1920	537
nC24	1745	529
nC25	5853	1011
nC26	1807	548
nC27	1014	324
nC28	286	206
nC29	504	391
nC30	746	272
nC31	68	84
nC32	127	126
nC33	333	160
nC34	139	168
nC35	137	149
nC36	55	49
nC37	274	136
nC38	93	72
nC39	74	76
nC40	156	103

Torkelson Geochemistry, Inc.

Hess Port Reading, 750 Cliff Road, Port Reading, NJ
Sample ID : Gas/Dies/Wax std
Acquired : Aug 27, 2008 10:40:18

c:\ezchrom\chrom\08151\gadiwax2.2 -- Channel A



Torkelson Geochemistry, Inc.

Hess Port Reading, 750 Cliff Road, Fort Reading, NJ
Sample ID : Gas/Dies/Wax std
Acquired : Aug 27, 2008 10:40:18

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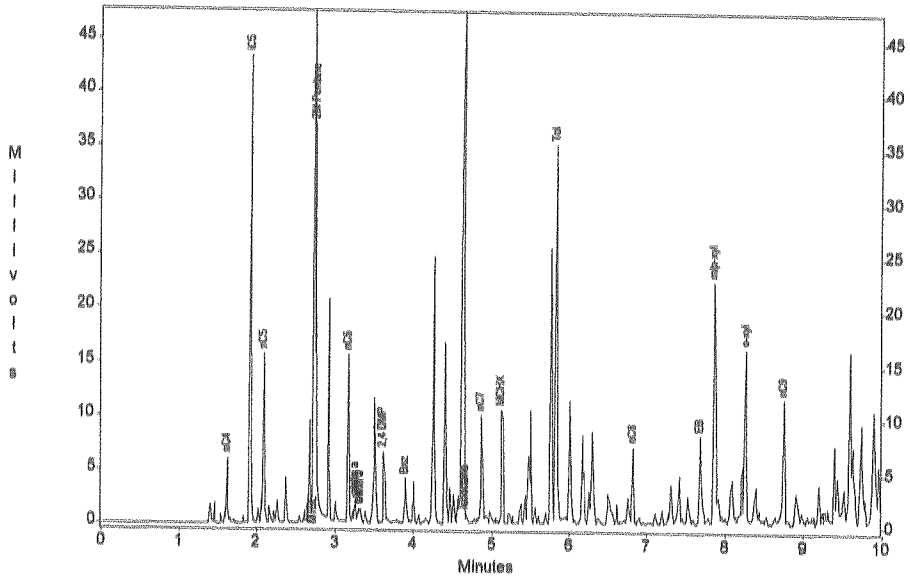
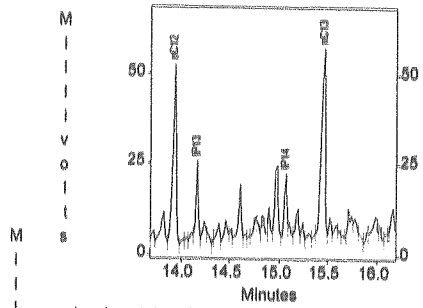
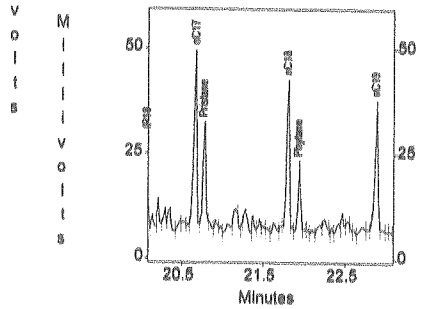


c:\ezchrom\chrom\08151\gadiwax2.2 -- Channel A



c:\ezchrom\chrom\08151\gadiwax2.2 -- Channel A



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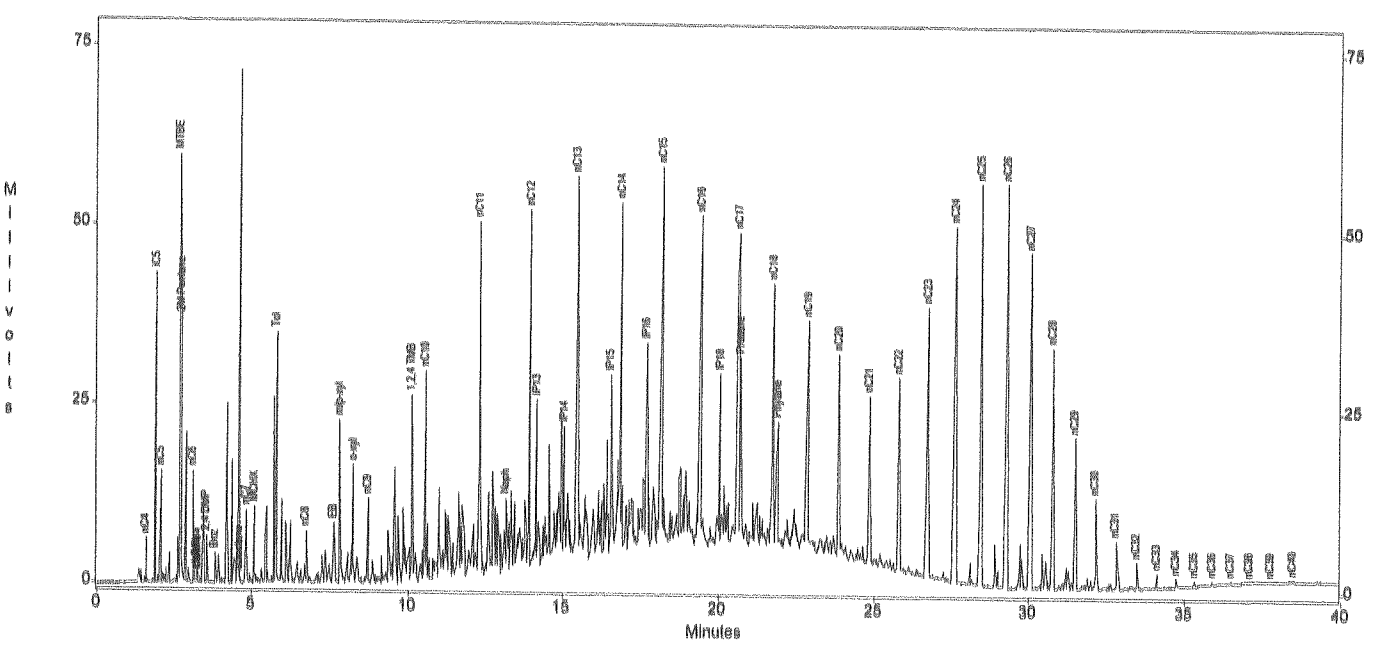


Channel A Results

Peak	Area	Height
nC4	4528	6069
iC5	33593	43368
nC5	13120	15508
MTBE	48226	59690
2M Pentane	39684	36968
nC6	16219	15631
olefin a	2515	2172
olefin b	1526	1335
olefin c	2003	1355
2,4 DMP	7073	6641
Bnz	6466	4168
Isooctane	1861	958
nC7	14136	10129
MCHX	13720	10616
Tol	50076	35123
nC8	9403	7170
EB	13886	8331
m/p-xyl	44216	22526
o-xyl	25505	16221
nC9	18206	11629
1,2,4 TMB	48822	25882
nC10	47695	29173
nC11	121988	49426
Naph	25395	10235
nC12	110624	49904
IP13	40430	23042
IP14	30343	18007
nC13	141412	52333
IP15	45598	24042
nC14	131064	47806
IP16	60236	28389
nC15	134264	52512
nC16	122019	46058
IP18	59278	24163
nC17	119358	44420
Pristane	73132	27145
nC18	97550	37958
Phytane	47294	18729
nC19	89638	33679
nC20	77458	29353
nC21	53615	24115
nC22	67174	27388
nC23	103089	37841
nC24	157456	49661
nC25	189571	56028
nC26	193509	56217
nC27	146328	46788
nC28	91255	33316
nC29	50527	20756
nC30	24390	12289
nC31	11394	6252
nC32	6719	3520
nC33	3624	1847
nC34	2055	1111
nC35	1136	581
nC36	717	332
nC37	346	161
nC38	252	99
nC39	219	63
nC40	119	44

CHAIN OF CUSTODY

1 of 1

ACCUTEST Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #:

Client / Reporting Information

Company Name: EnviroTrac
Address: 900 E Corporate Court
City: South Plainfield State: NJ Zip: 07080
Project Contact: Bill Correling E-mail:
Phone #: 908-757-1900
Samplers Name: Rich Delaruz

Project Information

Project Name: Hess Port Reading
Street: 750 Cliff Road
City: Port Reading State: NJ
Project #:
Fax #: 908-757-0017
Client Purchase Order #:

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	Requested Analysis	Matrix Codes
	TL-5 (LPH)		8/25/08	0800	RD	Oil	2	X	X LPH - Fingerprint	

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; LAB USE ONLY

Turnaround Time (Business Days)

- [x] Std. 15 Business Days
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [x] NJ Reduced
- [ ] NJ Full
- [ ] Other
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format

Commercial "A" = Results Only

Comments / Remarks

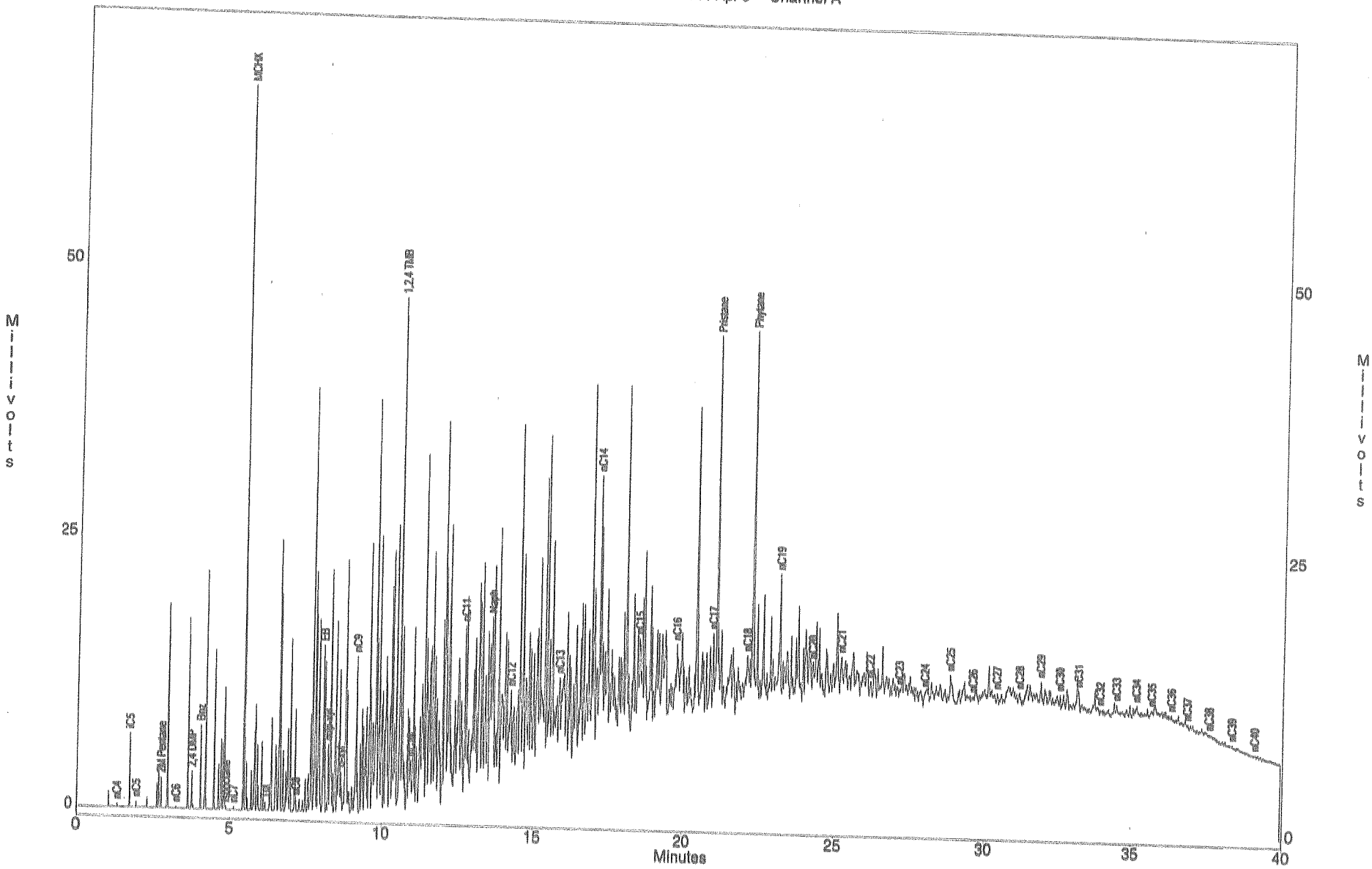
Call Bill Correling - 908-757-1900 w/ results.

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1 [signature]	8/25/08	1 Diane W. Schmidt	2 Diane W. Schmidt	8.26.08	2 [signature]
3	Date Time:	3	4	Date Time:	4
5	Date Time:	5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

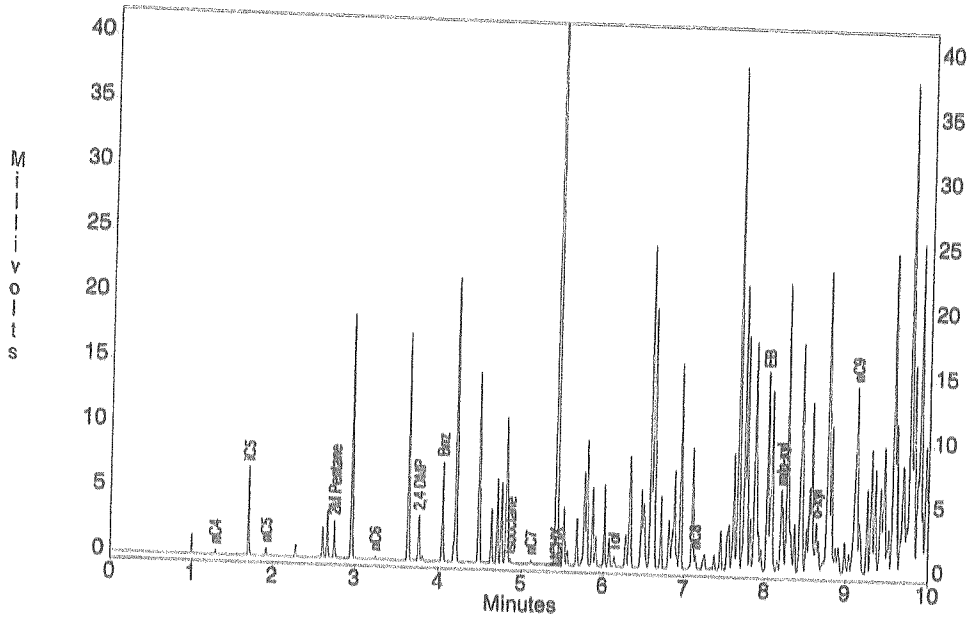
Amerada Hess Port Reading Refinery
Sample ID : PL-5
Acquired : Nov 10, 1998 12:08:23

c:\ezchrom\chrom\98111\pl-5 -- Channel A



Amerada Hess Port Reading Refinery
Sample ID : PL-5
Acquired : Nov 10, 1998 12:08:23

c:\ezchrom\chrom\98111\pl-5 -- Channel A



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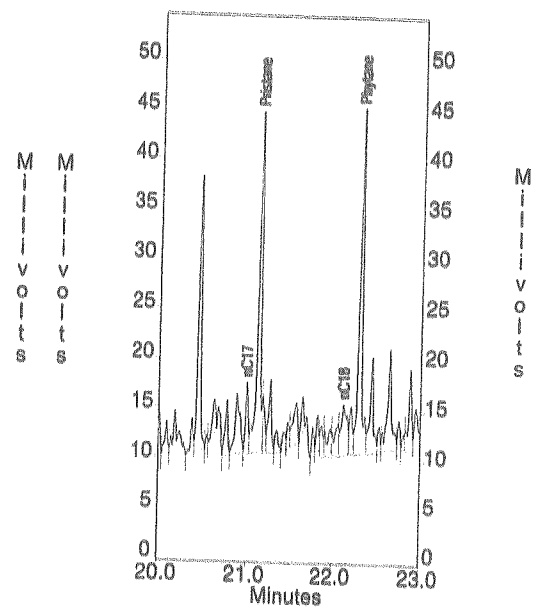
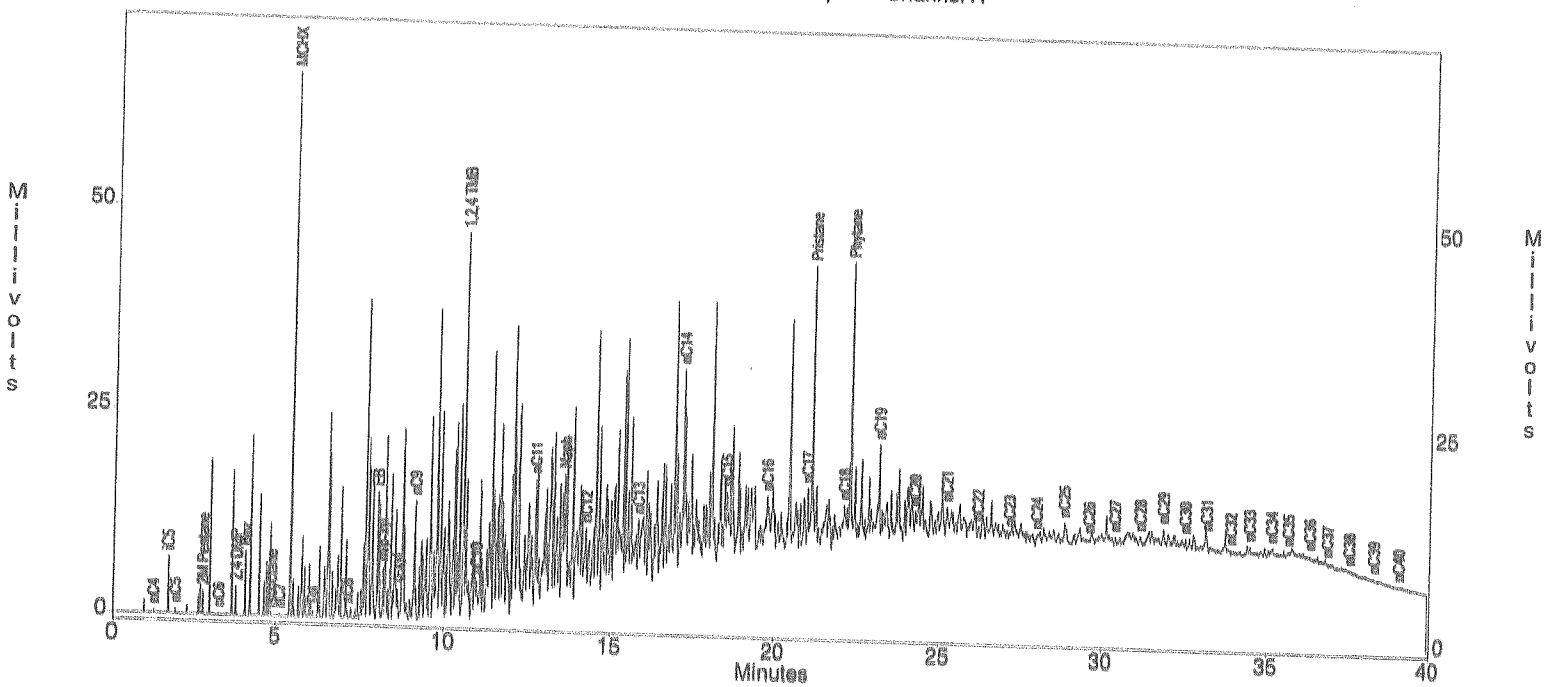
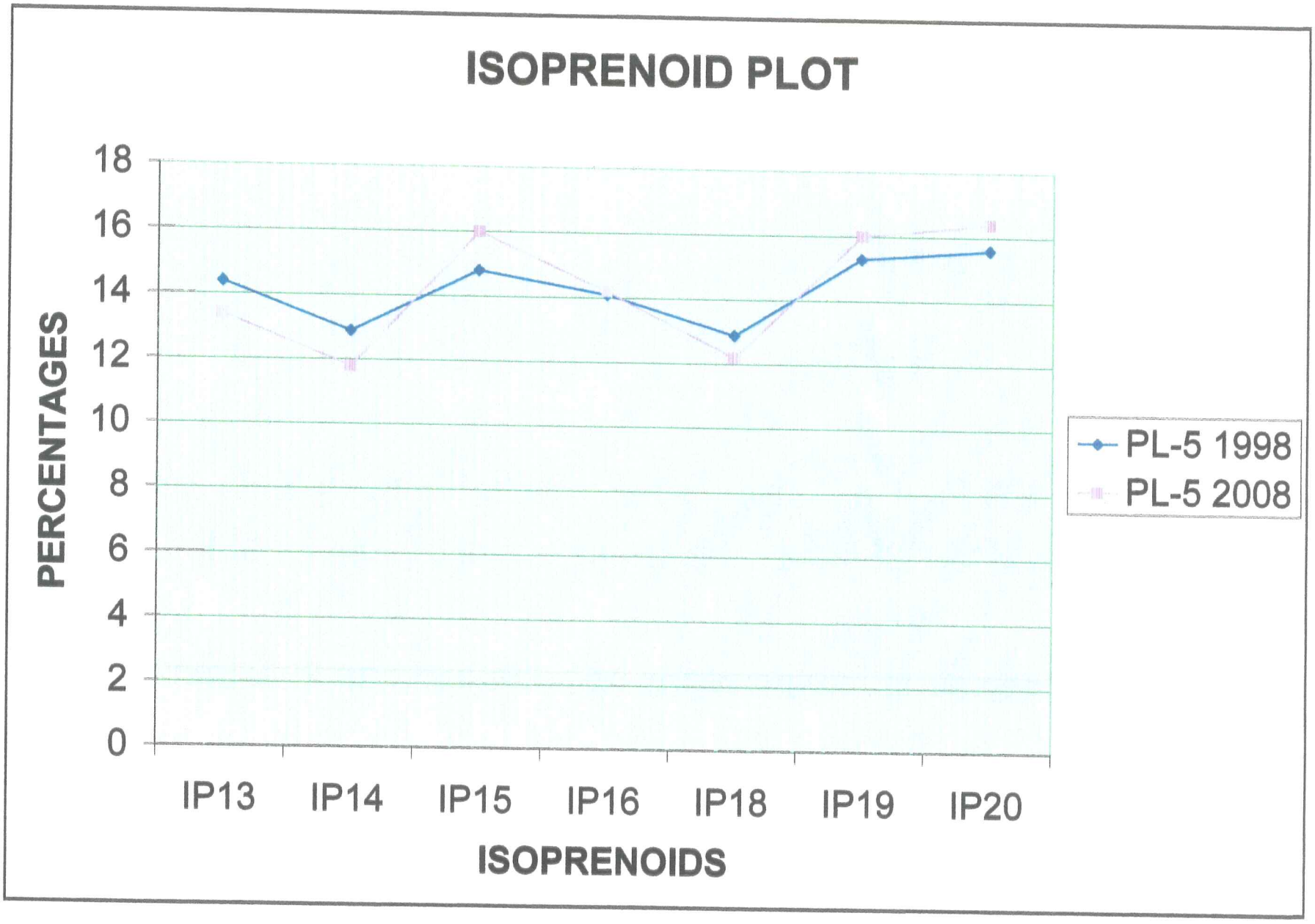


c:\ezchrom\chrom\98111\pl-5 -- Channel A



Channel A Results

Peak	Height
nC4	322
iC5	6844
nC5	575
MTBE	0
2M Pentane	2840
nC6	168
olefin a	0
olefin b	0
olefin c	0
2,4 DMP	3452
Bnz	7692
Isooctane	305
nC7	252
MCHX	66331
Tol	740
nC8	1099
EB	15342
m/p-xyl	6267
o-xyl	3817
nC9	14376
1,2,4 TMB	46942
nC10	4251
nC11	15627
Naph	15486
nC12	7974
nC13	6920
nC14	24701
nC15	7983
nC16	2804
nC17	7066
Pristane	34232
nC18	5037
Phytane	34589
nC19	11635
nC20	3337
nC21	3305
nC22	1294
nC23	833
nC24	1402
nC25	2824
nC26	842
nC27	1102
nC28	1111
nC29	1958
nC30	1135
nC31	653
nC32	390
nC33	788
nC34	678
nC35	509
nC36	434
nC37	269
nC38	211
nC39	258
nC40	217


ISOPRENOID PLOT
PERCENTAGES
18
16
14
12
10
8
6
4
2
0
IP13
IP14
IP15
IP16
IP18
IP19
IP20
ISOPRENOIDS
PL-5 1998
PL-5 2008

GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG
Specializing in Forensics of Petroleum Hydrocarbon
Contamination of Groundwater and Soils

11619 S.Hudson Place
Tulsa, OK 74137-8532
envirodog@aol.com

(O) 918-581-3021
(H) 918-298-9849
Fax 918-581-3015

RECEIVED

February 11, 2009

Bill Groeling
EnviroTrac
400 E. Corporate Court
South Plainfield, NJ 07080

HESS PORT READING REFINERY

Attached are the gas chromatograms (GC) for the petroleum sample, TF-1 collected on 2/4/09 and received by us on 2/5/09 for our analytical and forensic evaluation.

The TF-2 sample is a vey highly degraded crude oil. The sample is 100 percent crude oil as no other refined petroleum products are present. That conclusion is further confirmed in that no nC6 olefins are present (they are only found in refined petroleum).

The TF2 sample is the same type of sample as the PL-5 (1998) and the PL-5 (2008) samples (all crude oils) except the TF-2 crude is not "genetically" the same as the PL-5 samples. The crude oil in the TF-2 sample is from a different crude oil than the PL-5 samples (see attached GCs and the Isoprenoid Plot). The fact that the TF-5 crude oil is from a different crude than the PF-5 sample is further demonstrated by the pristane/phytane (P/P) ratios. The P/P ratios for the two PL-5 crude oils are both 0.98, whereas, the P/P ratio for the TF-2 crude oil is 1.50.

However, all three crude oils sample are very highly degraded (near maximum biodegradation) which implies all were released more than 20 years ago, which confirms that no recent releases occurred in the areas of the locations of TF-2 and PL-5 samples.

Gene W. Schmidt

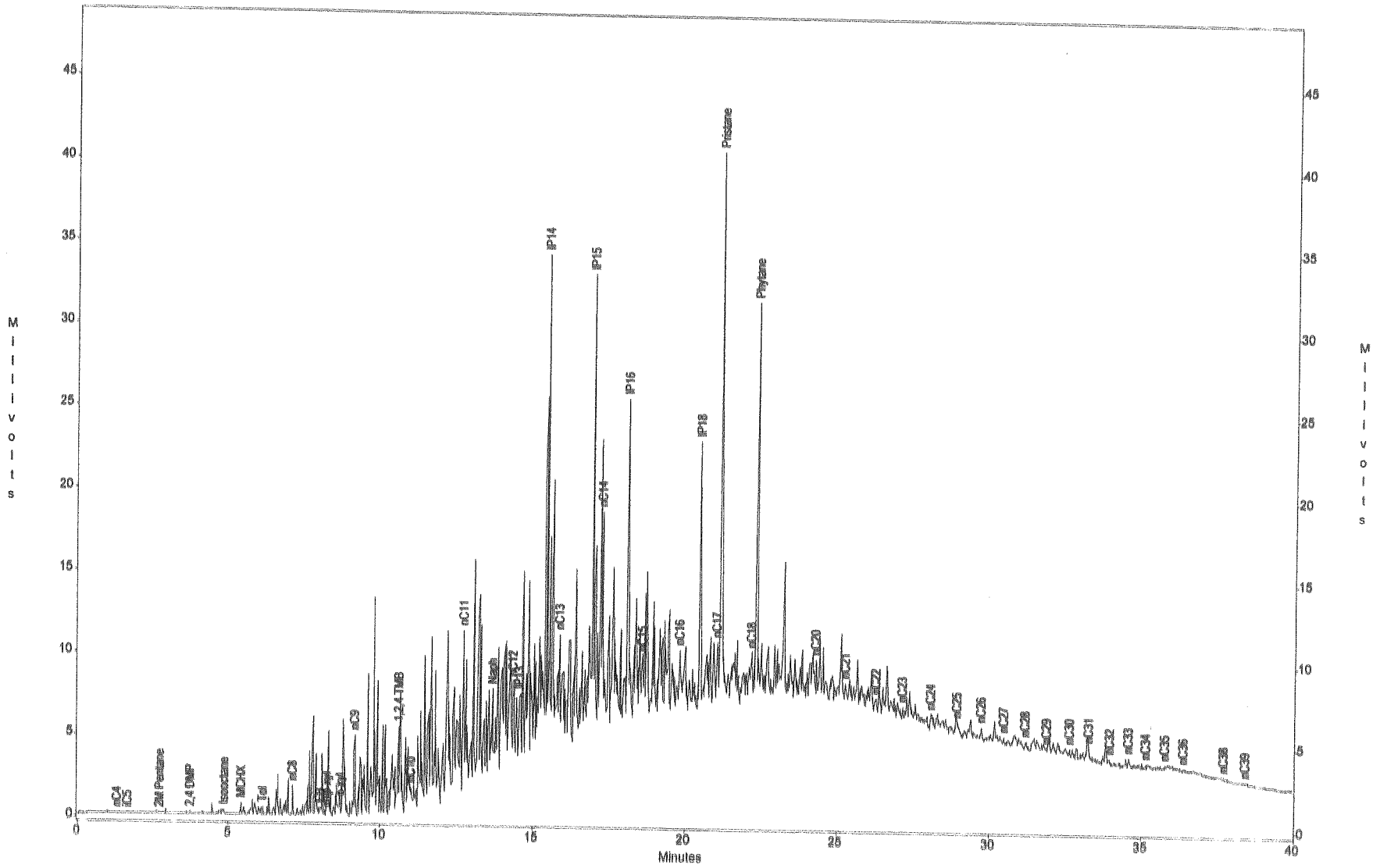
Gene W. Schmidt
GWS/trs

Attachments

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : TF-2
Acquired : Feb 10, 2009 14:19:54

c:\ezchrom\chrom\09023\tf-2 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : TF-2
Acquired : Feb 10, 2009 14:19:54

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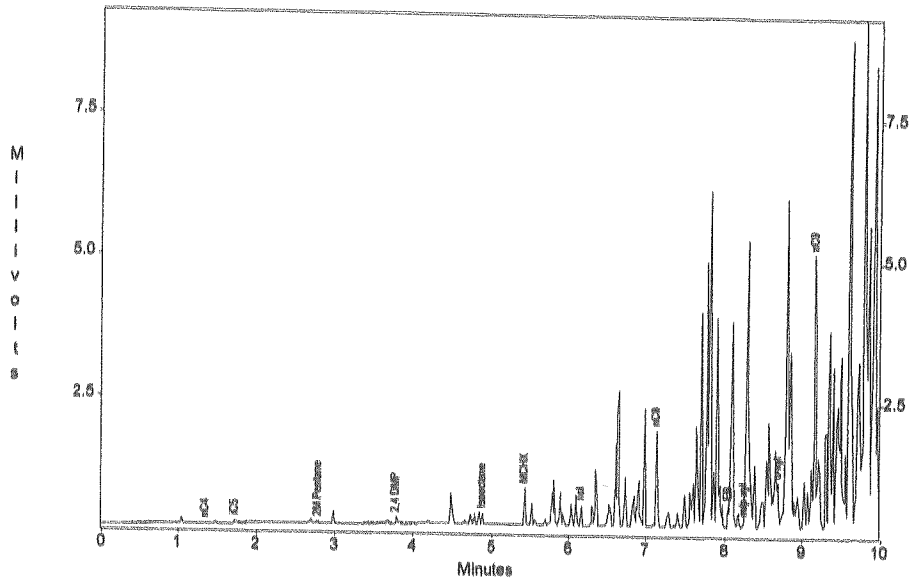

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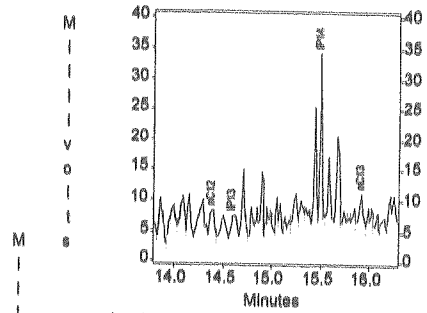

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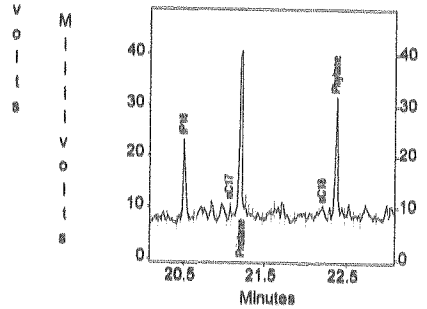

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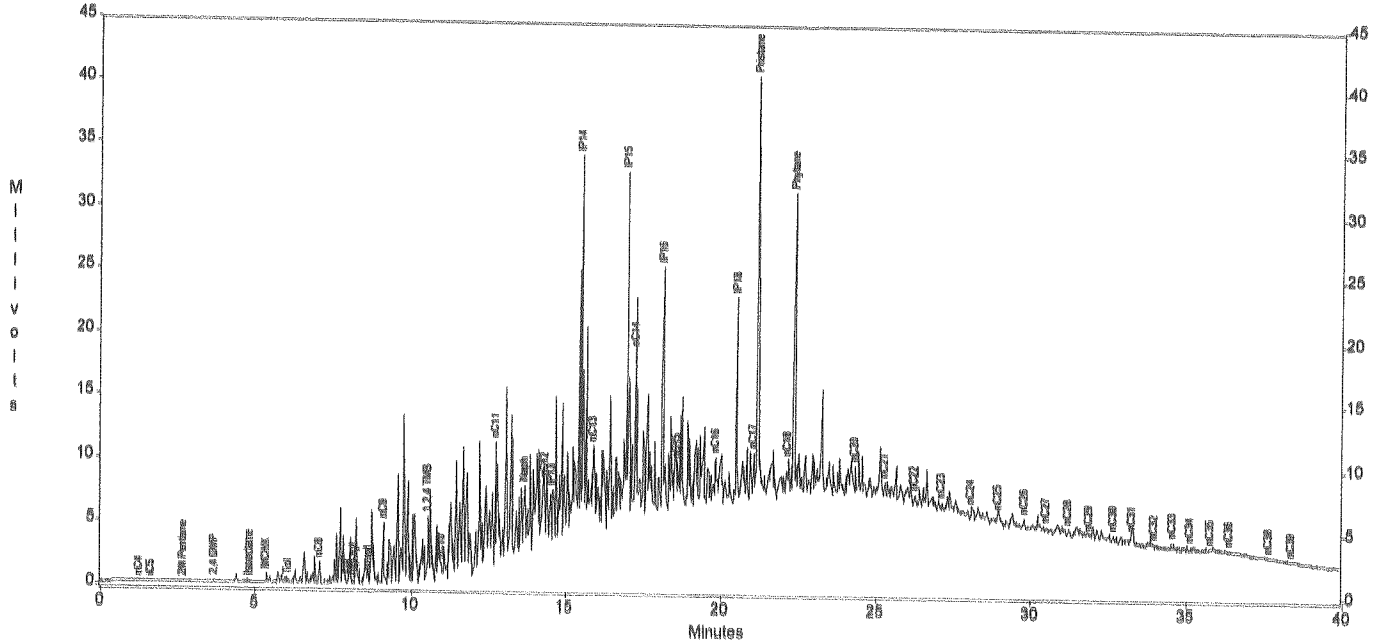


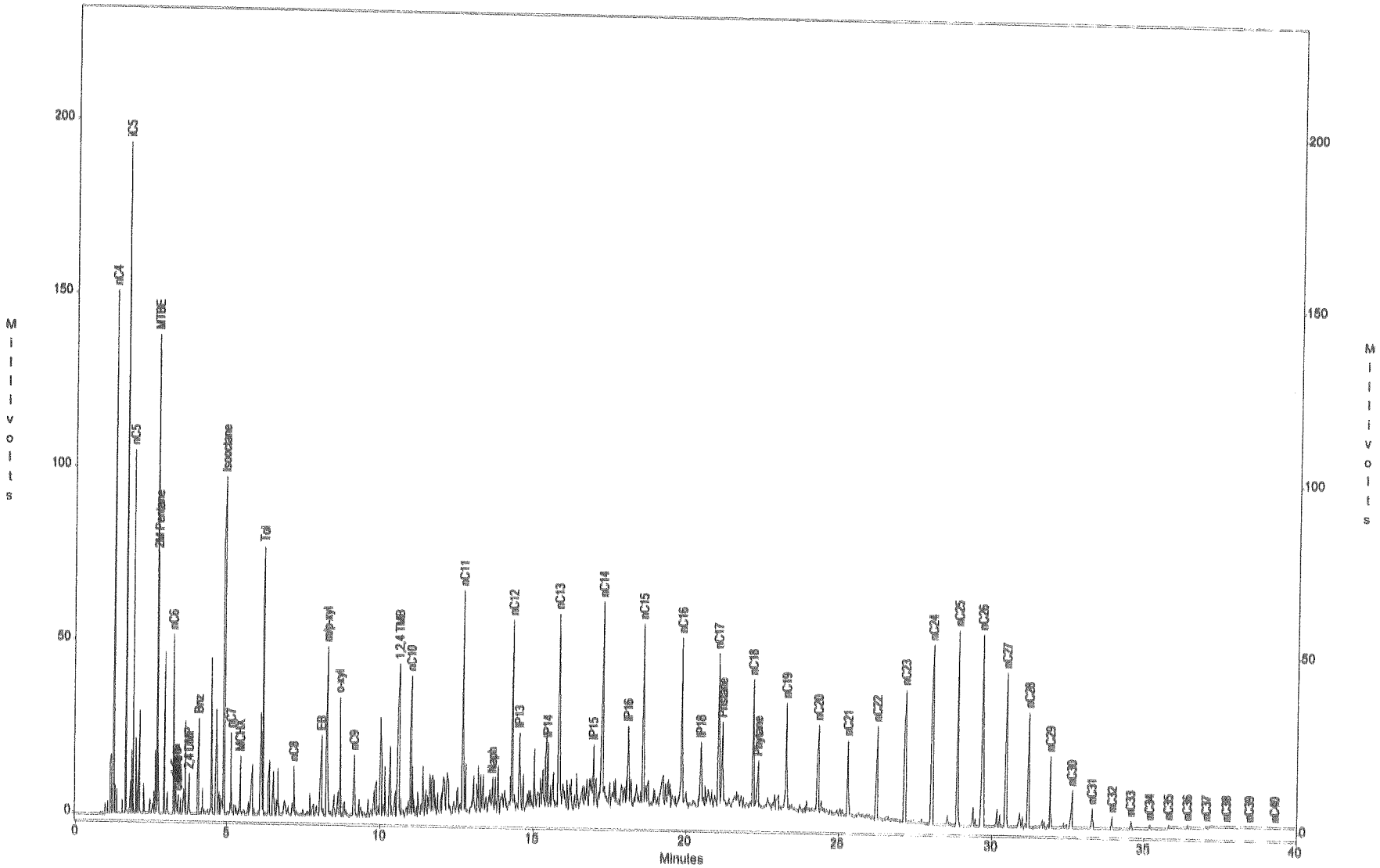
Channel A Results

Peak	Area	Height
nC4	15	7
iC5	61	34
nC5	0	0
MTBE	0	0
2M Pentane	24	18
nC6	0	0
olefin a	0	0
olefin b	0	0
olefin c	0	0
2,4 DMP	115	97
Bnz	0	0
Isooctane	239	200
nC7	0	0
MCHX	792	643
Tol	433	336
nC8	2407	1609
EB	535	391
m/p-xyl	74	117
o-xyl	846	706
nC9	7213	4812
1,2,4 TMB	10085	5170
nC10	3245	1217
nC11	18389	9854
Naph	11616	5470
nC12	24503	5358
IP13	18343	4392
IP14	46909	30200
nC13	22460	6964
IP15	47375	27600
nC14	31121	13058
IP16	44336	19210
nC15	10018	3535
nC16	15639	3392
IP18	35896	15880
nC17	7163	3628
Pristane	80678	33426
nC18	12749	3245
Phytane	53715	24401
nC19	0	0
nC20	7416	3100
nC21	8965	1915
nC22	3463	1150
nC23	1921	802
nC24	2216	893
nC25	1010	775
nC26	2903	775
nC27	921	375
nC28	921	440
nC29	199	62
nC30	643	348
nC31	284	28
nC32	161	82
nC33	1266	500
nC34	378	218
nC35	294	140
nC36	75	82
nC37	0	0
nC38	163	68
nC39	270	21
nC40	0	0

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Feb 10, 2009 12:03:22

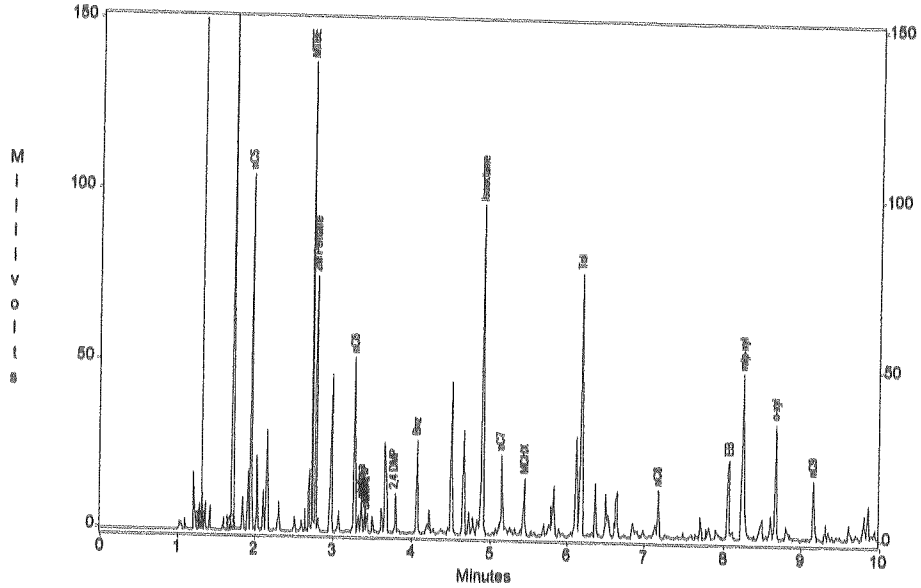
c:\ezchrom\chrom\09023\gadiwax2.2 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Feb 10, 2009 12:03:22

c:\ezchrom\chrom\09023\gadiwax2.2 -- Channel A



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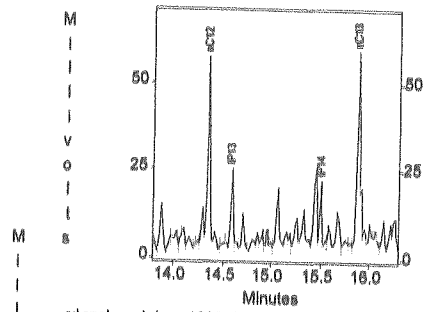

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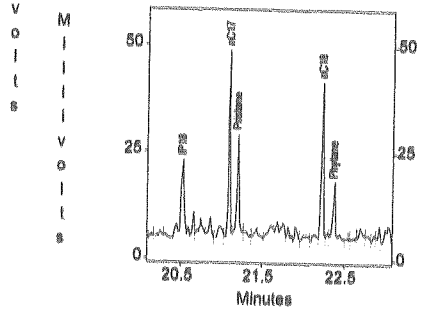

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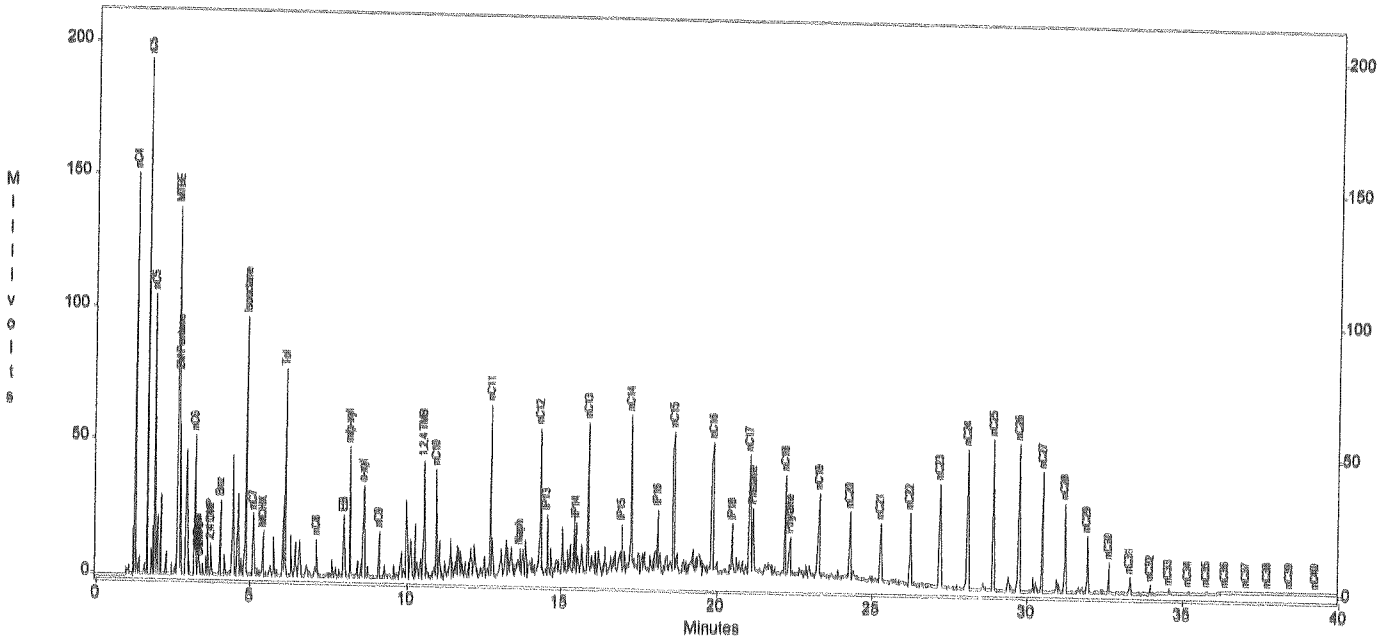


Channel A Results

Peak	Area	Height
nC4	78808	150317
iC5	129292	193392
nC5	72715	104804
MTBE	130320	137925
2M Pentane	66229	74921
nC6	50116	51609
olefin a	9107	8334
olefin b	7145	7610
olefin c	5763	5365
2,4 DMP	11733	11468
Bnz	34354	27604
Isooctane	134483	97080
nC7	28471	23380
MCHX	20461	16923
Tol	123939	77517
nC8	16969	14177
EB	30253	23102
m/p-xyl	105980	48691
o-xyl	47582	33992
nC9	26905	17536
1,2,4 TMB	72193	43857
nC10	58979	40373
nC11	105644	64199
Naph	18816	8664
nC12	96608	55306
IP13	42667	23154
IP14	28244	19578
nC13	104879	56607
IP15	38330	18213
nC14	111530	59406
IP16	44661	22408
nC15	101911	52724
nC16	103173	48597
IP18	47271	18230
nC17	83155	44044
Pristane	54446	24224
nC18	66149	36739
Phytane	28518	13211
nC19	72279	30988
nC20	46942	25444
nC21	38549	21942
nC22	47198	26867
nC23	75475	37860
nC24	114071	51451
nC25	134979	55974
nC26	136532	55028
nC27	104032	44300
nC28	65809	32900
nC29	36584	20466
nC30	16770	10495
nC31	9754	5696
nC32	5147	3134
nC33	2847	1746
nC34	1567	915
nC35	830	512
nC36	516	271
nC37	313	152
nC38	306	92
nC39	184	57
nC40	144	48

ACCUTEST Laboratories

CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job #

Client / Reporting Information

Company Name: EnviroTrac
Street Address: 400 Corporate Ct.
City / State / Zip: South Plainfield, NJ 07080
Project Contact / E-mail: Bill Groeling
Phone #: 908-757-1900 / Fax #:
Sampler(s) Name(s) / Phone #: Phil Allegro

Project Information

Project Name: Hess - Port Reading Refinery
Street: 750 Cliff Rd.
City / State: Port Reading, NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Fingerprint

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Fingerprint	LAB USE ONLY
	TF-2		2/4/09	1100	PA	01	3	2				1				✓	

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 10 Business Days (by Contract only)
- [ ] 10 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

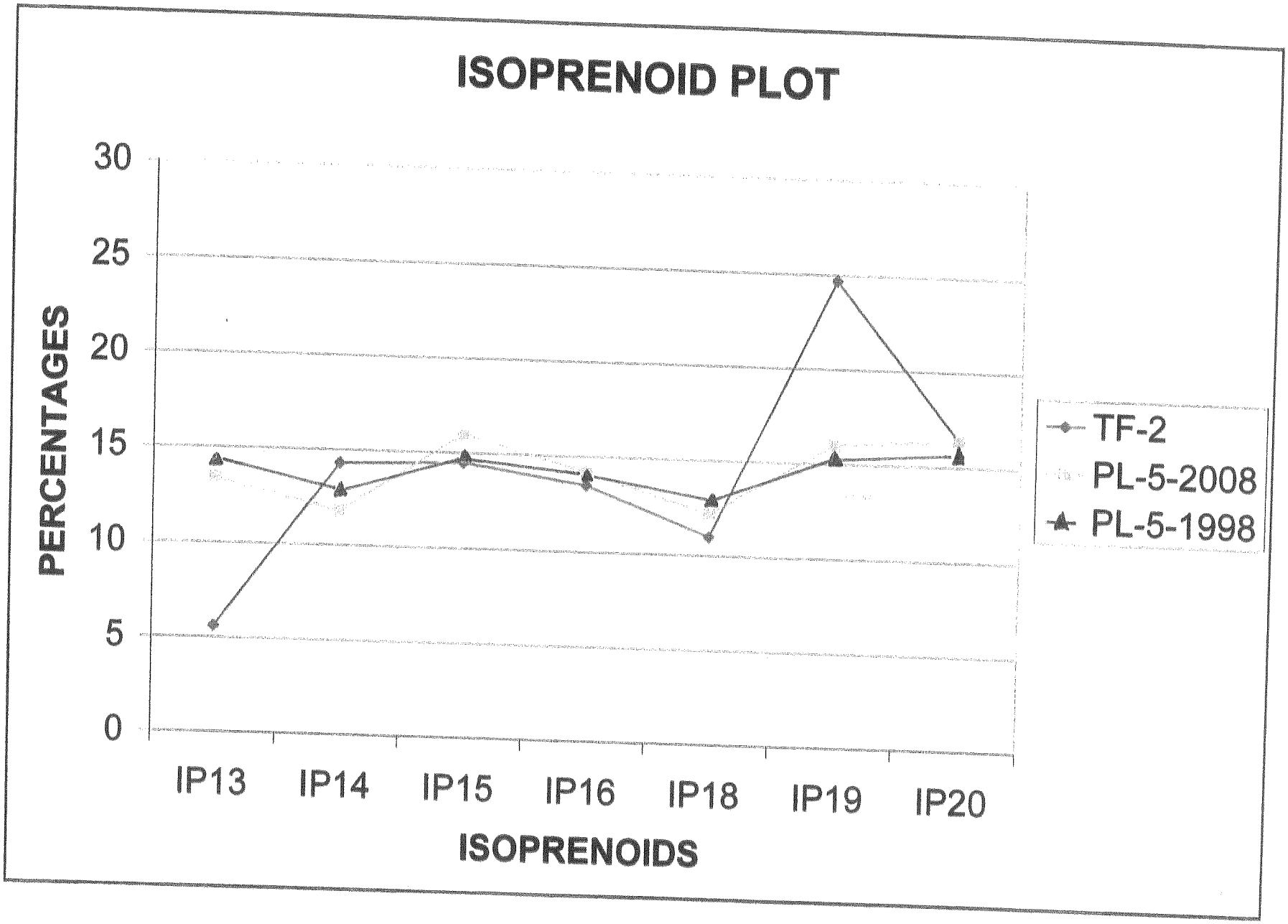
Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	2/4/09	1 Teresa W. Schmidt	2 Teresa W. Schmidt	11:45P 2.5.09	2 Bruce Torkelson
3		3	4		4
5		5			

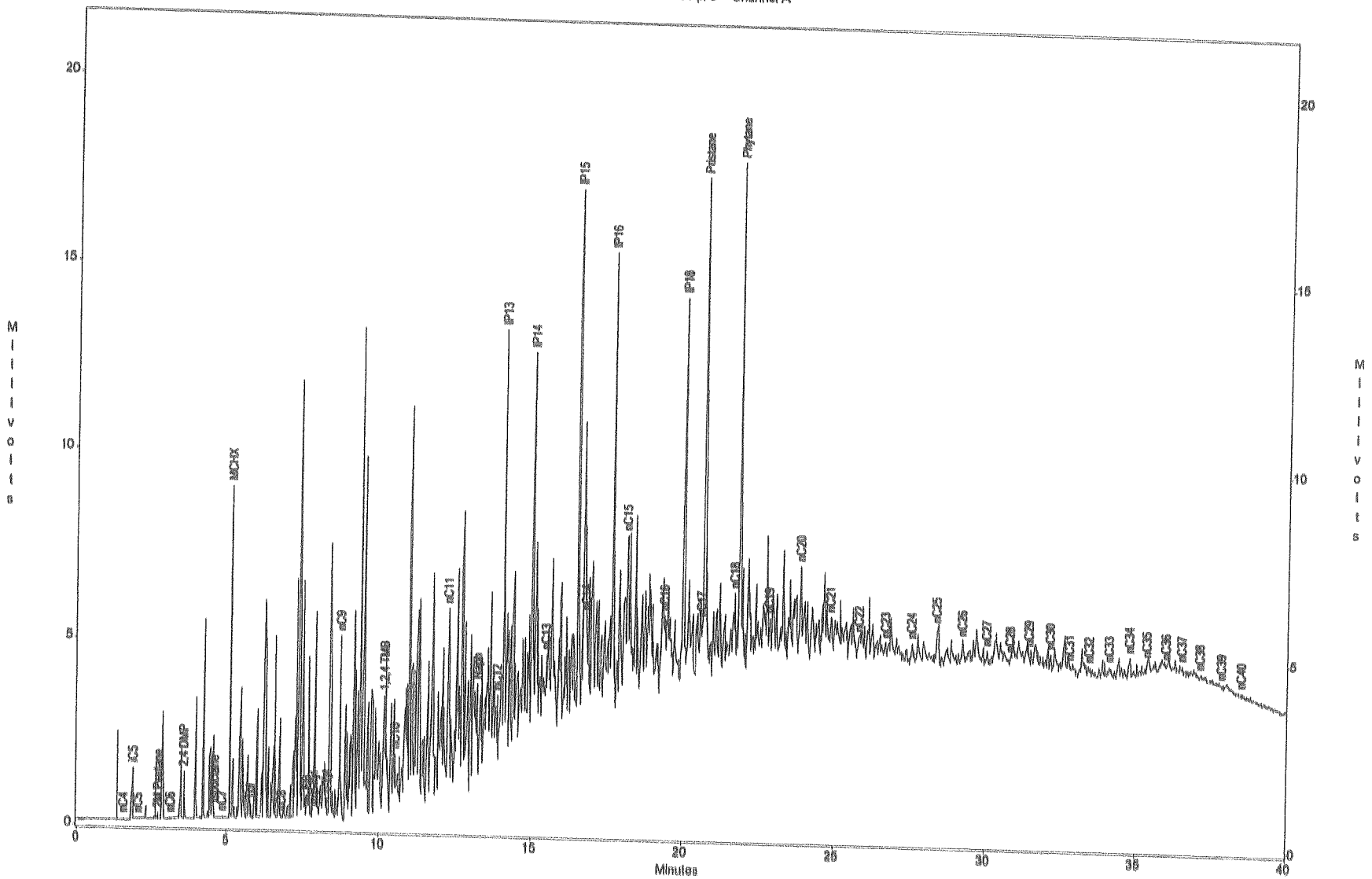
Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☐ — Cooler Temp.


ISOPRENOID PLOT
PERCENTAGES
30
25
20
15
10
5
0
IP13
IP14
IP15
IP16
IP18
IP19
IP20
ISOPRENOIDS
TF-2
PL-5-2008
PL-5-1998

Torkelson Geochemistry, Inc.

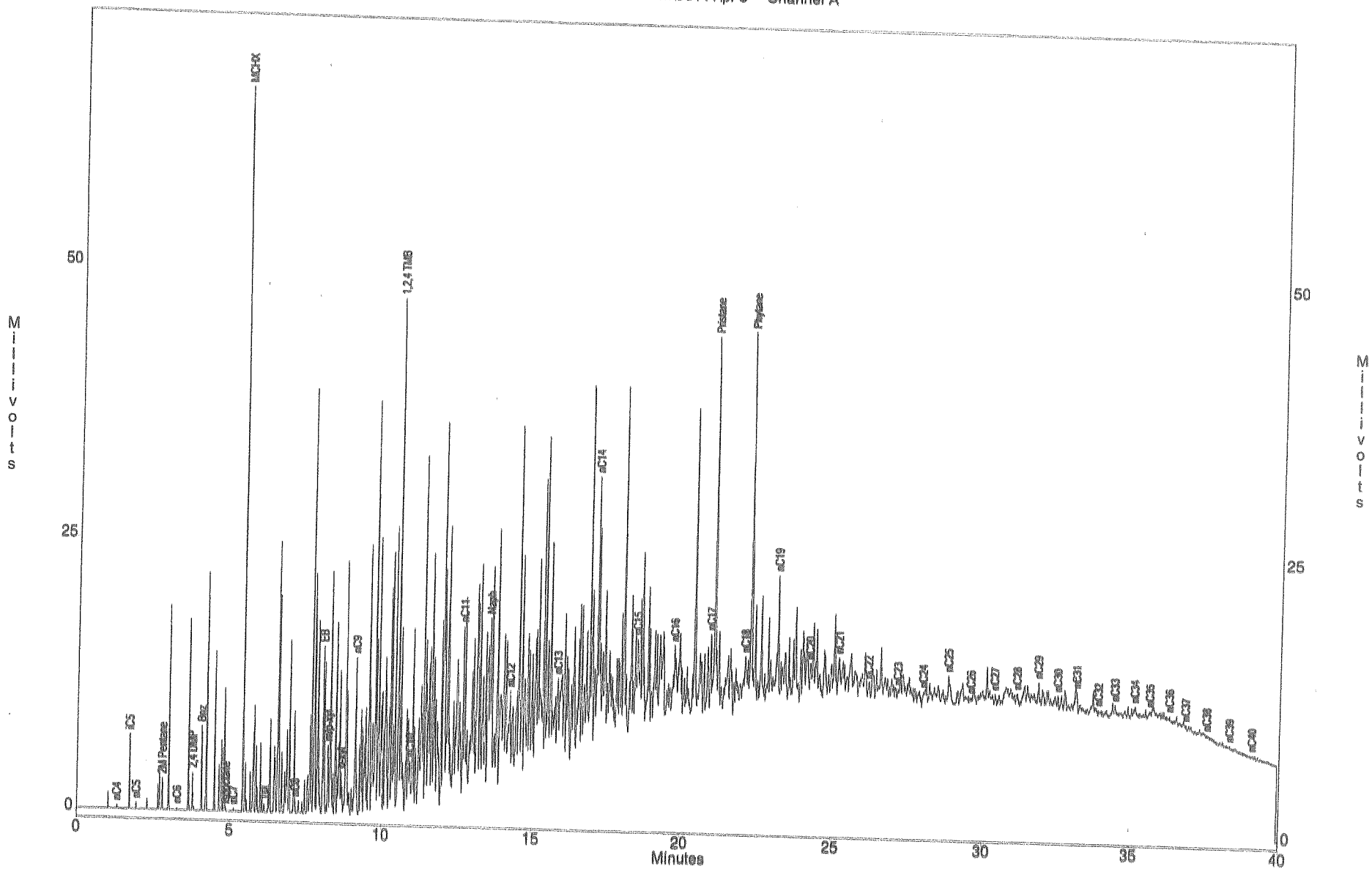
Hess Port Reading, 750 Cliff Road, Port Reading, NJ
Sample ID : PL-5 (LPH)
Acquired : Aug 27, 2008 14:56:16

c:\ezchrom\chrom\08151\pl-5 -- Channel A



Amerada Hess Port Reading Refinery
Sample ID : PL-5
Acquired : Nov 10, 1998 12:08:23

c:\ezchrom\chrom\98111\pl-5 -- Channel A



GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG

Specializing in Forensics of Petroleum Hydrocarbon Contamination of Groundwater and Soils

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Tulsa, OK 74137-8532
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November 9, 2009

Bill Groeling
Enviro Trac
400 E. Corporate Court
South Plainfield, NJ 07080

HESS PORT READING REFINERY (SLF-TW-2)

Attached are the gas chromatograms (GC) for the petroleum sample, SLF-TW-2, collected 10/28/09 and received by us on 11/2/09 for our analytical examination and forensic evaluation.

The SLF-TW-2 sample is apparently a mixture of, at least, four petroleum products. The sample possibly contains a very small amount (less than 5 percent) of a very highly weathered/degraded gasoline fraction, a possible very small amount (less than 5 percent) of a "fresher" kerosene boiling range product (possibly Jet A) and a third portion containing, as much as, 30 percent of a moderately degraded distillate (diesel/fuel oil product). These three possible products are superimposed on a very highly degraded crude oil which may make up, as much as, 50 to 60 percent of the sample. It is not possible to age date the gasoline fraction because of the very limited volume of the gasoline present. The possible kerosene (Jet A?) portion may represent a more recent release because of the lack of degradation the n-paraffin in that range. The presence of the small amounts of the n-paraffins still in the diesel/fuel oil boiling range suggests that the diesel/fuel oil certainly was released after the crude oil. The crude oil most likely was released more than 10 years ago and possibly as much as 20 years ago. The crude oil fraction is not recently released petroleum, but has been in the subsurface for a long period of time (nC17/pristane ratio of 0.19).

The attached Isoprenoid Plot shows that the SLF-TW-2 sample (pristane/phytane ratio of 1.73) is not likely "genetically" related (not from the same crude oil/source)

to the 2000 SLF-1 sample (p/p=1.23), the PL-5 2008 sample (p/p=1.07) nor the PL-5 1998 sample (p/p=0.99). However, the SLF-TW-2 sample appears to have a better "genetically" relationship (correlation) to the TF-2 2009 sample (p/p=1.51) and the PL-1 1998 sample (p/p=1.47). Keep in mind that the above correlations are based on the p/p ratios (pristane/phytane) and the over all comparison of the isoprenoids greater than the IP-13 and IP-14 range. Also consider that the isoprenoid values probably reflect the crude oil rather than the distillate (diesel/fuel oil).

Gene W. Schmidt

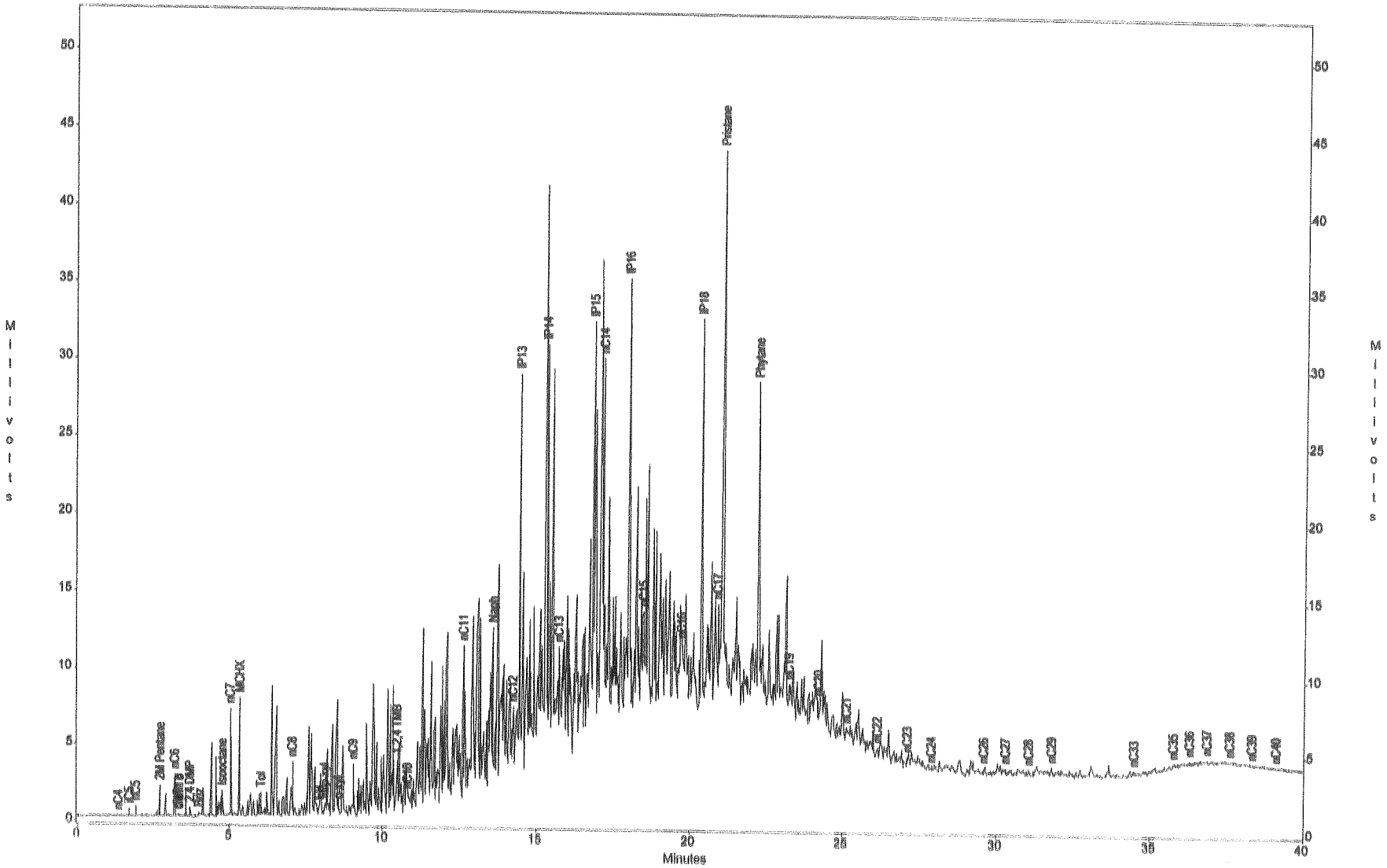
Gene W. Schmidt
GWS/trs

Attachments

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : SLF-TW-2
Acquired : Nov 05, 2009 11:51:13

c:\ezchrom\chrom\09163\slftw2 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : SLF-TW-2
Acquired : Nov 05, 2009 11:51:13

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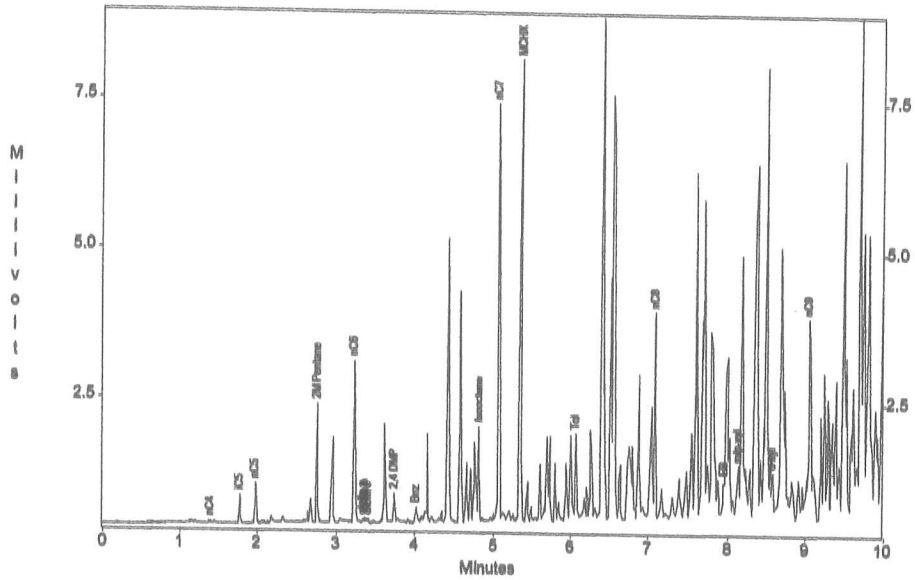

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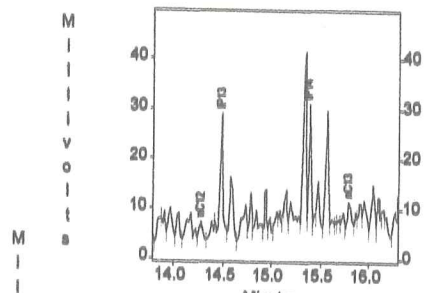

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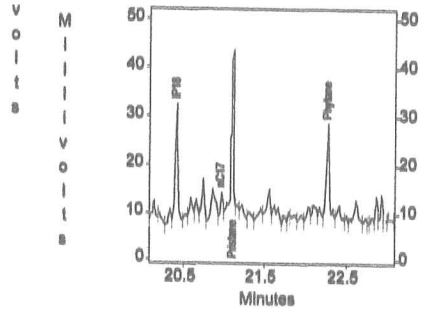

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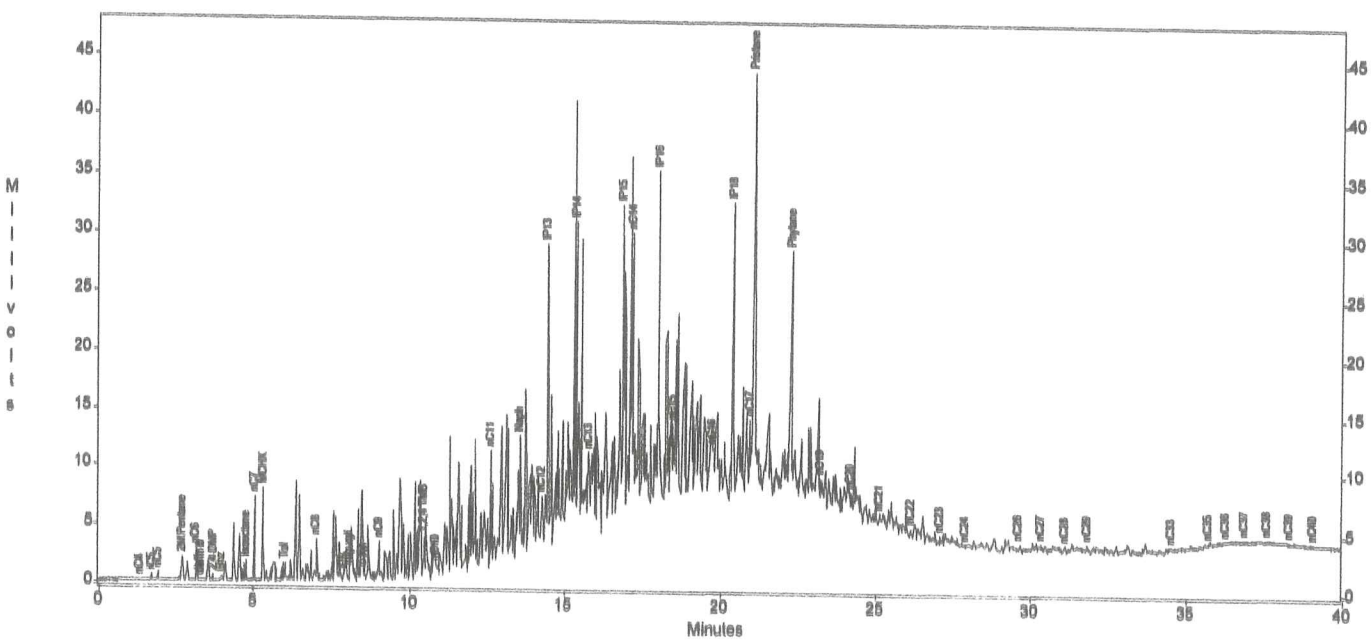


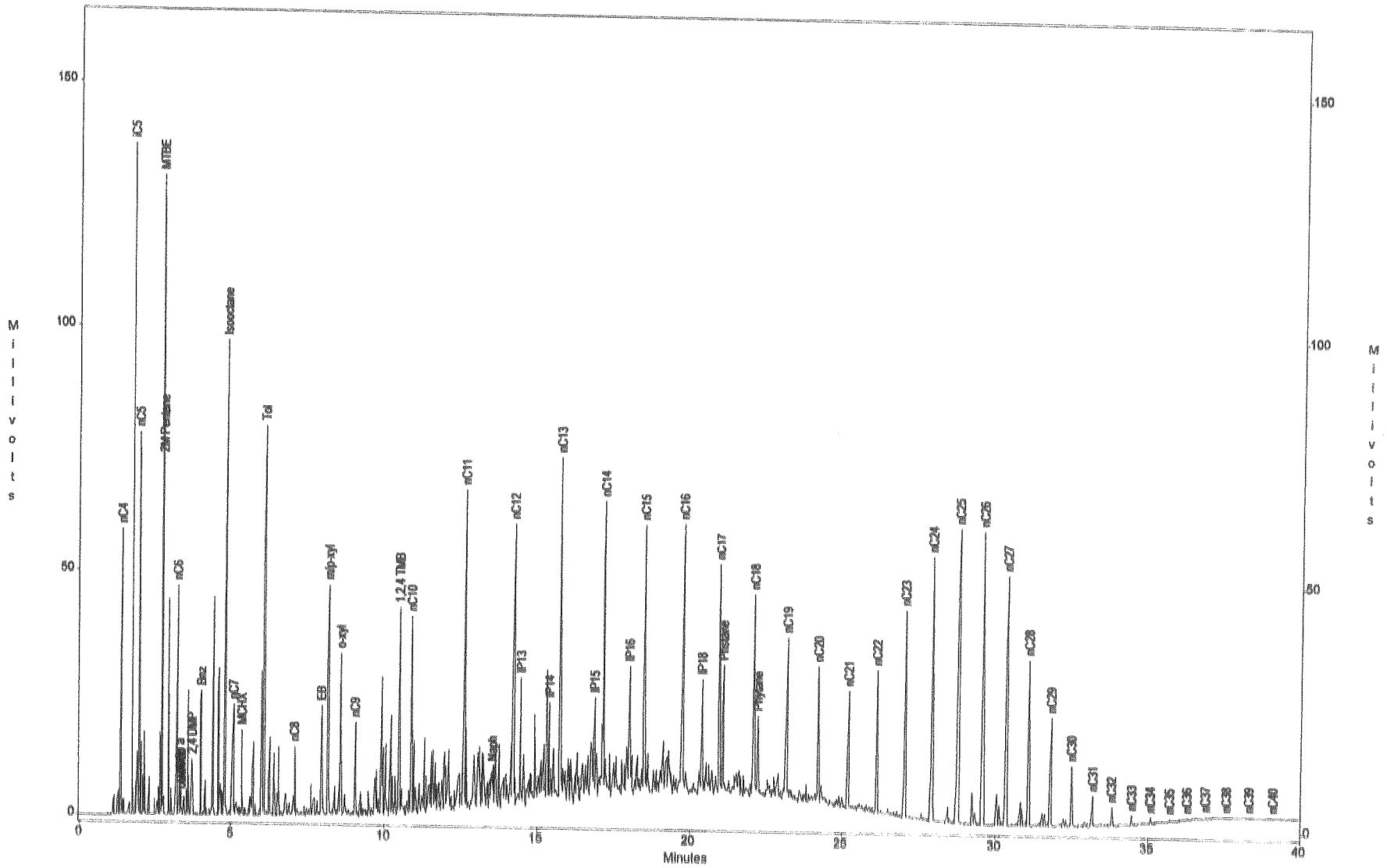
Channel A Results

Peak	Area	Height
nC4	31	30
iC5	344	459
nC5	533	664
MTBE	0	0
2M Pentane	1790	1971
nC6	2588	2673
olefin a	54	45
olefin b	95	87
olefin c	69	55
2,4 DMP	530	474
Bnz	385	244
Isooctane	2027	1597
nC7	7723	6992
MCHX	9199	7740
Tol	2119	1477
nC8	4352	3480
EB	1212	684
m/p-xyl	2037	898
o-xyl	1239	792
nC9	5354	3355
1,2,4 TMB	5304	3537
nC10	3222	1031
nC11	16926	9742
Naph	16763	9359
nC12	12527	4246
IP13	56359	25648
IP14	33981	24208
nC13	17213	5766
IP15	46932	26763
nC14	45888	23857
IP16	67150	27728
nC15	26143	6034
nC16	10356	3711
IP18	58150	25204
nC17	16281	6719
Pristane	99056	36090
nC18	0	0
Phytane	57413	20928
nC19	2020	1468
nC20	1977	1113
nC21	5032	1002
nC22	2269	652
nC23	1948	676
nC24	415	218
nC25	0	0
nC26	2478	525
nC27	1155	487
nC28	1513	349
nC29	1147	461
nC30	0	0
nC31	0	0
nC32	0	0
nC33	586	163
nC34	0	0
nC35	51	89
nC36	193	123
nC37	199	98
nC38	16	35
nC39	158	62
nC40	90	35

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 05, 2009 11:02:27

c:\ezchrom\chrom\09163\gadiwax2 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 05, 2009 11:02:27

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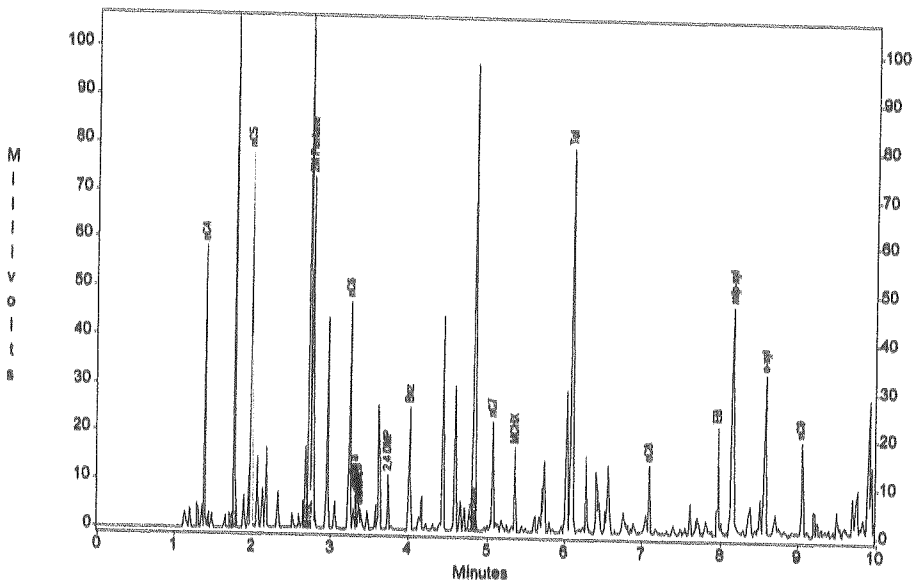

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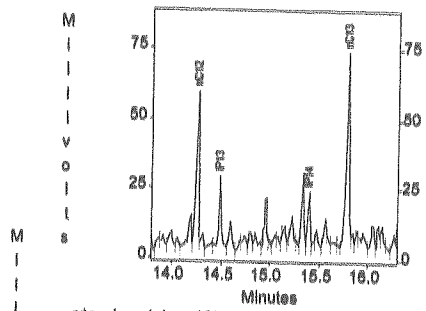

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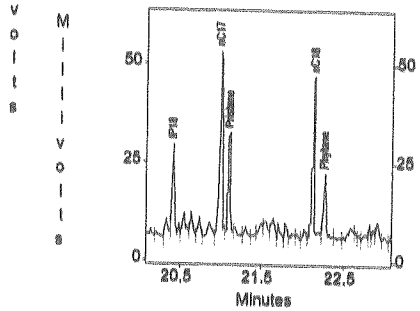

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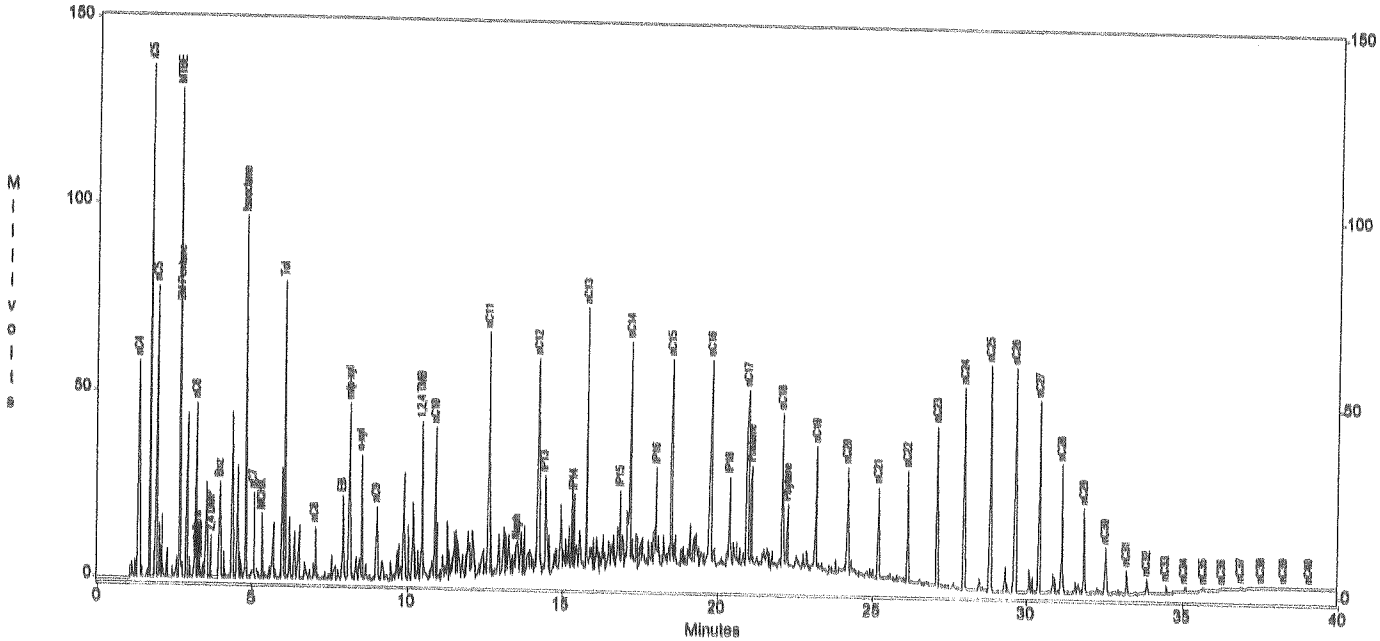

Channel A Results

Peak	Area	Height
nC4	33732	58307
iC5	93370	137166
nC5	55821	78182
MTBE	120003	130767
2M Pentane	63673	72881
nC6	46047	46898
olefin a	7929	7392
olefin b	8201	5455
olefin c	4616	4091
2,4 DMP	11422	11310
Bnz	30229	25470
Isooctane	141601	97184
nC7	27769	22715
MCHX	21322	17396
Tol	132854	79791
nC8	17190	14092
EB	30421	22518
m/p-xyl	110114	47359
o-xyl	40833	33303
nC9	20411	19396
1,2,4 TMB	76420	42443
nC10	62764	40587
nC11	118002	65897
Naph	28534	8747
nC12	109573	57910
IP13	53576	26586
IP14	33992	21220
nC13	149420	71140
IP15	44334	21043
nC14	131244	60702
IP16	54059	25746
nC15	118537	54826
nC16	125306	55066
IP18	50190	23058
nC17	109717	47557
Pristane	62606	27111
nC18	93708	41814
Phytane	43605	17369
nC19	72719	32553
nC20	54186	28140
nC21	45415	24074
nC22	57160	29562
nC23	81632	42216
nC24	140158	53865
nC25	165973	60025
nC26	167107	59658
nC27	136462	51082
nC28	79194	33862
nC29	43659	22114
nC30	21139	11998
nC31	11038	5918
nC32	5781	3415
nC33	3126	1711
nC34	1752	983
nC35	998	536
nC36	555	283
nC37	341	157
nC38	433	86
nC39	143	50
nC40	149	43

ACCUTEST Laboratories

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PAGE ___ OF ___

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FED-EX Tracking #
Bottle Order Control #
Accutest Quote #
Accutest Job #

Client / Reporting Information

Company Name: EnviroTrac
Street Address: 400 Corporate Ct.
City / State / Zip: South Plainfield, NJ
Project Contact: Bill Groeling
E-mail:
Phone #: 908-757-1900
Fax #:
Sampler(s) Name(s):
Phone #:

Project Information

Project Name: Hess - Port Reading Refinery
Street: 750 Cliff Rd.
City / State: Port Reading, NJ
Project #:
Client Purchase Order #:
Project Manager:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Fingerprint	Ace Dating	LAB USE ONLY
	SLF-TW-2		10/28/09	1205		OI	1					1				0	0	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [x] Std. 15 Business Days
- [ ] Std. 18 Business Days (by Contract only)
- [ ] 10 Day *RUSH*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [x] NJ Reduced
- [ ] Commercial "C"
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

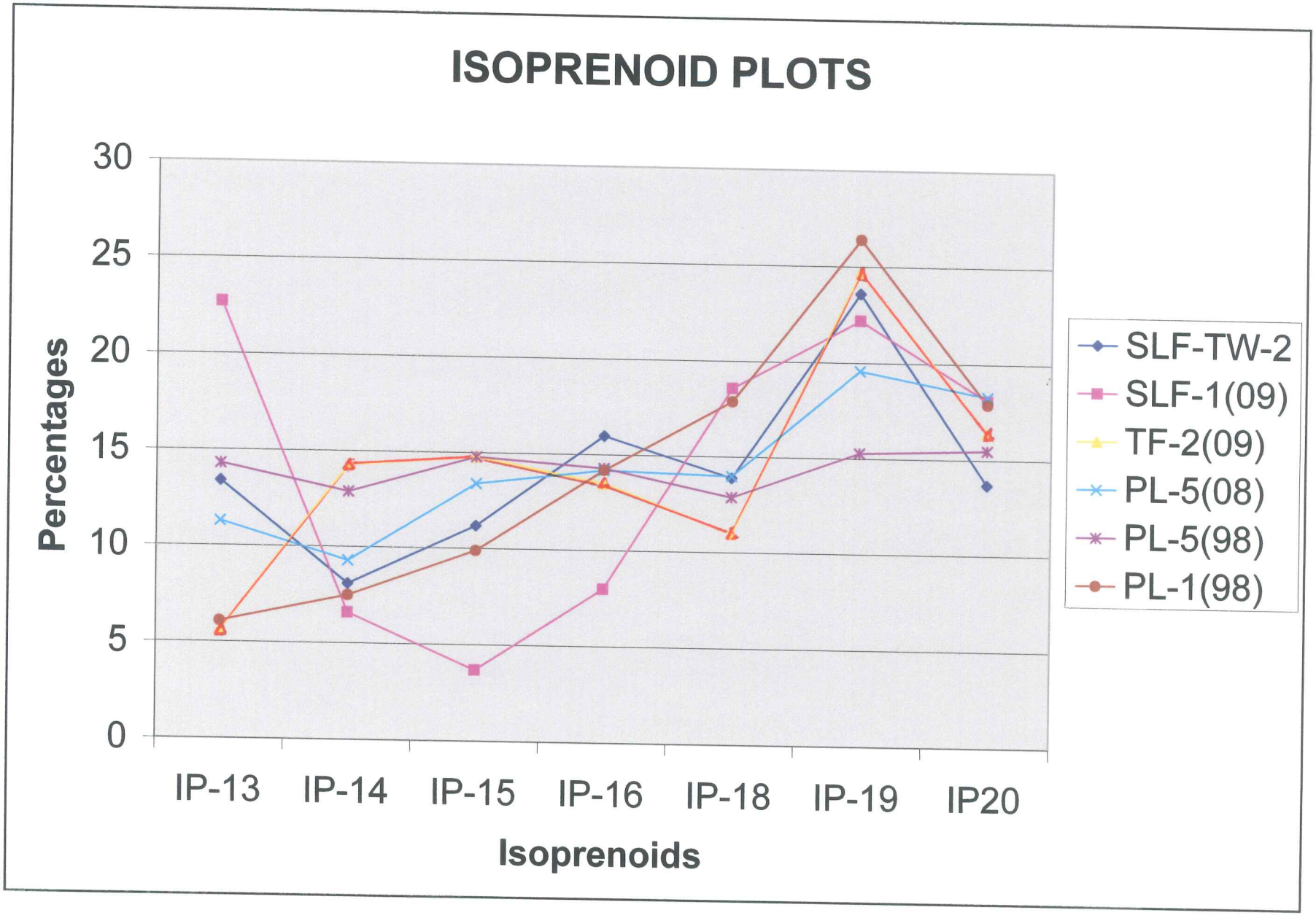
Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	10/30/09	1	2	9:30 p 10:31.09	2 Dene W. Schmidt
3 Dene W. Schmidt	11.2.09 10:30a	3 Bruce Stinkelson	4		4
5		5	Custody Seal #		

- [ ] Intact
- [ ] Not intact

Preserved where applicable [ ]
On Ice [ ]
Cooler Temp.


ISOPRENOID PLOTS
Percentages
30
25
20
15
10
5
0
IP-13
IP-14
IP-15
IP-16
IP-18
IP-19
IP20
Isoprenoids
SLF-TW-2
SLF-1(09)
TF-2(09)
PL-5(08)
PL-5(98)
PL-1(98)

GW/S ENVIRONMENTAL CONSULTING

GENE W. SCHMIDT, CGWP & PHG

Specializing in Forensics of Petroleum Hydrocarbon Contamination of Groundwater and Soils

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Tulsa, OK 74137-8532
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Fax 918-299-7600

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November 9, 2009

Bill Groeling
Enviro Trac
400 E. Corporate Court
South Plainfield, NJ 07080

HESS PORT READING REFINERY (TR-TW-14)

Attached are the gas chromatograms (GC) for the petroleum sample TR-TW-14, collected 10/22/09 and received on 11/2/09 for our analytical examination and forensic evaluation.

The TR-TW-14 sample is more than 95 percent composed of regular grade gasoline (octane rating index of 2.1) and less than 5 percent a relatively "fresh" (recently released distillate (diesel/fuel oil) having an nC17/pristane ratio of 1.71. The gasoline is most likely a recent release because it still contains MTBE. MTBE is so highly soluble that it is rapidly removed from gasoline in the subsurface (therefore, the gasoline probably has not been in the subsurface an extended time). Also, the "light ends" (butane, nC4 and the pentanes, iC5 and nC5 are still present in very significant amounts indicating a short time in the subsurface).

It is very likely that both the gasoline and distillate (diesel/fuel oil) components are the result of a more recent release (probably less than 10 years ago). Although the corrected Toluene/nC8 ratio is 7.6 (LN2.03), the presence of the MTBE is very significant suggesting a recent release date (as little as 2 years).

Gene W. Schmidt

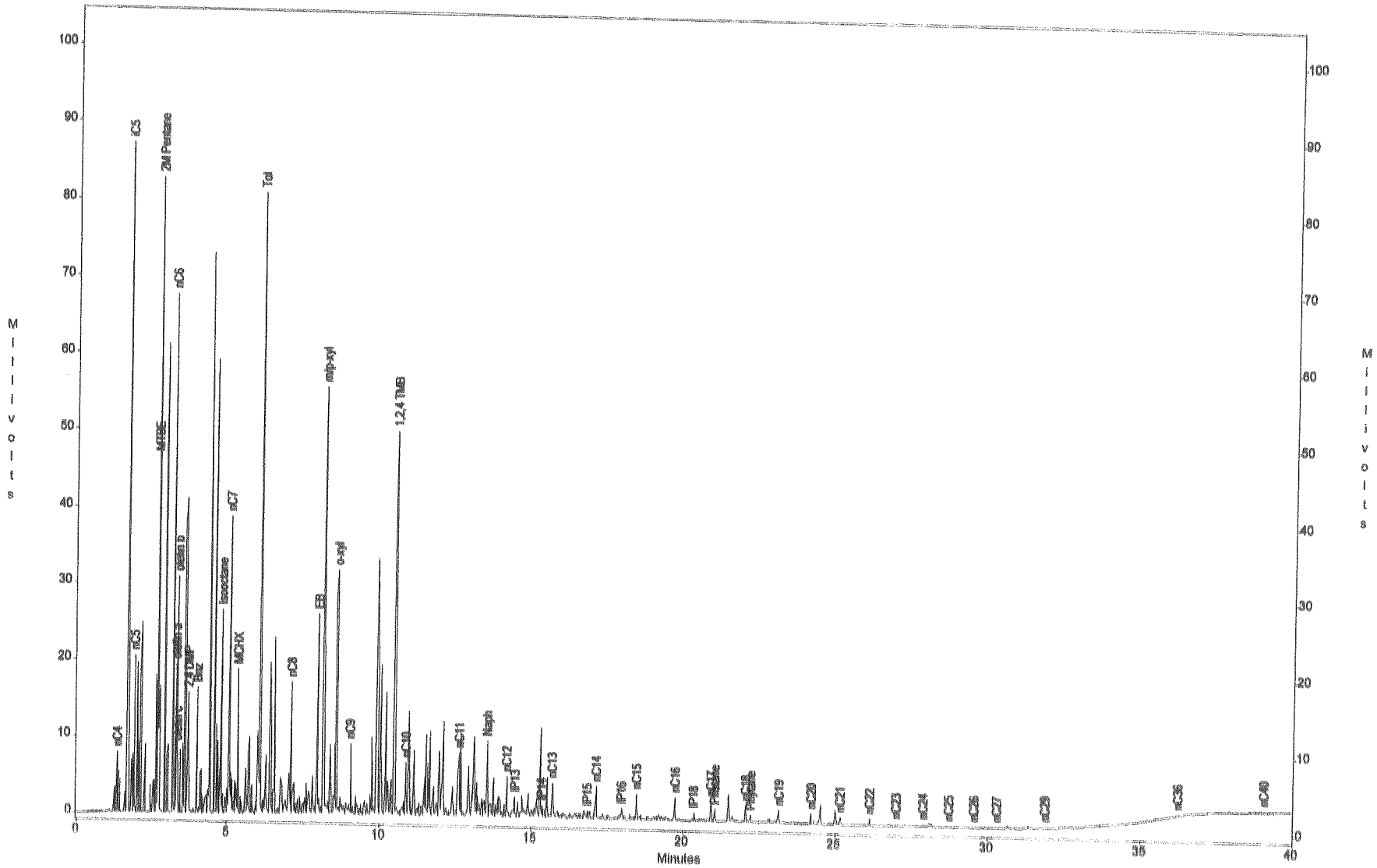
Gene W. Schmidt
GWS/trs

Attachments

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : TR-TW-14
Acquired : Nov 05, 2009 10:12:48

c:\ezchrom\chrom\09163\trtw14 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : TR-TW-14
Acquired : Nov 05, 2009 10:12:48

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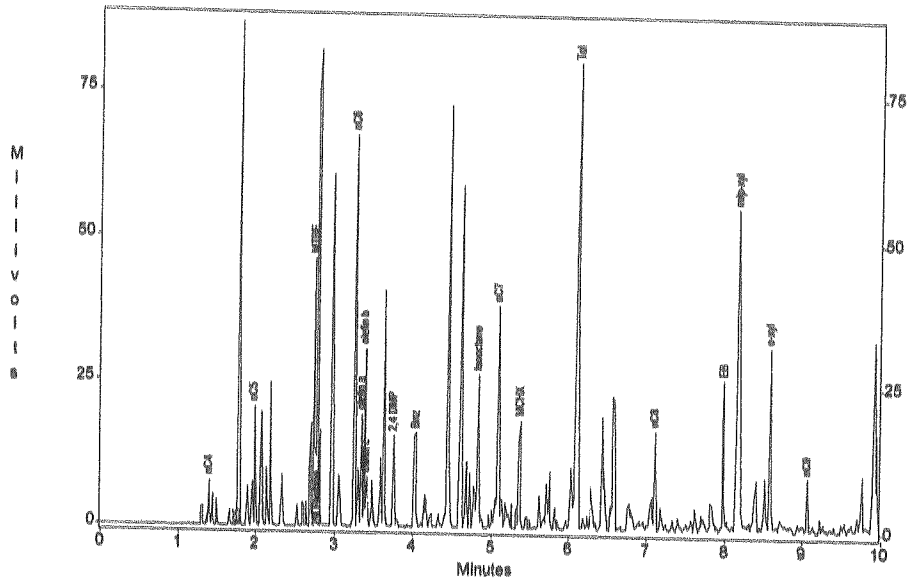

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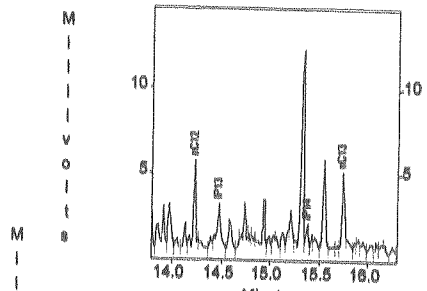

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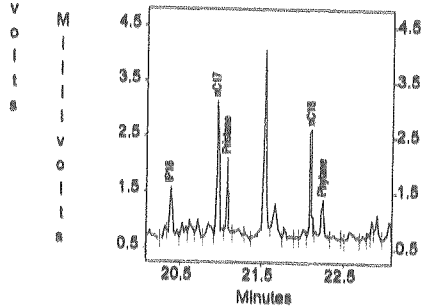

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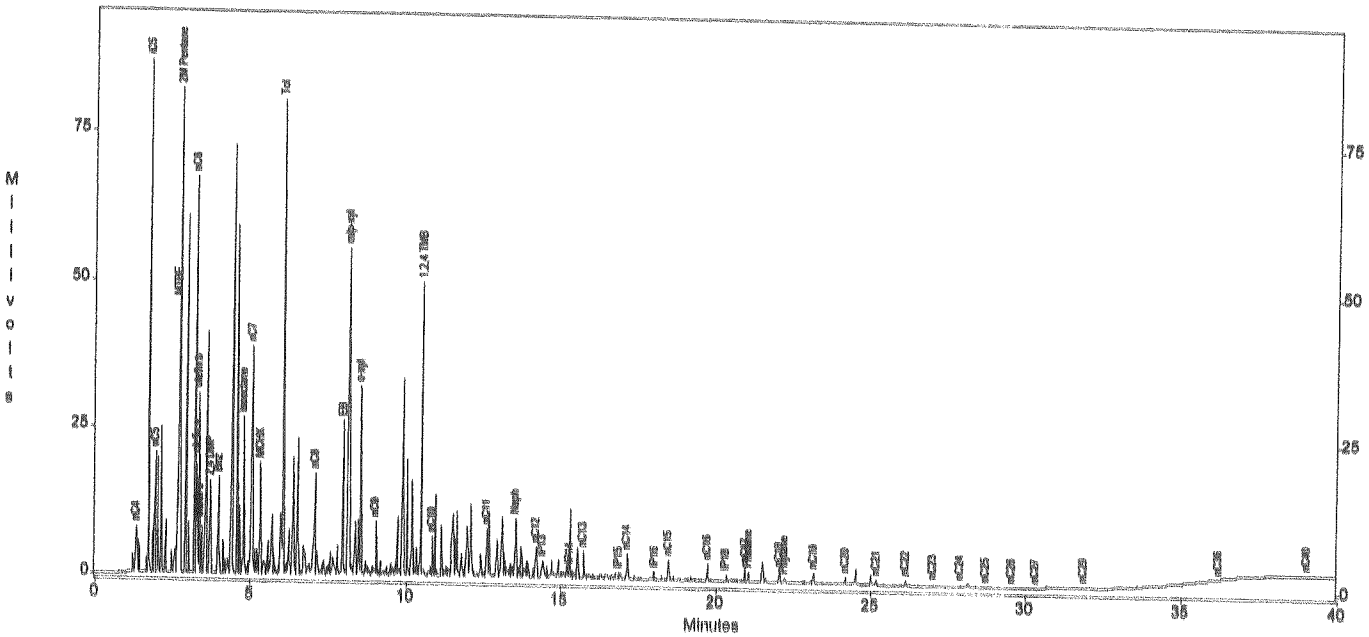


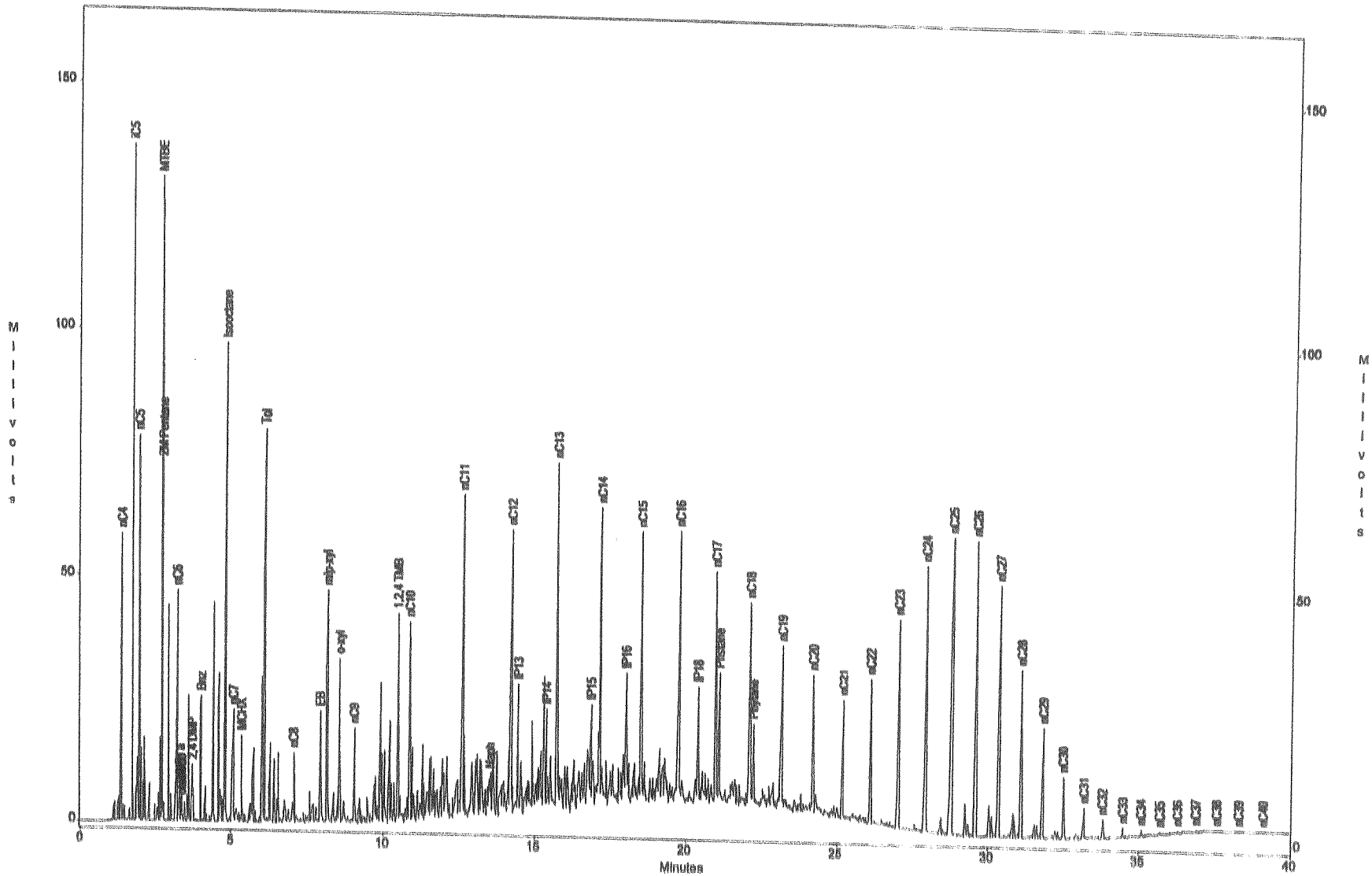
Channel A Results

Peak	Area	Height
nC4	5042	7737
iC5	72062	87012
nC5	18098	20410
MTBE	46398	46179
2M Pentane	82036	82452
nC6	69435	67497
olefin a	20753	19351
olefin b	30274	30756
olefin c	9297	8623
2,4 DMP	17397	15692
Bnz	23268	16329
Isooctane	32783	26469
nC7	80782	38540
MCHX	33256	18796
Tol	126405	80645
nC8	20968	17130
EB	36584	26064
m/p-xyl	134860	55857
o-xyl	47156	31863
nC9	13063	9177
1,2,4 TMB	83580	49796
nC10	8983	6752
nC11	11785	8028
Naph	21452	9704
nC12	8292	5027
IP13	7471	2535
IP14	1940	1363
nC13	6716	4373
IP15	1574	1000
nC14	7353	4157
IP16	2617	1304
nC15	5031	3233
nC16	5954	2845
IP18	2713	951
nC17	4641	2511
Pristane	3388	1471
nC18	3789	2021
Phytane	2568	745
nC19	2887	1604
nC20	1893	1179
nC21	2078	919
nC22	1337	680
nC23	839	327
nC24	396	193
nC25	213	96
nC26	251	66
nC27	188	30
nC28	0	0
nC29	53	34
nC30	0	0
nC31	0	0
nC32	0	0
nC33	0	0
nC34	0	0
nC35	0	0
nC36	481	28
nC37	0	0
nC38	0	0
nC39	0	0
nC40	62	14

Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 05, 2009 11:02:27

c:\ezchrom\chrom\09163\gadlwax2 -- Channel A



Torkelson Geochemistry, Inc.

Hess - Port Reading Refinery
Sample ID : Gas/Dies/Wax std
Acquired : Nov 05, 2009 11:02:27

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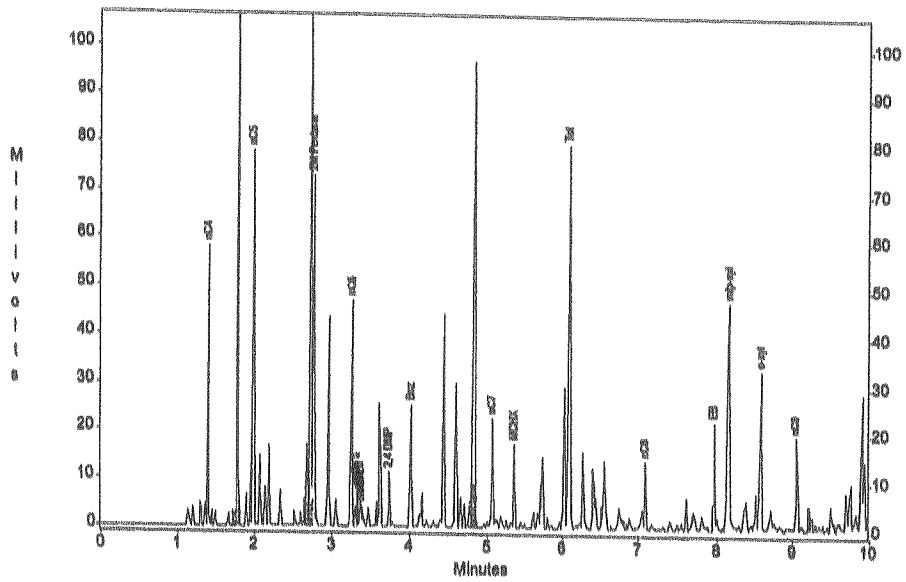

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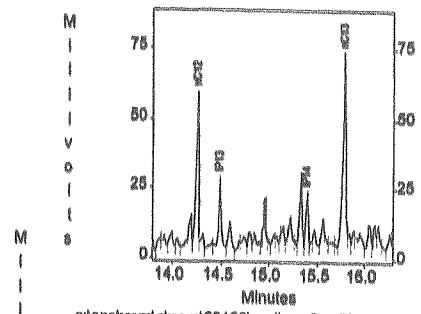

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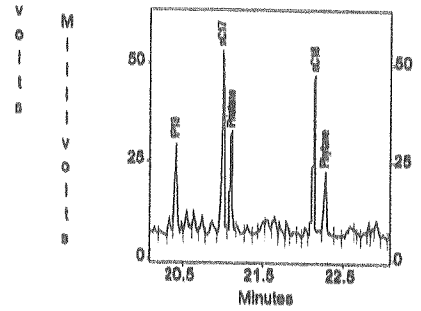

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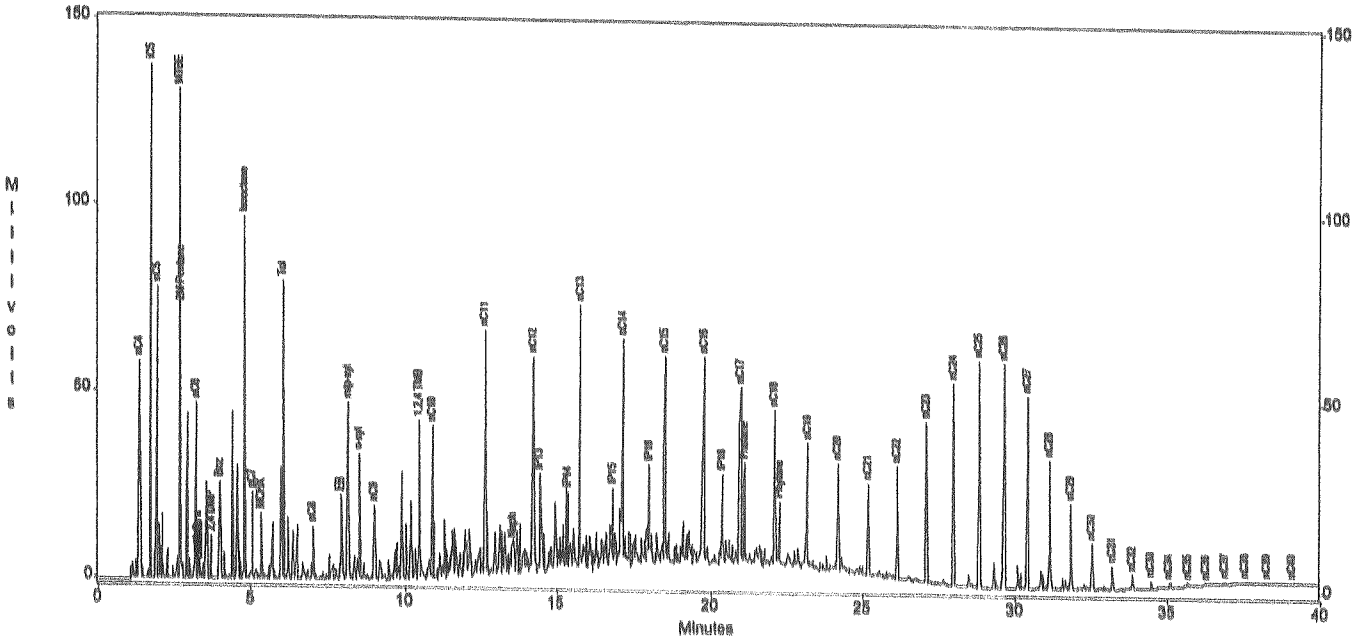

Channel A Results

Peak	Area	Height
nC4	33732	58307
iC5	93370	137166
nC5	55821	78182
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2M Pentane	63673	72801
nC6	46047	46098
olefin a	7929	7392
olefin b	5201	5455
olefin c	4616	4091
2,4 DMP	11422	11310
Bnz	30229	25470
Isooctane	141601	97184
nC7	27769	22719
MCHX	21322	17356
Tol	122584	79791
nC8	17196	14092
EB	30421	22510
m/p-xyl	110114	47359
o-xyl	40833	33303
nC9	28411	19396
1,2,4 TMB	76420	42443
nC10	62764	40587
nC11	118002	65897
Naph	28534	8747
nC12	109873	57910
IP13	53576	26586
IP14	33992	21220
nC13	149420	71140
IP15	44334	21043
nC14	131244	60702
IP16	54859	25746
nC15	118537	54826
nC16	125306	55066
IP18	50198	23858
nC17	109717	47587
Pristane	62606	27111
nC18	93708	41914
Phytane	43605	17369
nC19	72719	33553
nC20	54186	28140
nC21	45415	24074
nC22	57160	29562
nC23	91832	42216
nC24	140156	53865
nC25	165973	60025
nC26	167107	59658
nC27	126462	51082
nC28	79194	33862
nC29	43669	22114
nC30	21138	11998
nC31	11038	5918
nC32	5791	3415
nC33	3126	1711
nC34	1782	983
nC35	999	536
nC36	555	283
nC37	341	157
nC38	433	86
nC39	143	50
nC40	149	43

CHAIN OF CUSTODY

ACCUTEST Laboratories

2235 Route 130, Dayton NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #:
Bottle Order Control #:
Accutest Quote #:
Accutest Job #:

Client / Reporting Information

Company Name: EnviroTrac
Address: 400 E Corporate Cl
City: South Plainfield State: NJ Zip: 07080
Project Contact: Bill Groeling E-mail:
Phone #: 908-757-1900
Sampler's Name:

Project Information

Project Name: Hess - Port Reading Refinery
Street: 750 Cliff Rd.
City: Port Reading State: NJ
Project #:
Fax #:
Client Purchase Order #:

Requested Analysis

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MECH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	Fingerprint	Oil Dilting
	TR-TW-14		10/2/09	1036		Oil	1		1	

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

LAB USE ONLY

Turnaround Time (Business Days)

- ☑ Std. 15 Business Days
- ☐ 10 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☑ NJ Reduced
- ☐ NJ Full
- ☐ Other _____
- ☐ FULL CLP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____

Commercial "A" = Results Only

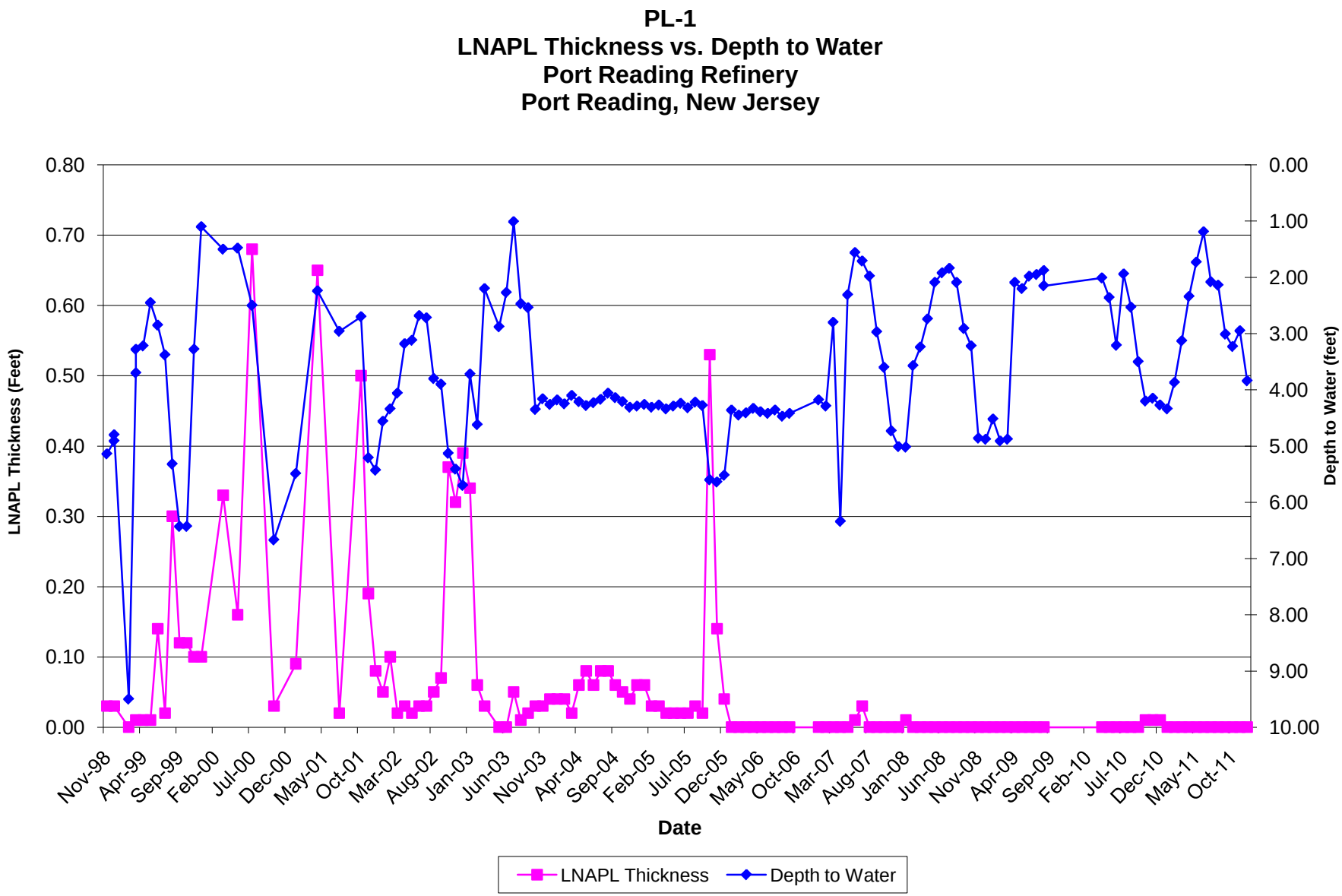
Comments / Remarks

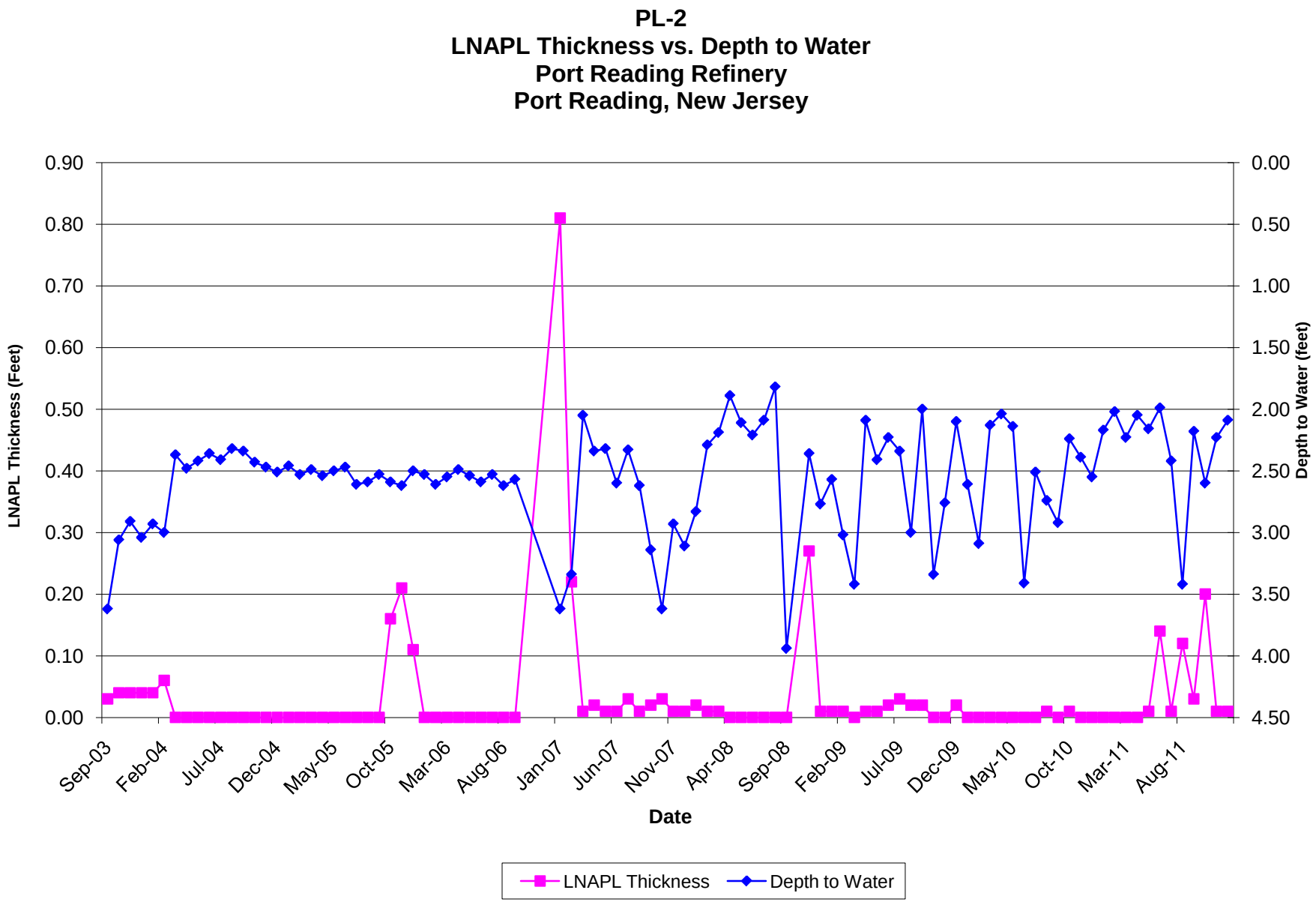
Sample Custody must be documented below each time samples change possession, including courier delivery.

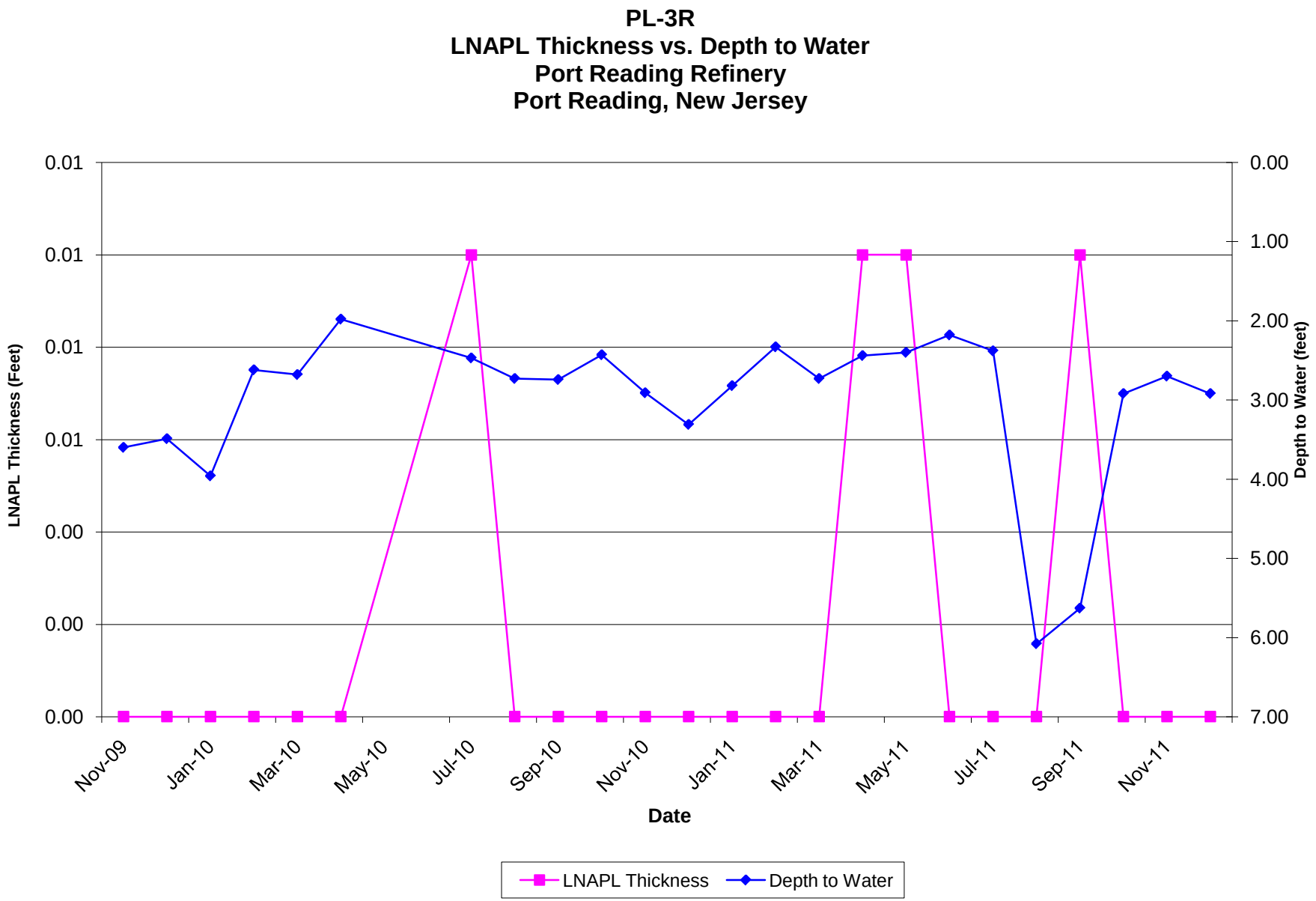
Relinquished by:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
1	10/2/09	1	2	10/5/09	Steve W. Schmidt
2 Steve W. Schmidt	11.2.09 10:30	2 Bruce Lambert	3		
3		3	4		4
5		5	Custody Seal #	Preserved where applicable ☐	On Ice ☐ Cooler Temp.

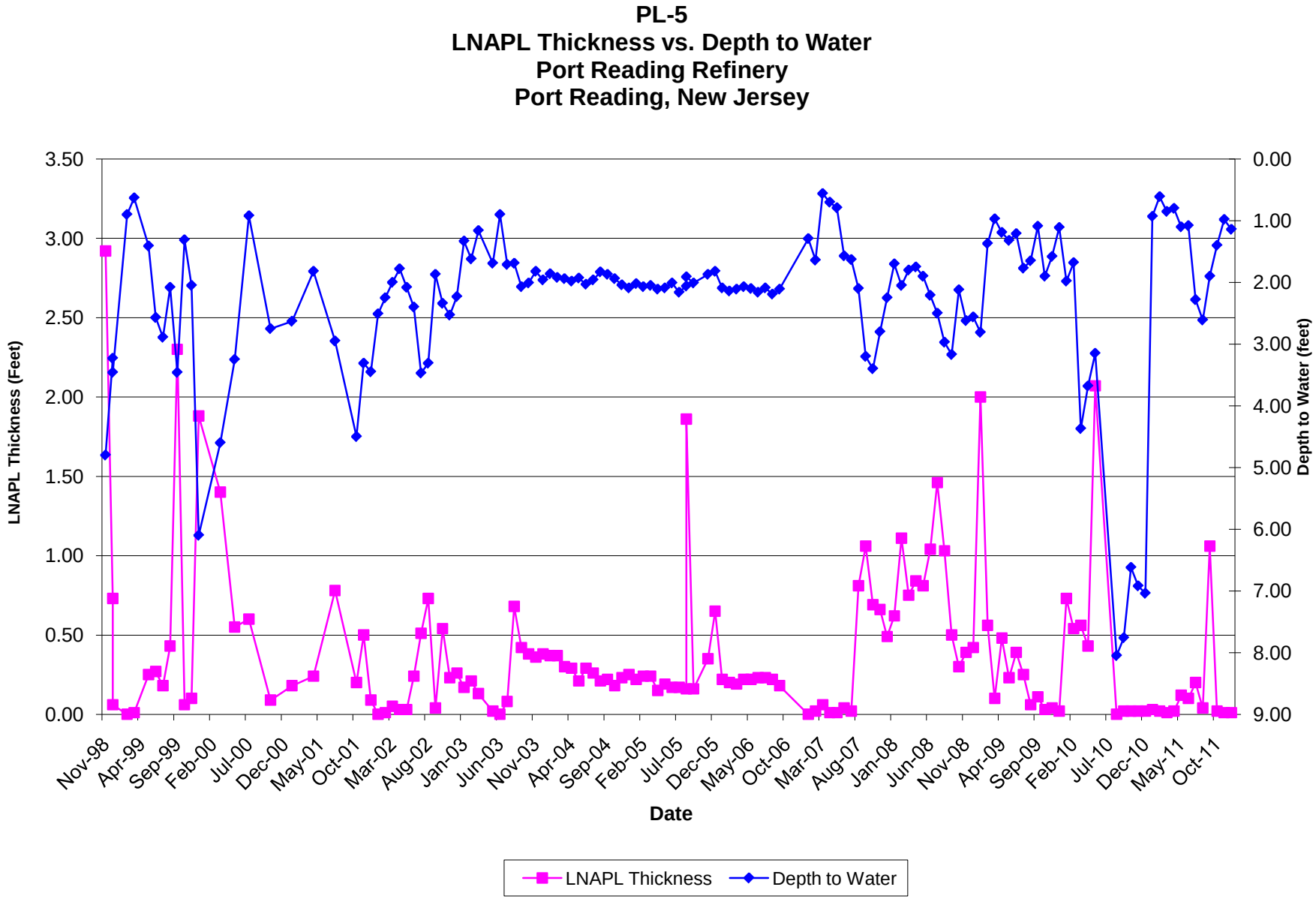
Appendix V:

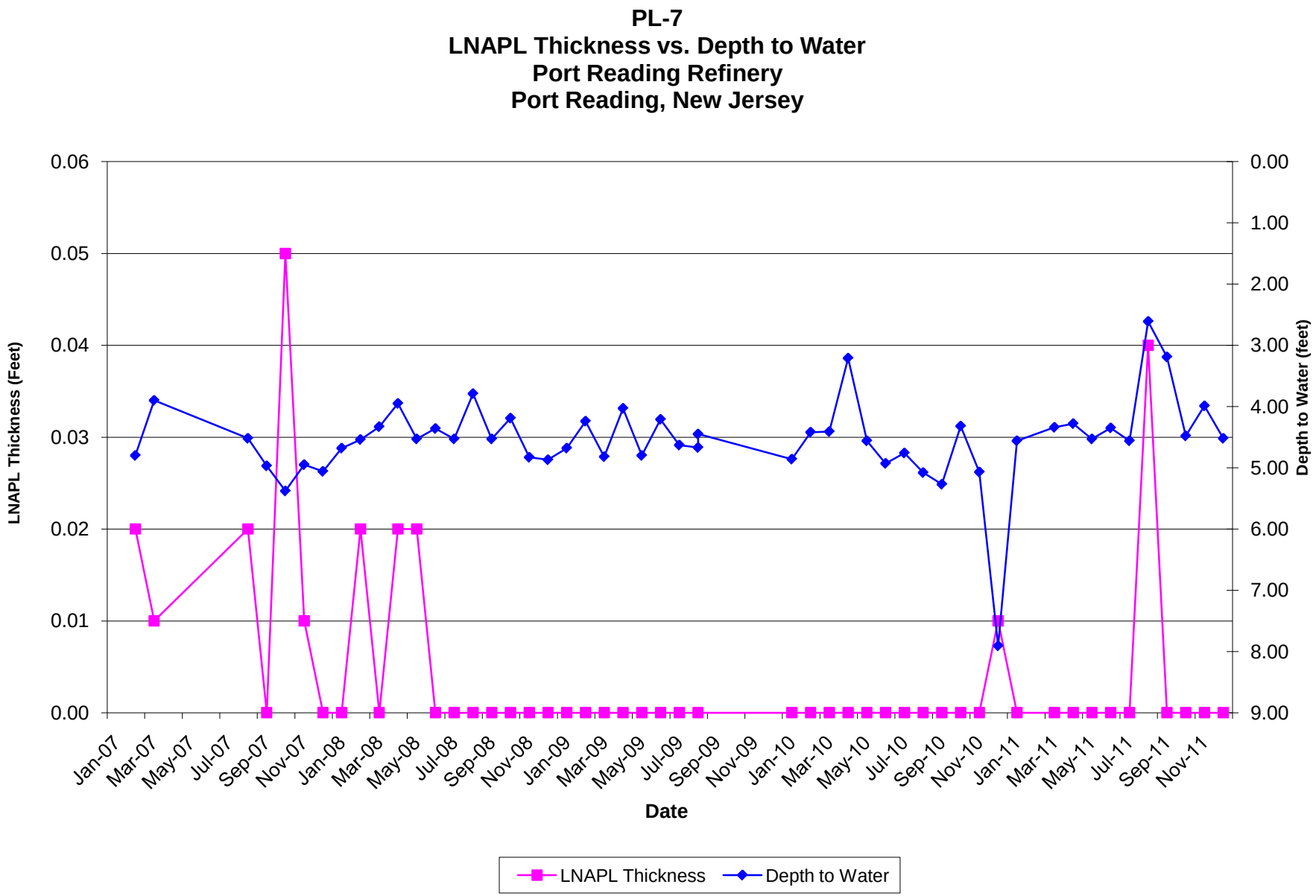
Graphical Depiction of LNAPL Thickness versus Depth Groundwater


PL-1
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Nov-98
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
Date
LNAPL Thickness
Depth to Water


PL-2
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
Sep-03
Feb-04
Jul-04
Dec-04
May-05
Oct-05
Mar-06
Aug-06
Jan-07
Jun-07
Nov-07
Apr-08
Sep-08
Feb-09
Jul-09
Dec-09
May-10
Oct-10
Mar-11
Aug-11
Date
LNAPL Thickness
Depth to Water


PL-3R
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
0.01
0.01
0.01
0.01
0.00
0.00
0.00
Depth to Water (feet)
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Nov-09
Jan-10
Mar-10
May-10
Jul-10
Sep-10
Nov-10
Jan-11
Mar-11
May-11
Jul-11
Sep-11
Nov-11
Date
LNAPL Thickness
Depth to Water


PL-5
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
Nov-98
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
Date
LNAPL Thickness
Depth to Water


PL-7
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08
May-08
Jul-08
Sep-08
Nov-08
Jan-09
Mar-09
May-09
Jul-09
Sep-09
Nov-09
Jan-10
Mar-10
May-10
Jul-10
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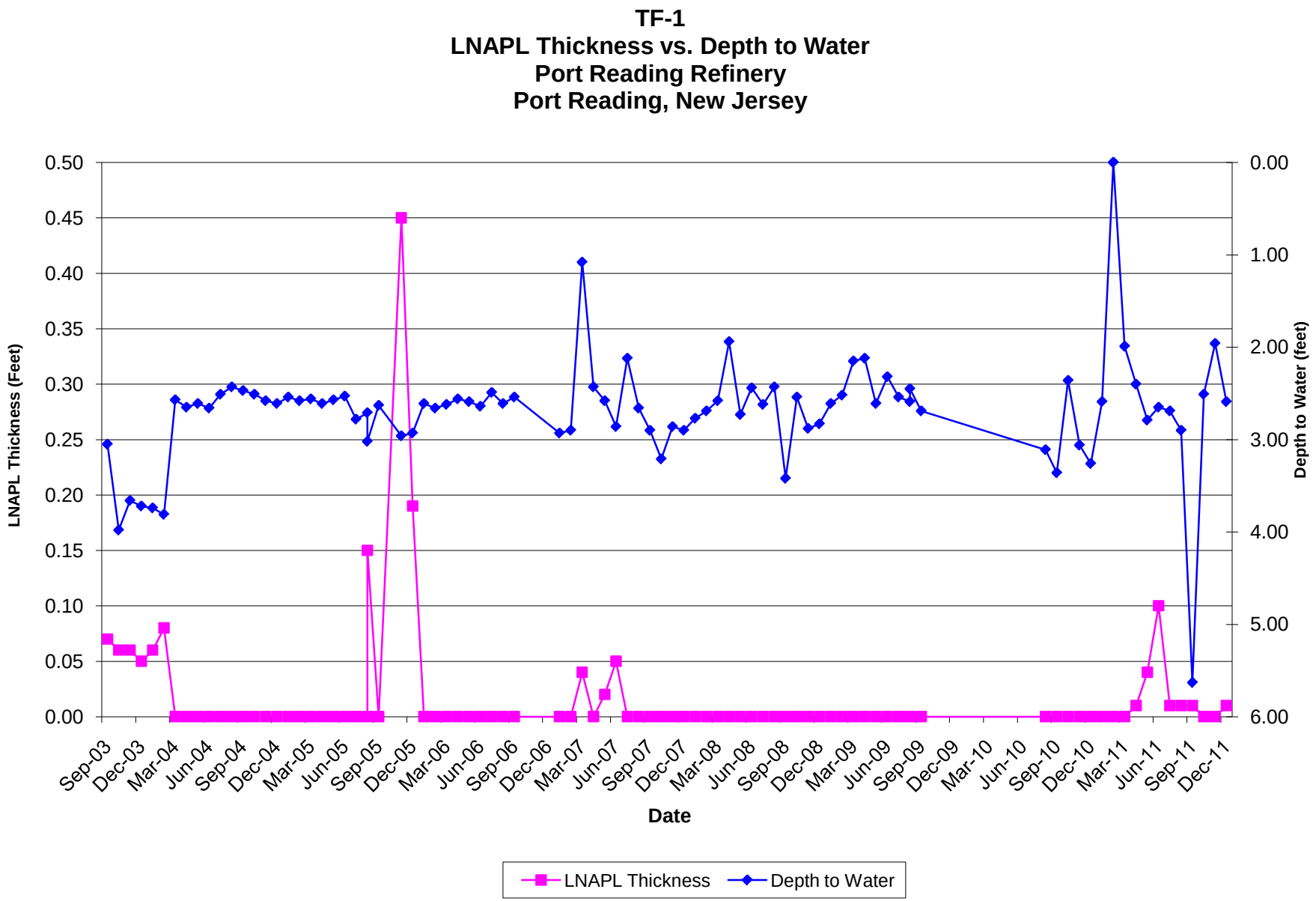
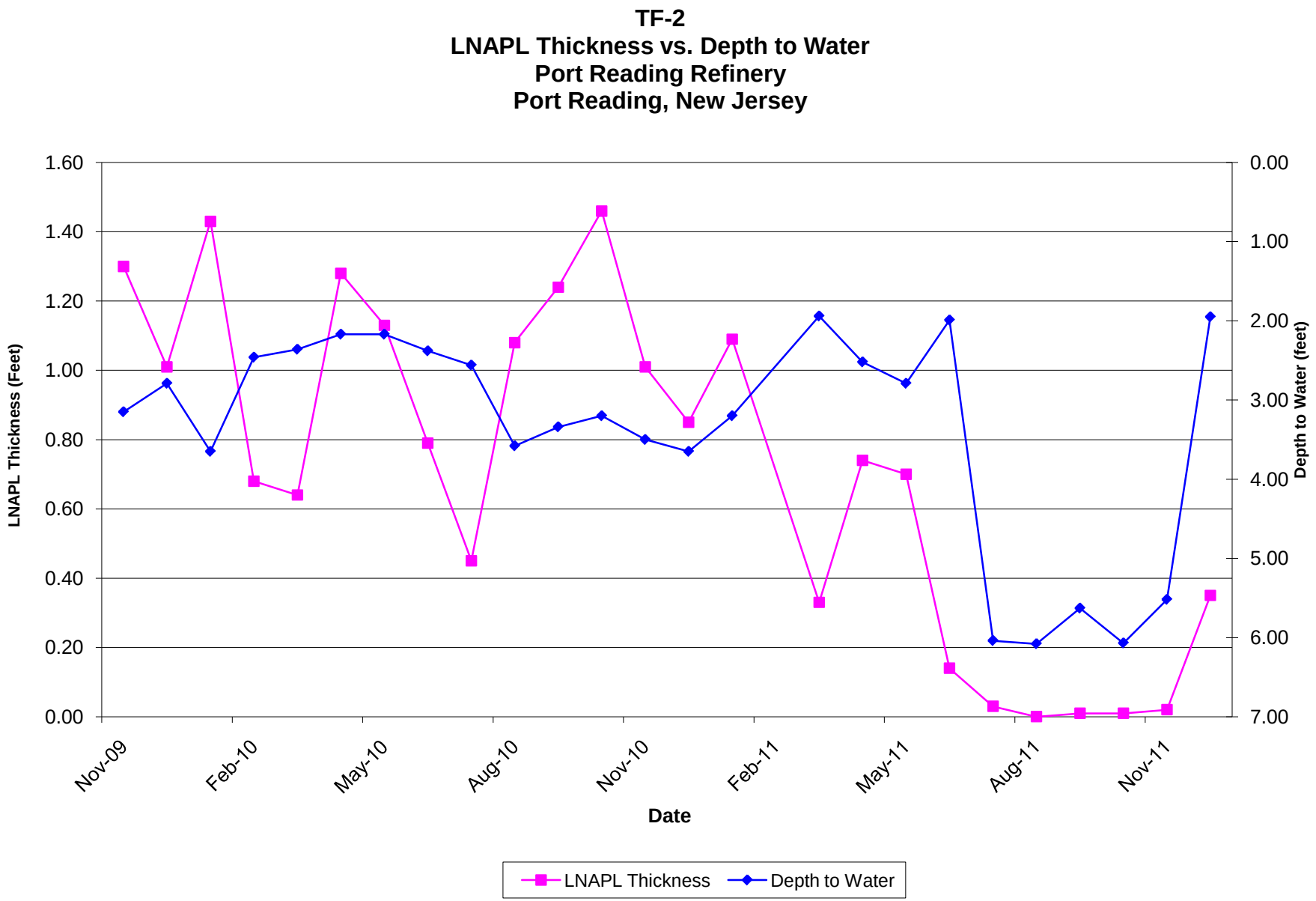
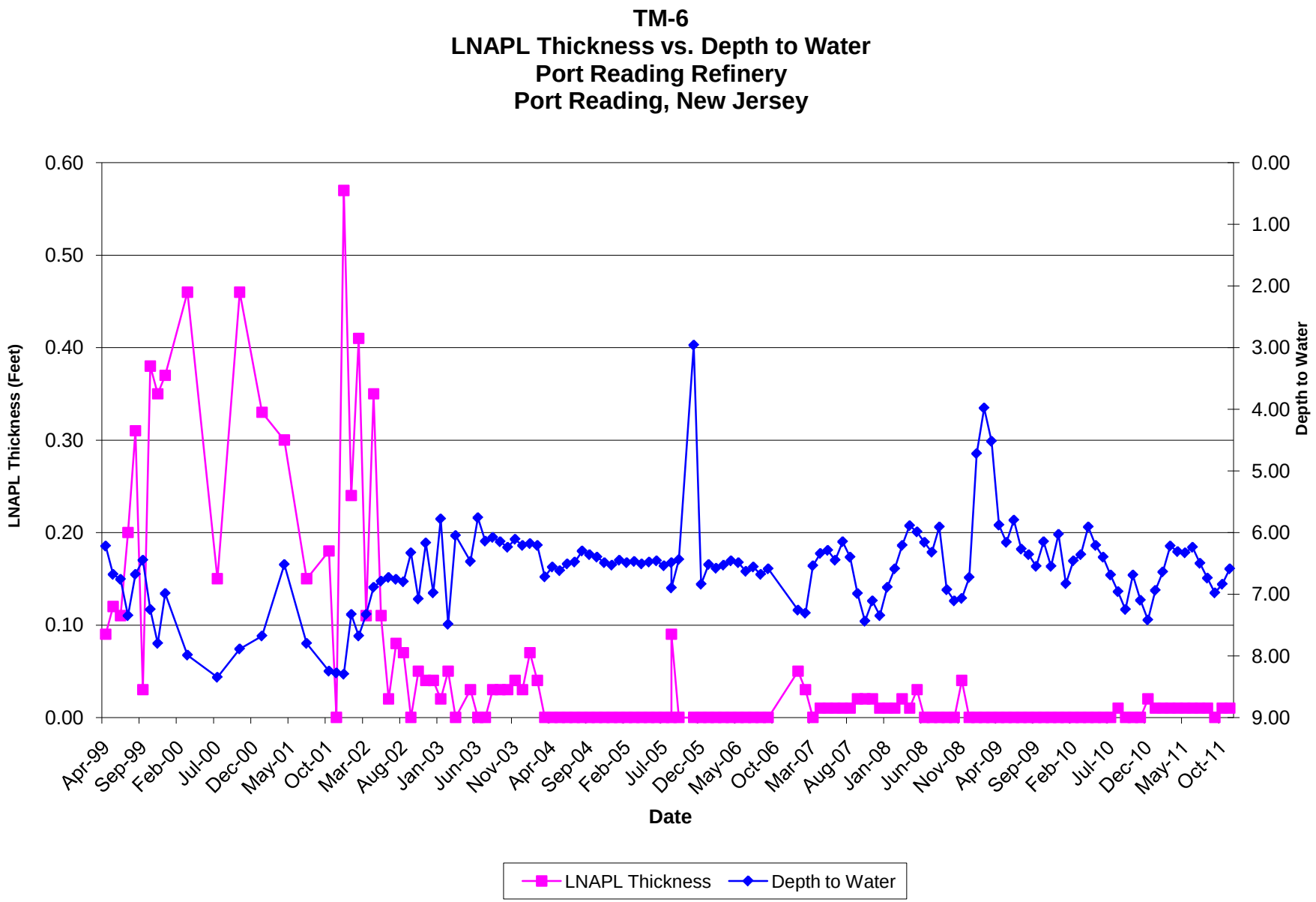
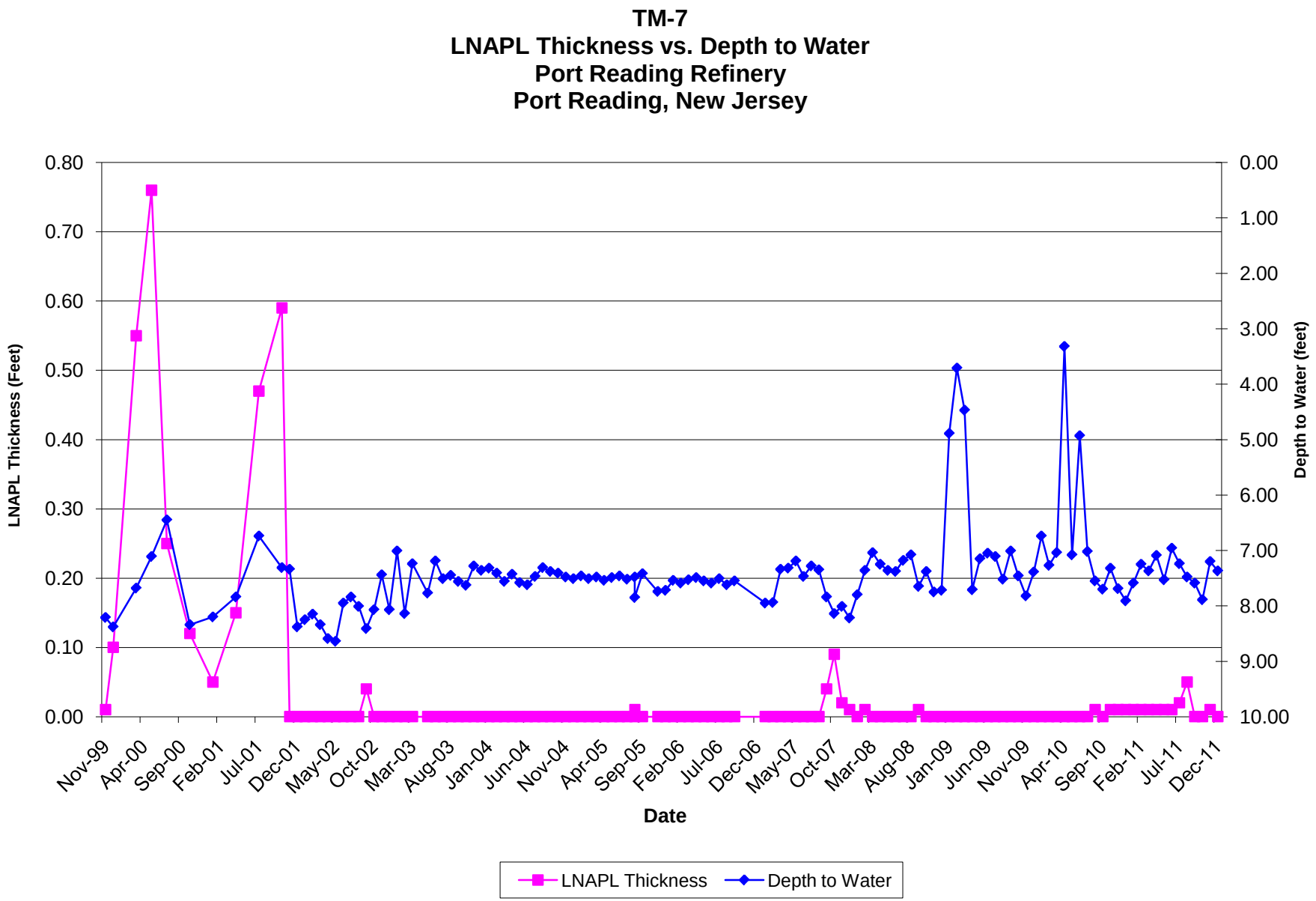
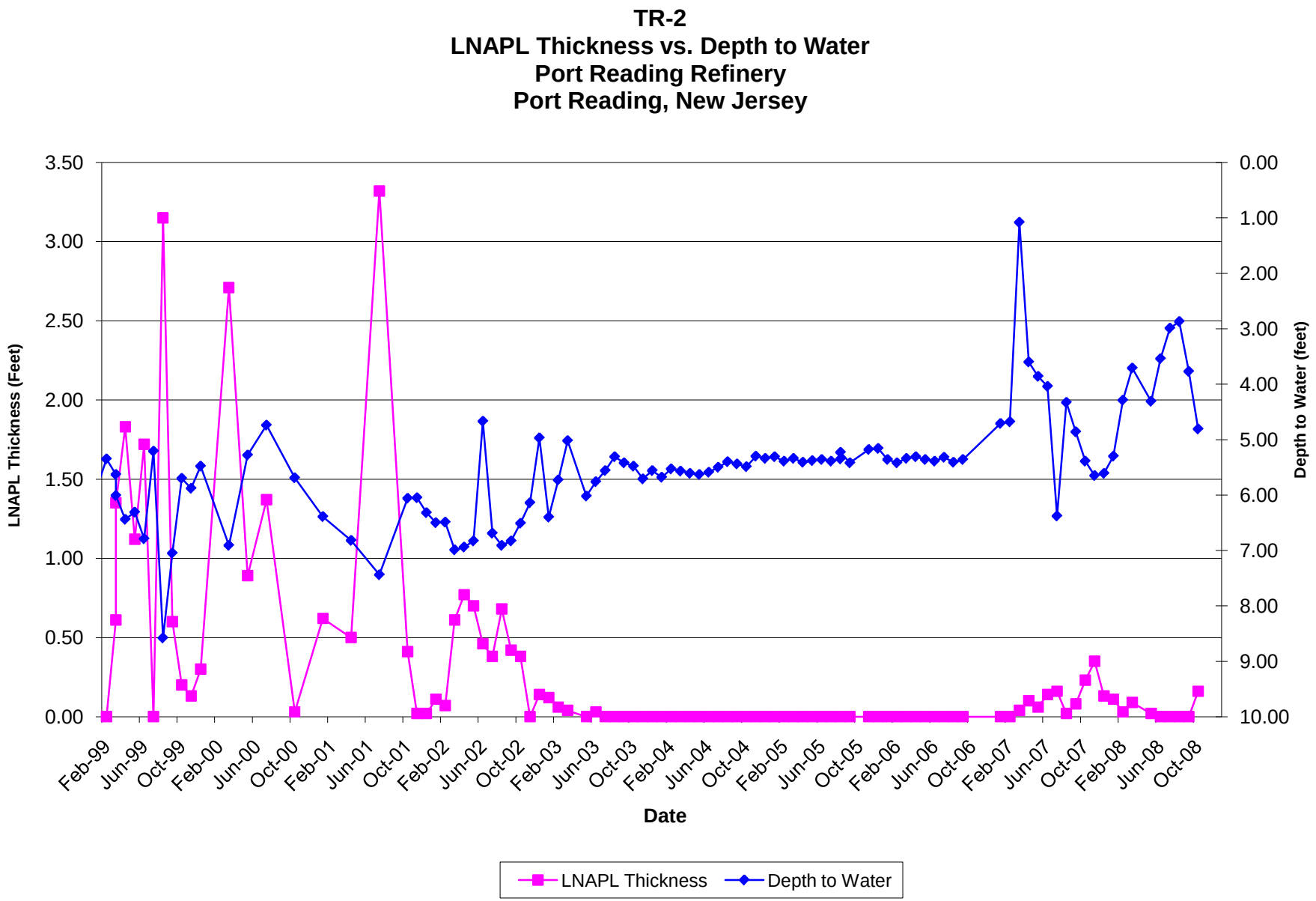
Nov-10
Jan-11
Mar-11
May-11
Jul-11
Sep-11
Nov-11
Date
LNAPL Thickness
Depth to Water

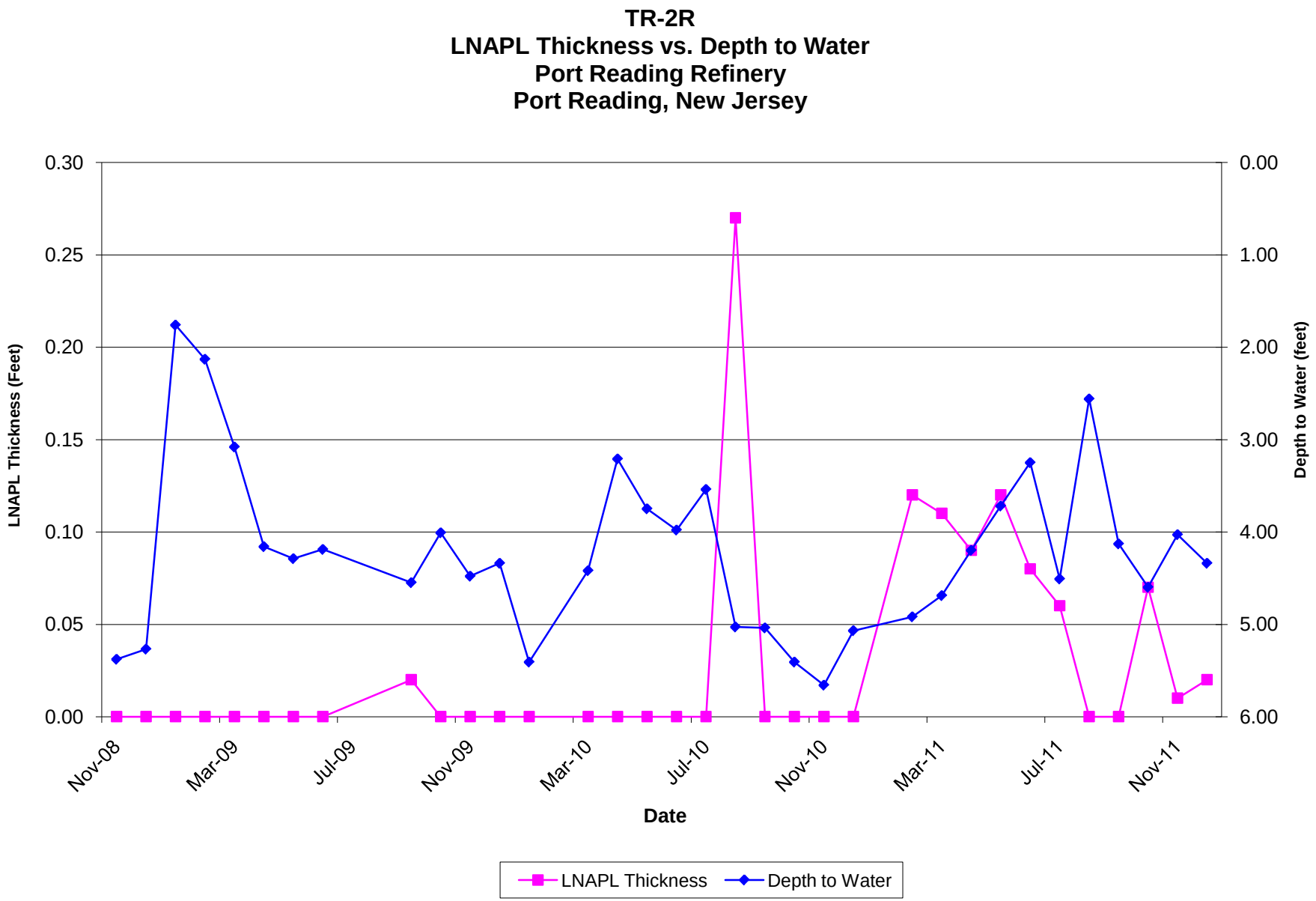

TF-1
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Sep-03
Dec-03
Mar-04
Jun-04
Sep-04
Dec-04
Mar-05
Jun-05
Sep-05
Dec-05
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Date
LNAPL Thickness
Depth to Water

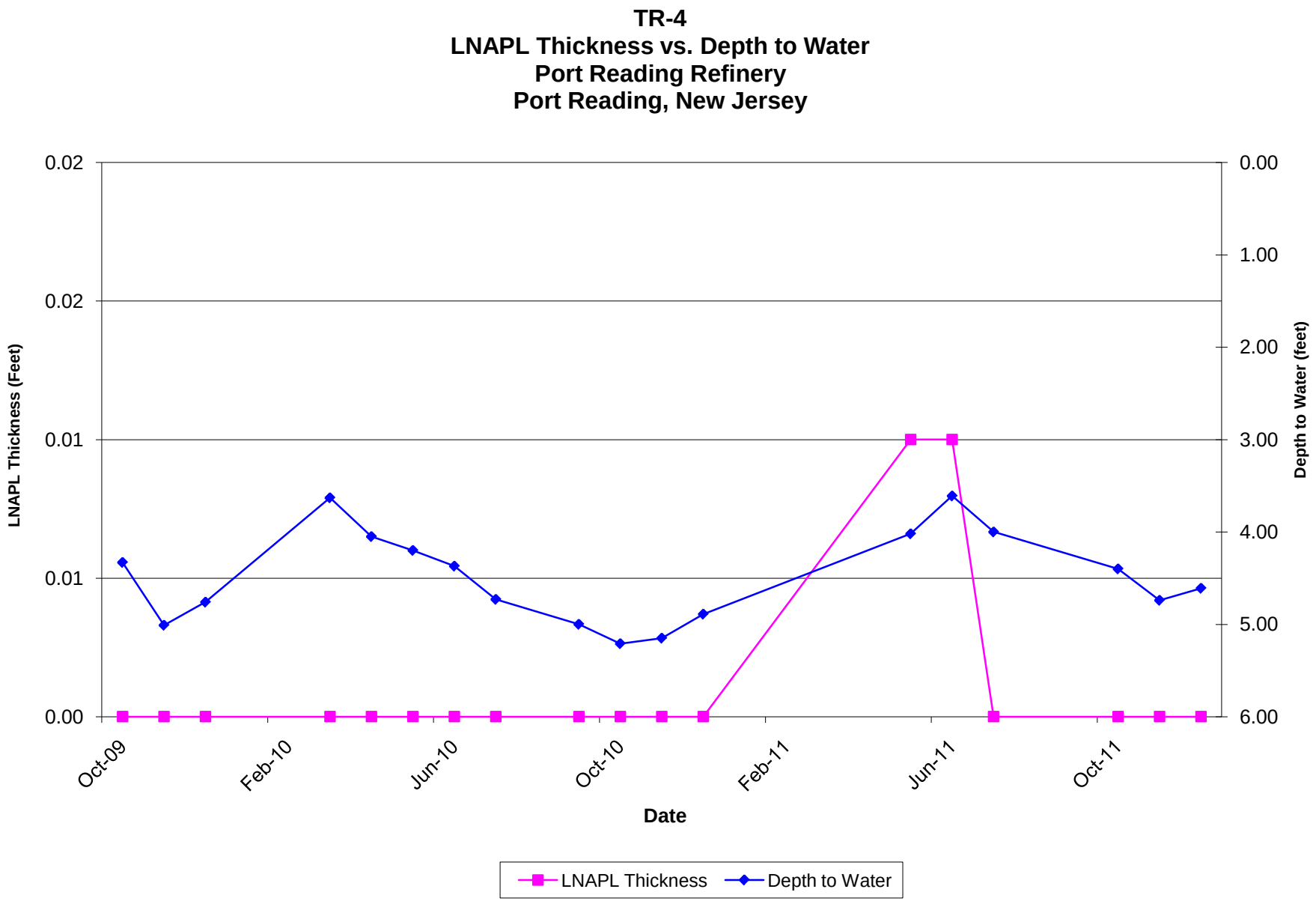

TF-2
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Nov-09
Feb-10
May-10
Aug-10
Nov-10
Feb-11
May-11
Aug-11
Nov-11
Date
LNAPL Thickness
Depth to Water


TM-6
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water
Date
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
LNAPL Thickness
Depth to Water


TM-7
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Nov-99
Apr-00
Sep-00
Feb-01
Jul-01
Dec-01
May-02
Oct-02
Mar-03
Aug-03
Jan-04
Jun-04
Nov-04
Apr-05
Sep-05
Feb-06
Jul-06
Dec-06
May-07
Oct-07
Mar-08
Aug-08
Jan-09
Jun-09
Nov-09
Apr-10
Sep-10
Feb-11
Jul-11
Dec-11
Date
LNAPL Thickness
Depth to Water

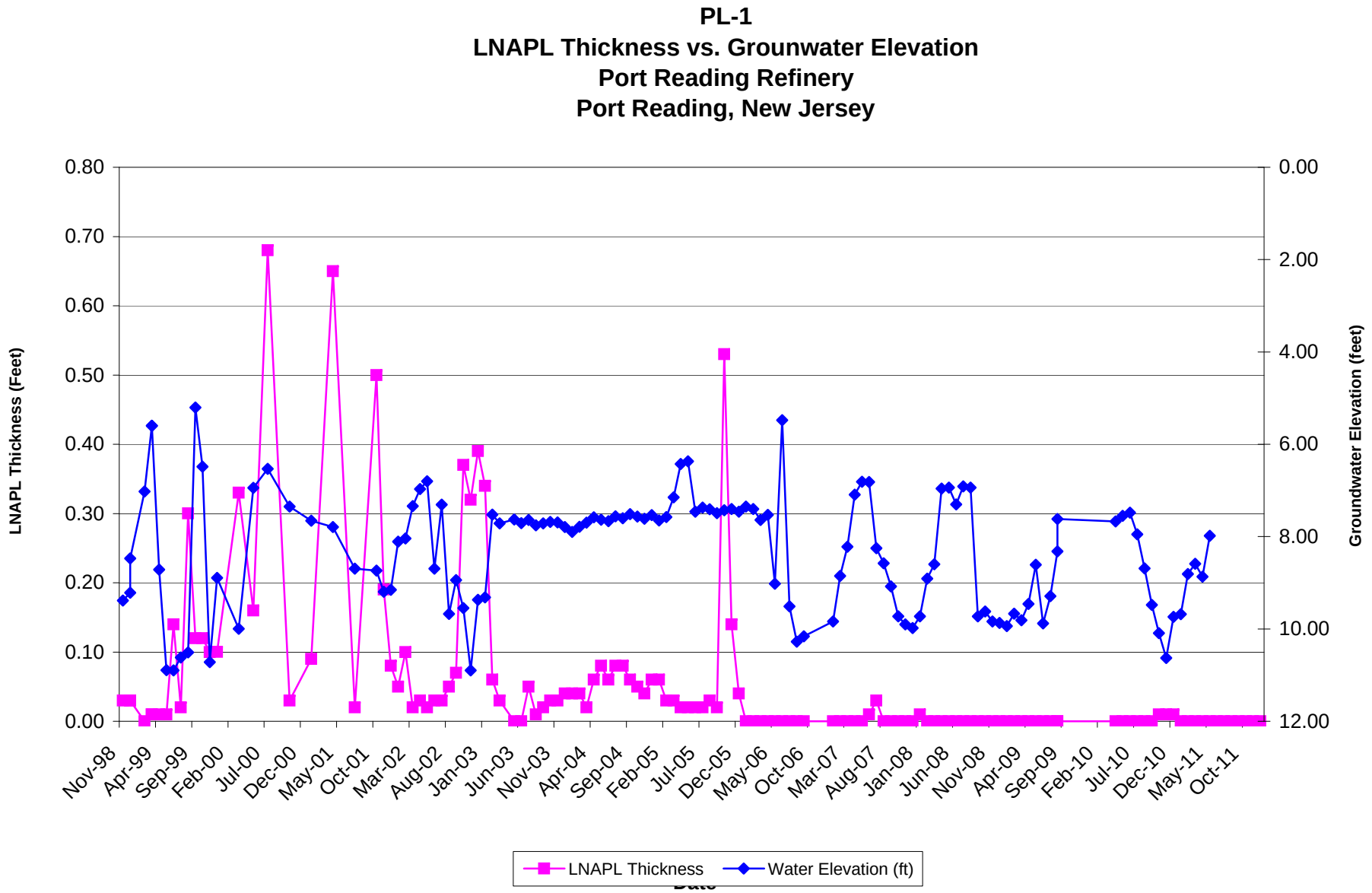

TR-2
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
Feb-99
Jun-99
Oct-99
Feb-00
Jun-00
Oct-00
Feb-01
Jun-01
Oct-01
Feb-02
Jun-02
Oct-02
Feb-03
Jun-03
Oct-03
Feb-04
Jun-04
Oct-04
Feb-05
Jun-05
Oct-05
Feb-06
Jun-06
Oct-06
Feb-07
Jun-07
Oct-07
Feb-08
Jun-08
Oct-08
Date
LNAPL Thickness
Depth to Water

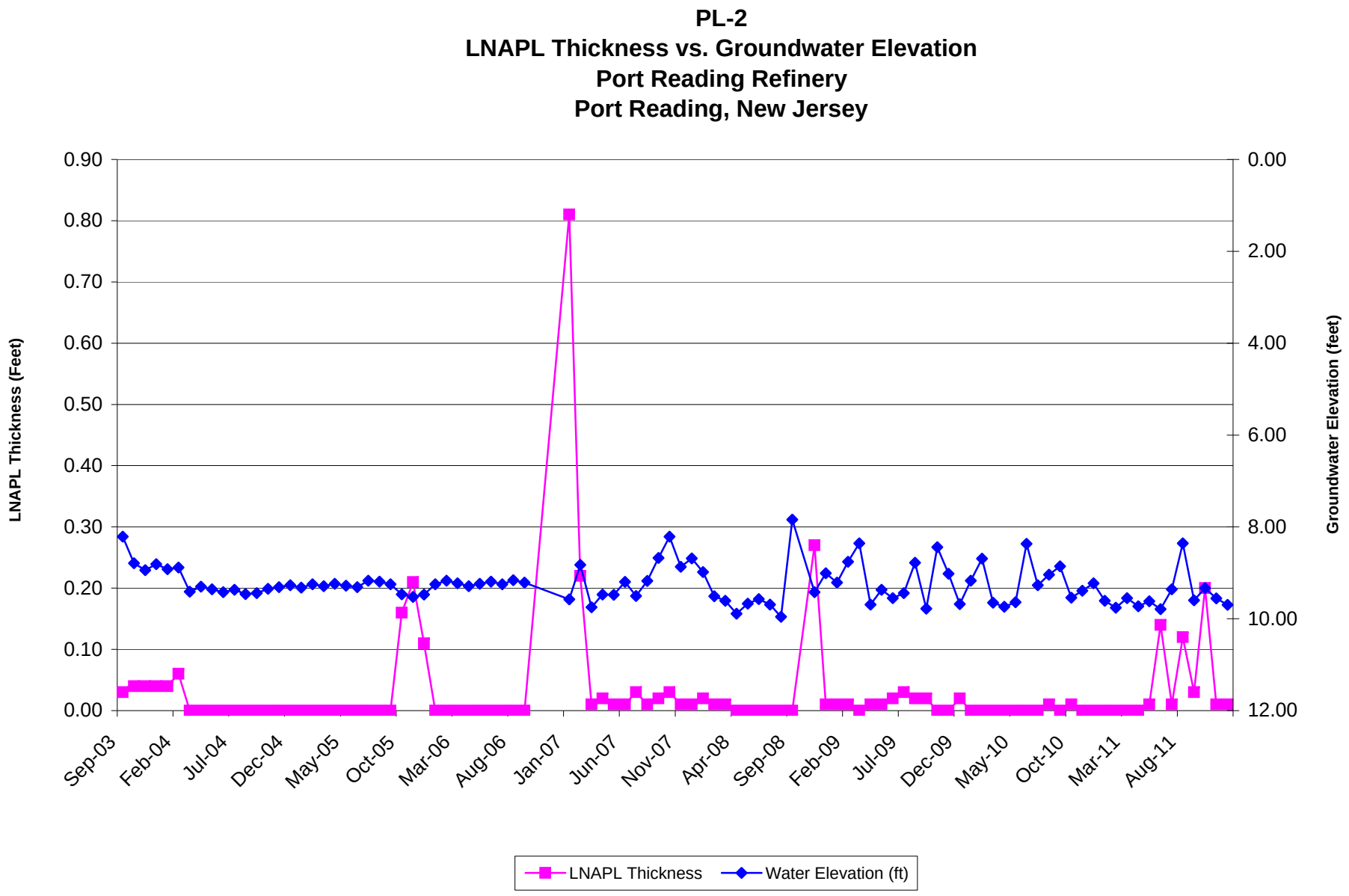

TR-2R
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Nov-08
Mar-09
Jul-09
Nov-09
Mar-10
Jul-10
Nov-10
Mar-11
Jul-11
Nov-11
Date
LNAPL Thickness
Depth to Water

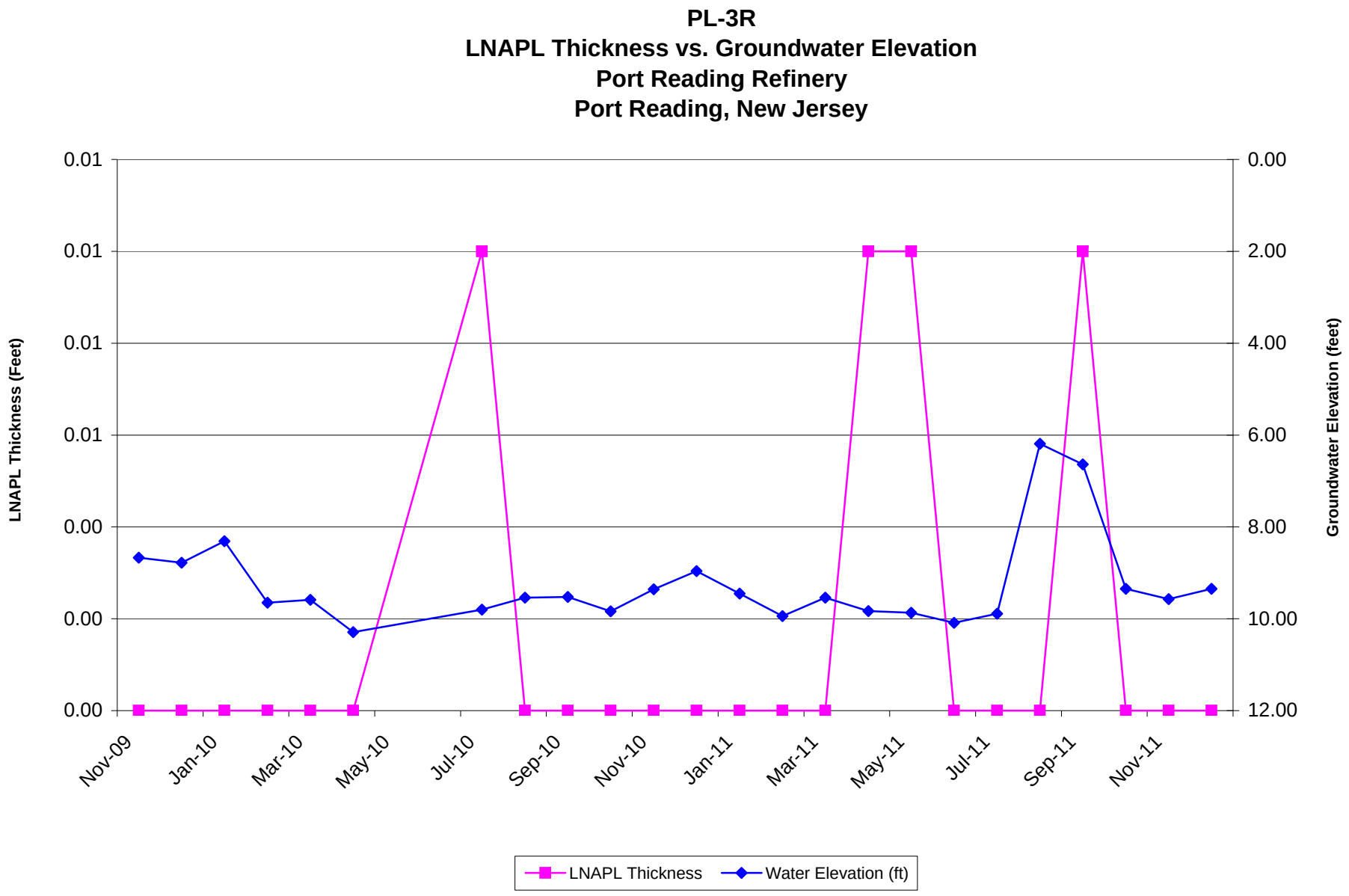

TR-4
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
0.02
0.02
0.01
0.01
0.00
Depth to Water (feet)
0.00
1.00
2.00
3.00
4.00
5.00
6.00
Oct-09
Feb-10
Jun-10
Oct-10
Feb-11
Jun-11
Oct-11
Date
LNAPL Thickness
Depth to Water

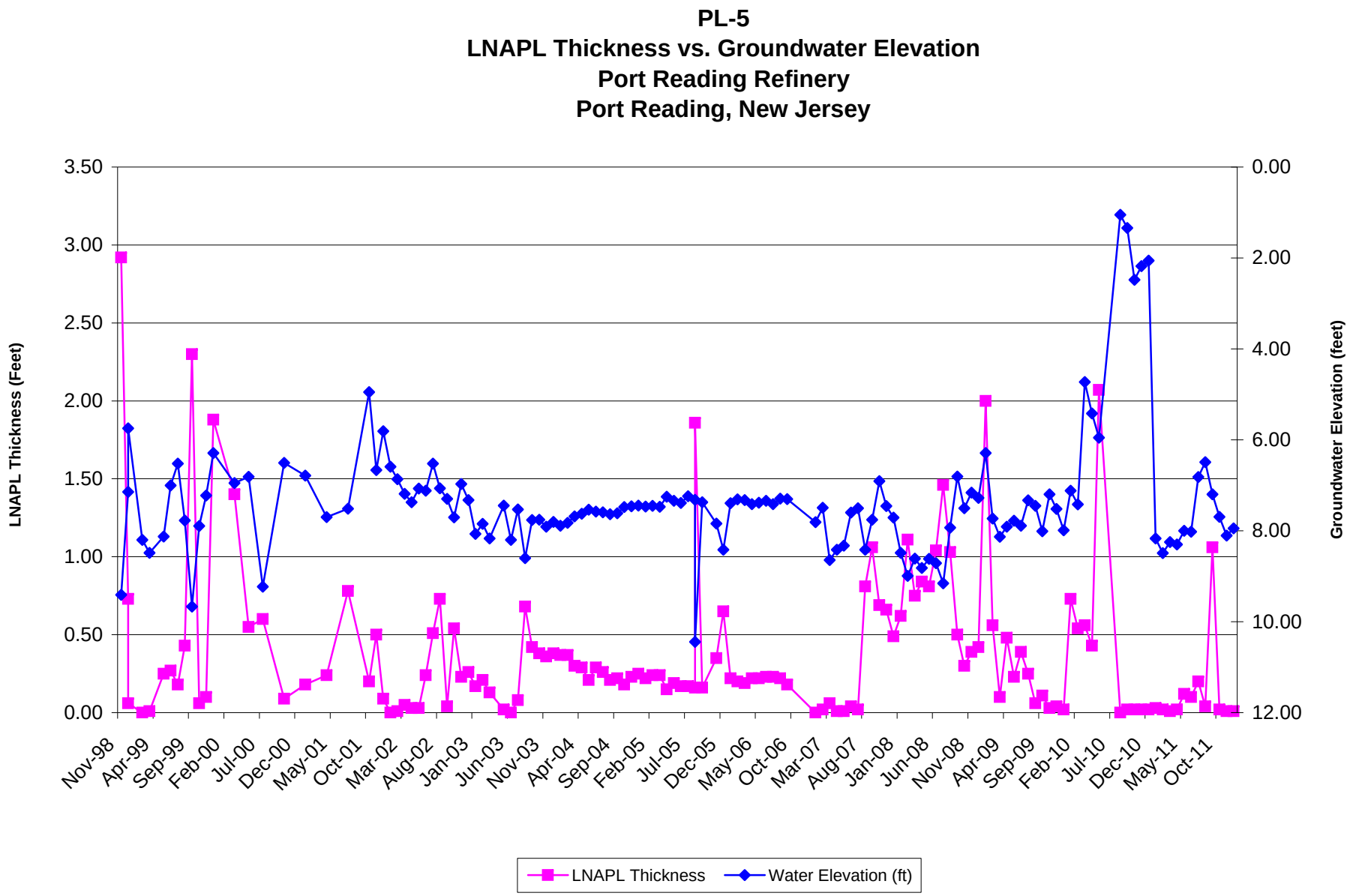
Appendix VI:

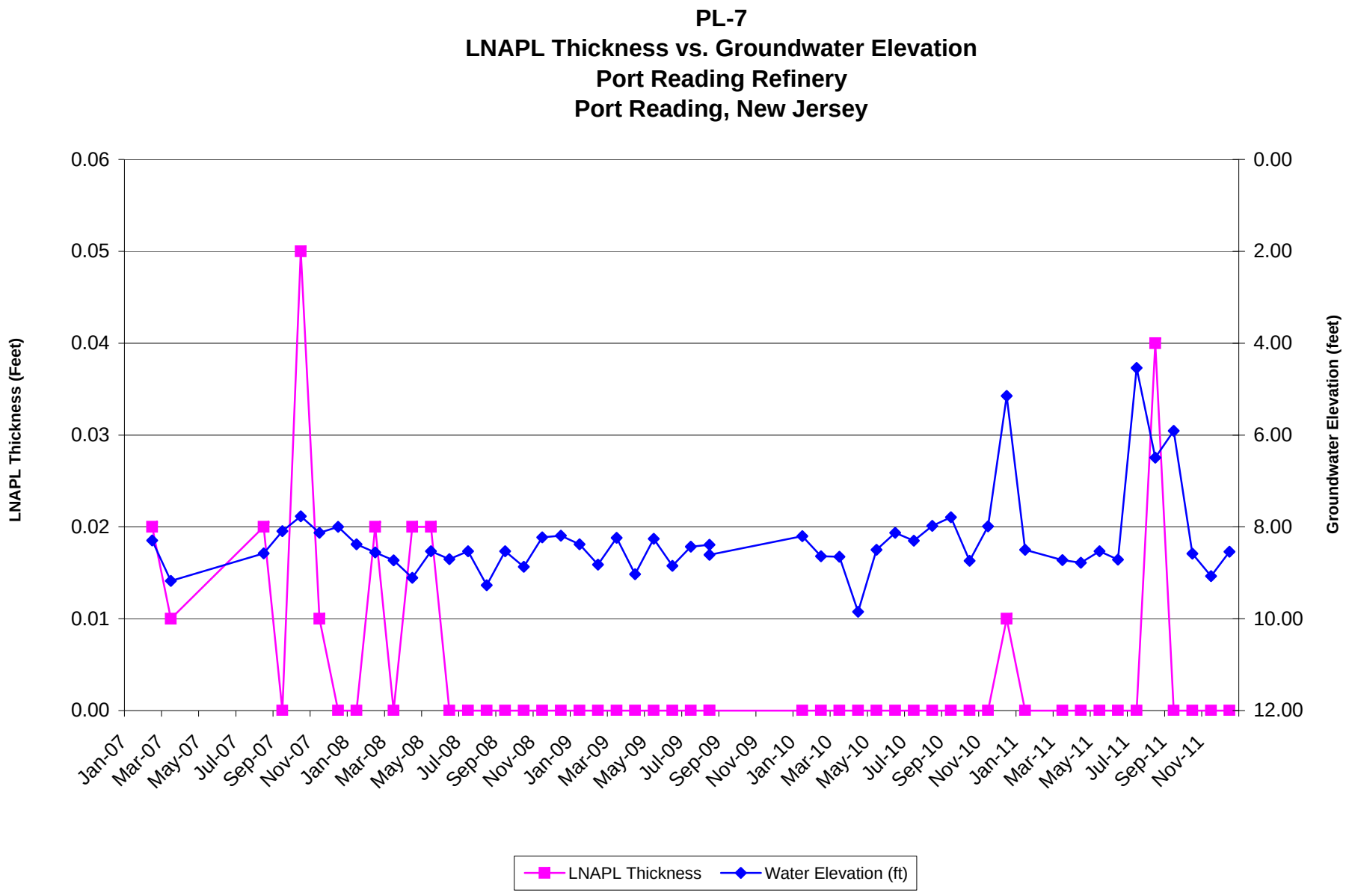
Graphical Depiction of LNAPL Thickness versus Groundwater Elevation

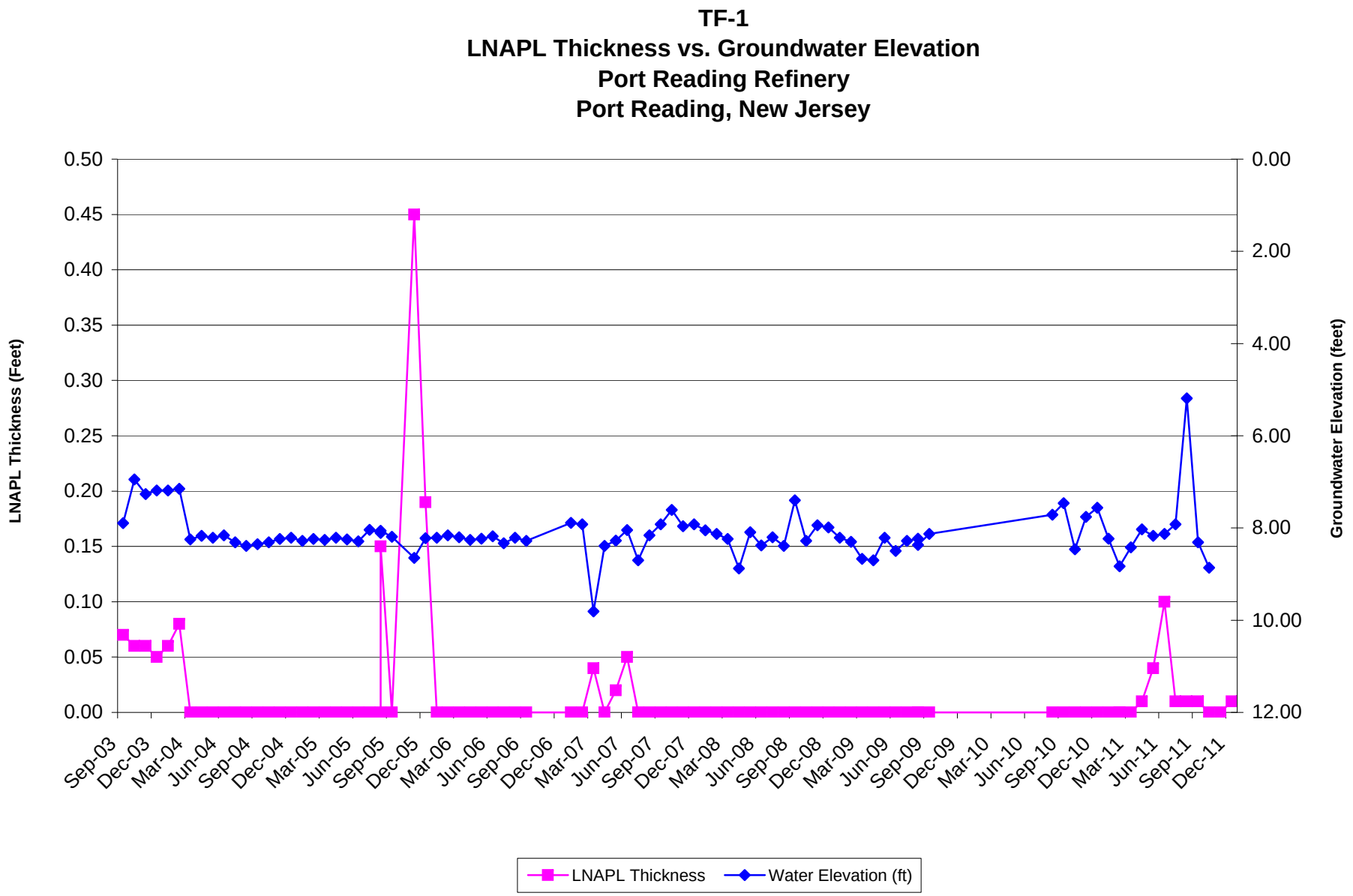

PL-1
LNAPL Thickness vs. Grounwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Nov-98
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
LNAPL Thickness
Water Elevation (ft)

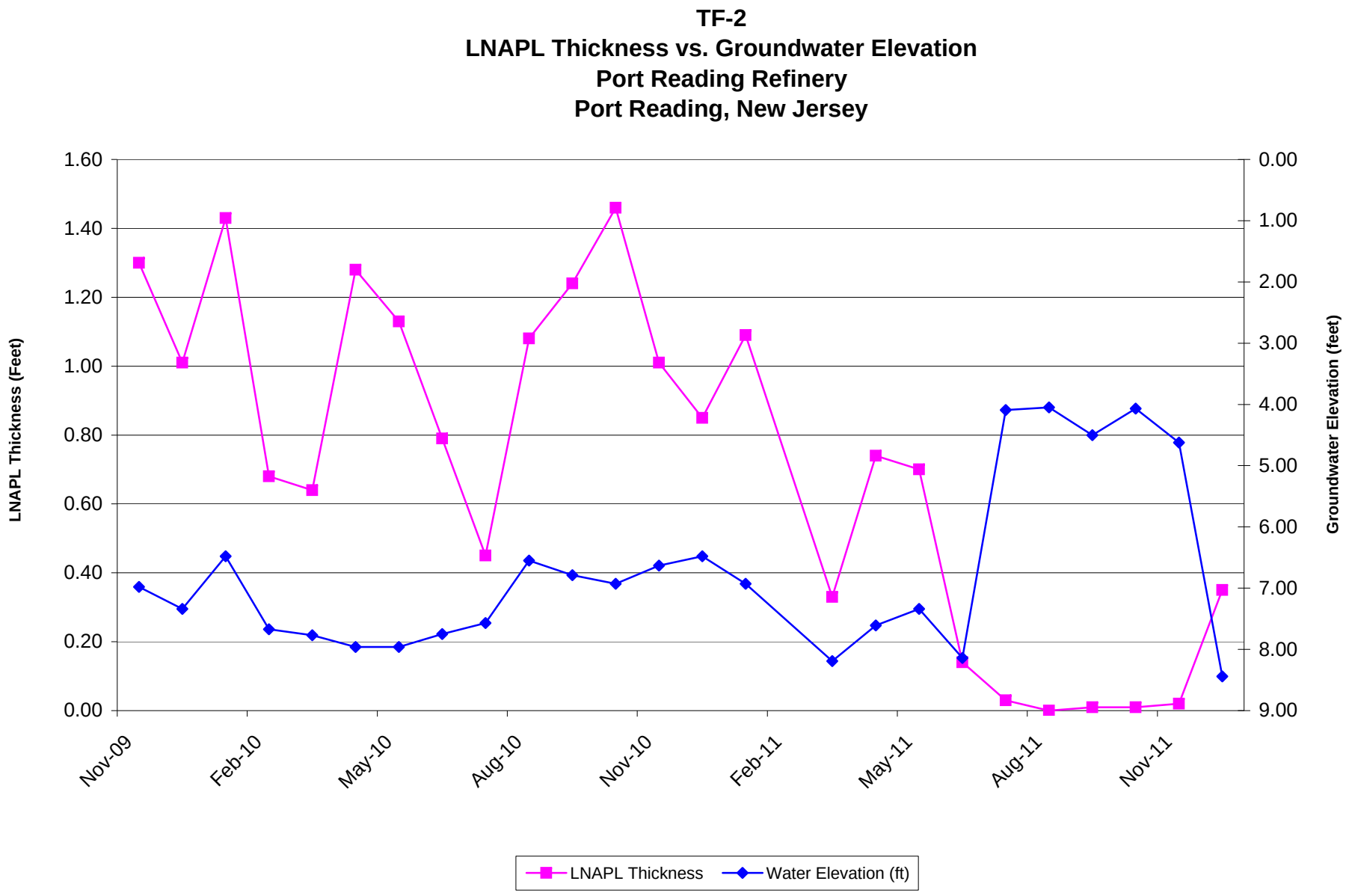

PL-2
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Sep-03
Feb-04
Jul-04
Dec-04
May-05
Oct-05
Mar-06
Aug-06
Jan-07
Jun-07
Nov-07
Apr-08
Sep-08
Feb-09
Jul-09
Dec-09
May-10
Oct-10
Mar-11
Aug-11
LNAPL Thickness
Water Elevation (ft)

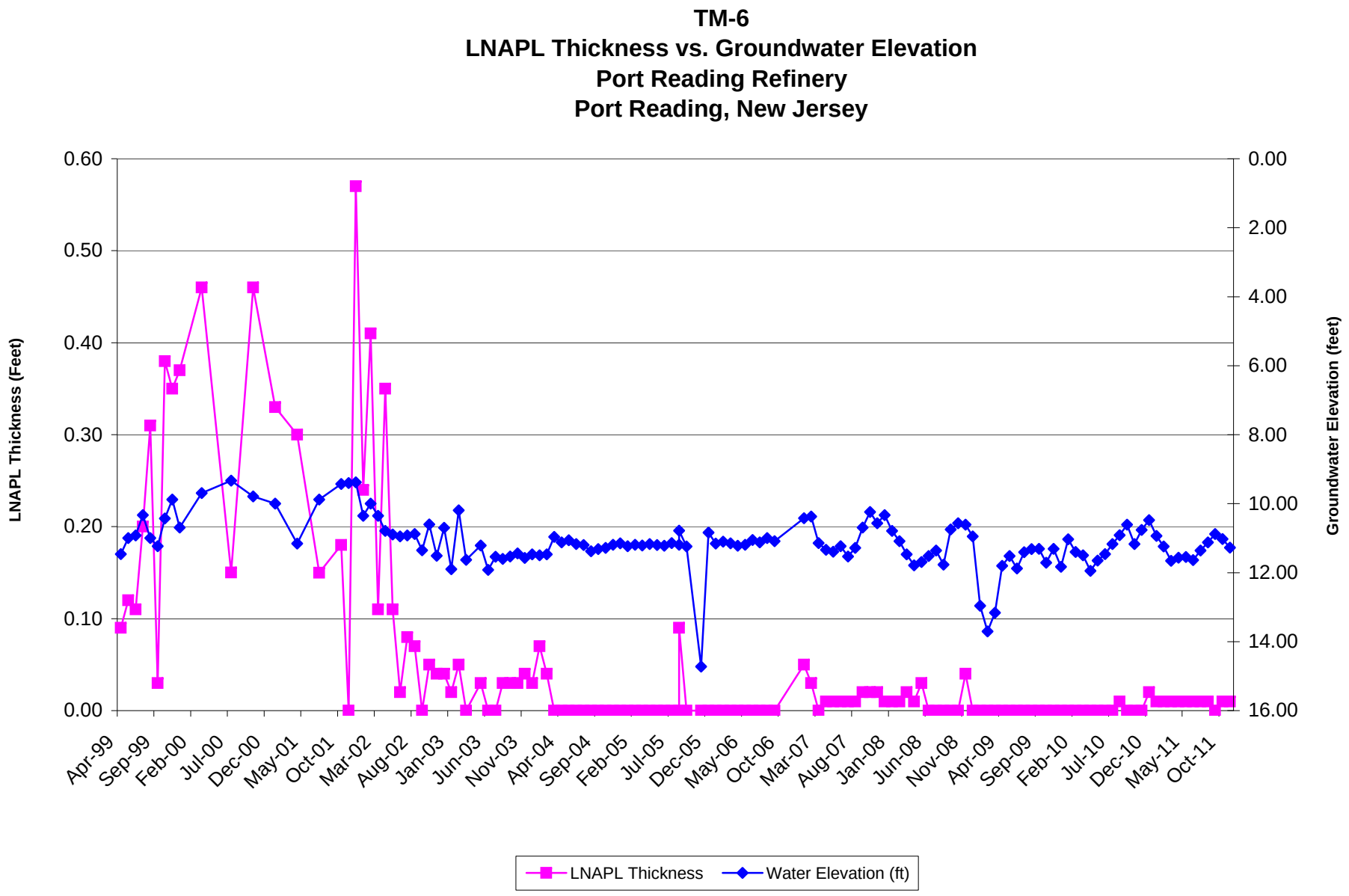

PL-3R
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.01
0.01
0.01
0.01
0.00
0.00
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Nov-09
Jan-10
Mar-10
May-10
Jul-10
Sep-10
Nov-10
Jan-11
Mar-11
May-11
Jul-11
Sep-11
Nov-11
LNAPL Thickness
Water Elevation (ft)


PL-5
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Nov-98
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
LNAPL Thickness
Water Elevation (ft)

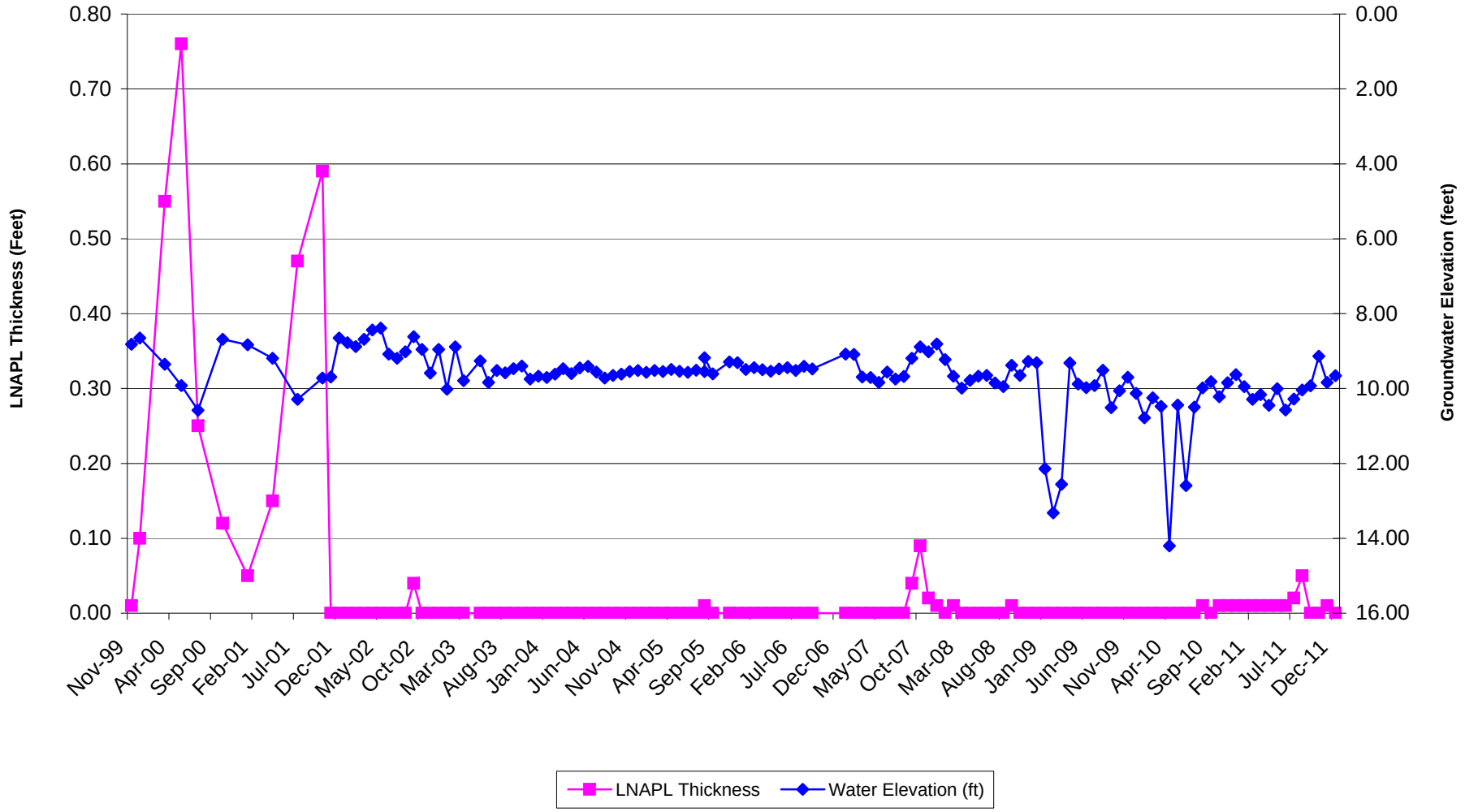

PL-7
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Jan-07
Mar-07
May-07
Jul-07
Sep-07
Nov-07
Jan-08
Mar-08
May-08
Jul-08
Sep-08
Nov-08
Jan-09
Mar-09
May-09
Jul-09
Sep-09
Nov-09
Jan-10
Mar-10
May-10
Jul-10
Sep-10
Nov-10
Jan-11
Mar-11
May-11
Jul-11
Sep-11
Nov-11
LNAPL Thickness
Water Elevation (ft)

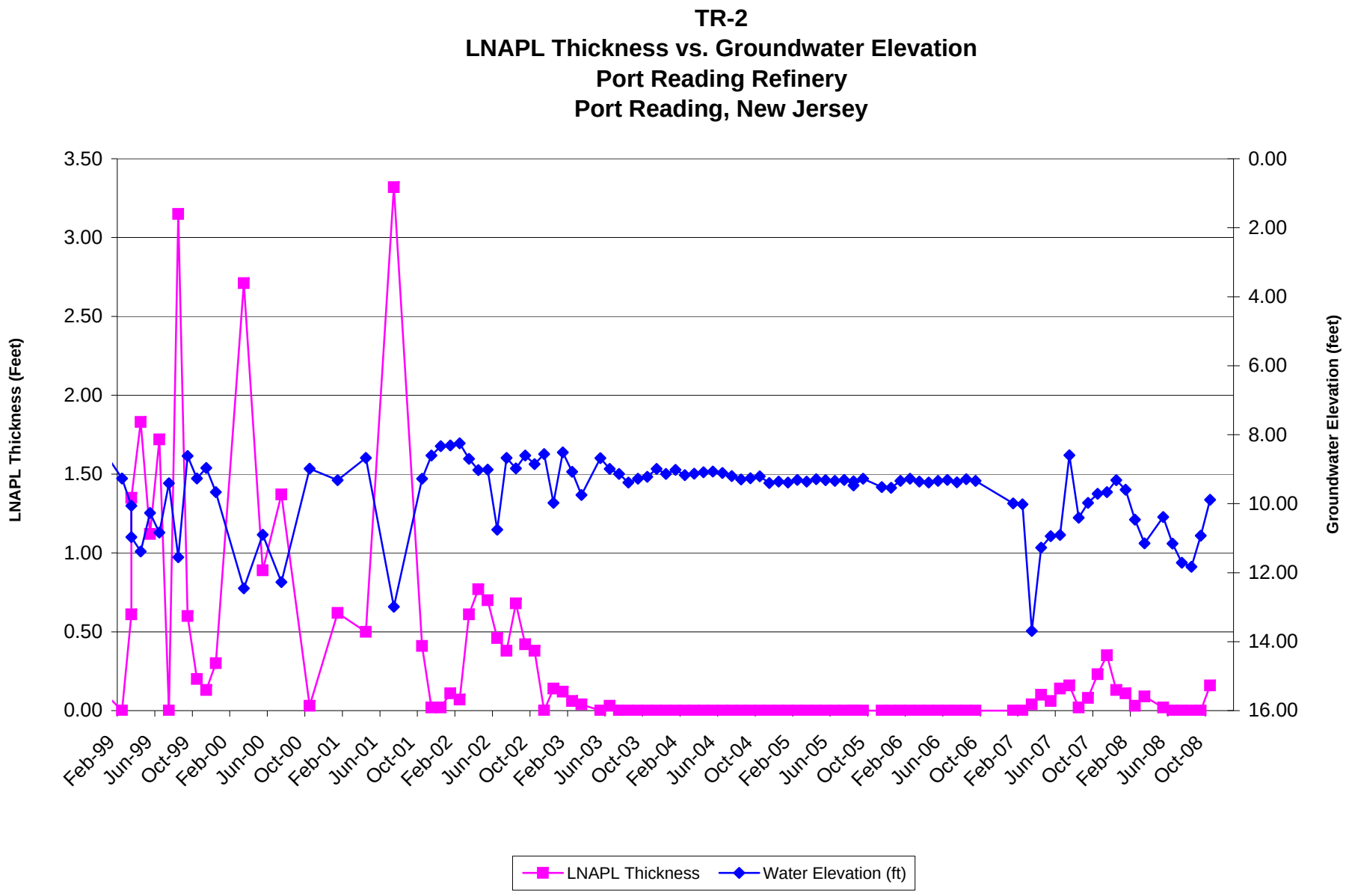

TF-1
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
Sep-03
Dec-03
Mar-04
Jun-04
Sep-04
Dec-04
Mar-05
Jun-05
Sep-05
Dec-05
Mar-06
Jun-06
Sep-06
Dec-06
Mar-07
Jun-07
Sep-07
Dec-07
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
LNAPL Thickness
Water Elevation (ft)

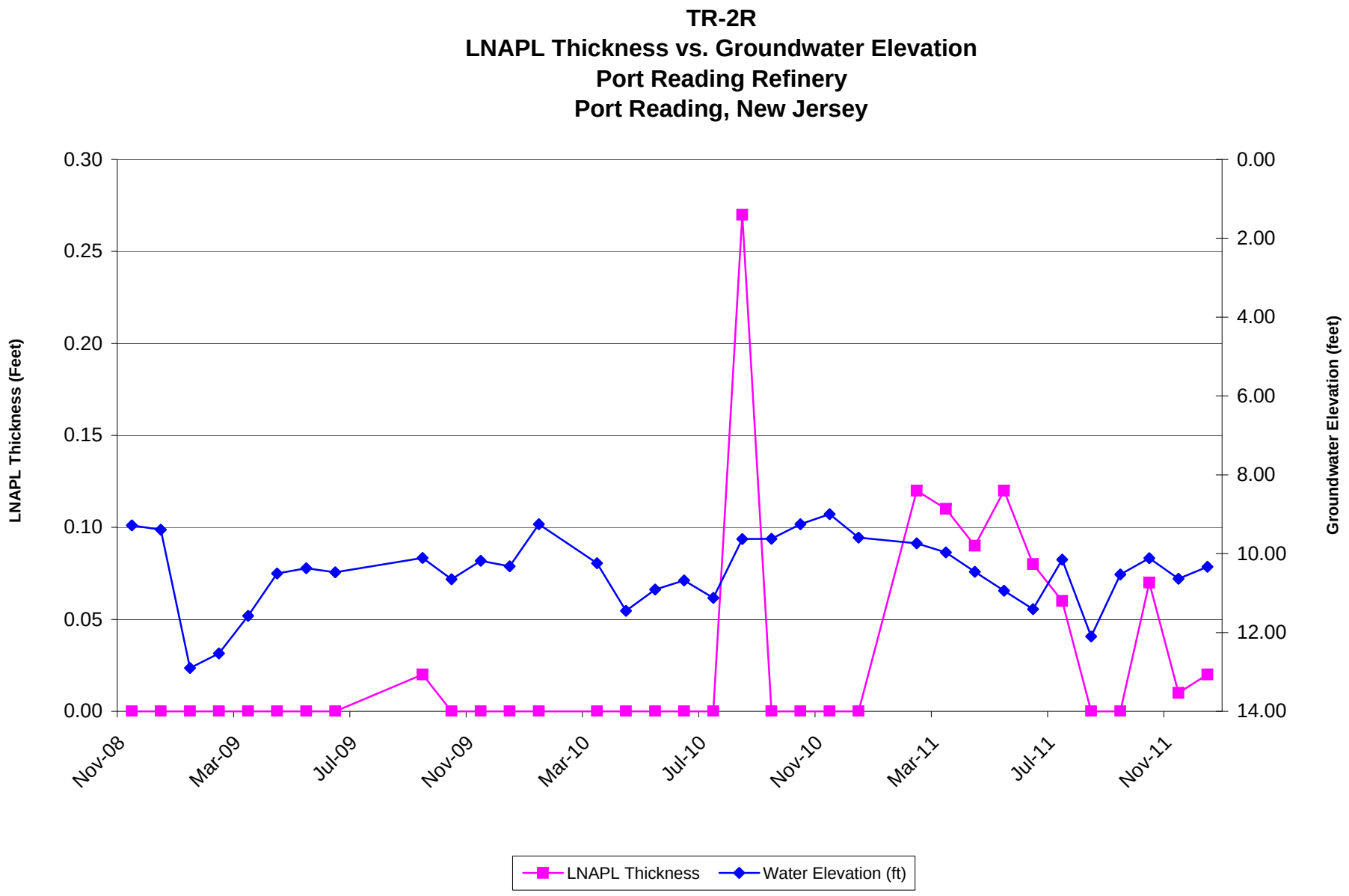

TF-2
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
0.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
Nov-09
Feb-10
May-10
Aug-10
Nov-10
Feb-11
May-11
Aug-11
Nov-11
LNAPL Thickness
Water Elevation (ft)

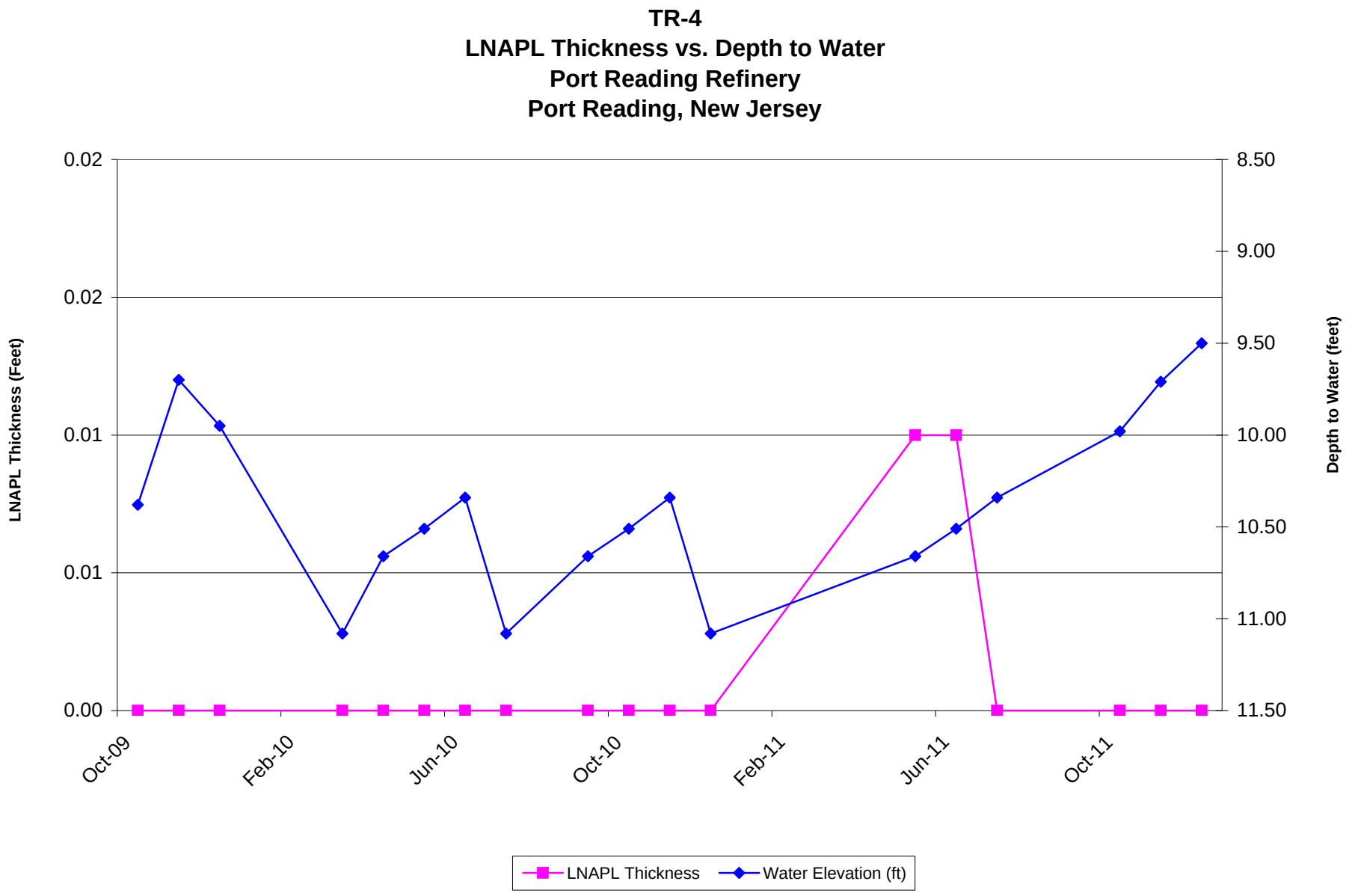

TM-6
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
Apr-99
Sep-99
Feb-00
Jul-00
Dec-00
May-01
Oct-01
Mar-02
Aug-02
Jan-03
Jun-03
Nov-03
Apr-04
Sep-04
Feb-05
Jul-05
Dec-05
May-06
Oct-06
Mar-07
Aug-07
Jan-08
Jun-08
Nov-08
Apr-09
Sep-09
Feb-10
Jul-10
Dec-10
May-11
Oct-11
LNAPL Thickness
Water Elevation (ft)

TM-7
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey




TR-2
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
Feb-99
Jun-99
Oct-99
Feb-00
Jun-00
Oct-00
Feb-01
Jun-01
Oct-01
Feb-02
Jun-02
Oct-02
Feb-03
Jun-03
Oct-03
Feb-04
Jun-04
Oct-04
Feb-05
Jun-05
Oct-05
Feb-06
Jun-06
Oct-06
Feb-07
Jun-07
Oct-07
Feb-08
Jun-08
Oct-08
LNAPL Thickness
Water Elevation (ft)


TR-2R
LNAPL Thickness vs. Groundwater Elevation
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Groundwater Elevation (feet)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
Nov-08
Mar-09
Jul-09
Nov-09
Mar-10
Jul-10
Nov-10
Mar-11
Jul-11
Nov-11
LNAPL Thickness
Water Elevation (ft)


TR-4
LNAPL Thickness vs. Depth to Water
Port Reading Refinery
Port Reading, New Jersey
LNAPL Thickness (Feet)
Depth to Water (feet)
0.02
0.02
0.01
0.01
0.00
8.50
9.00
9.50
10.00
10.50
11.00
11.50
Oct-09
Feb-10
Jun-10
Oct-10
Feb-11
Jun-11
Oct-11
LNAPL Thickness
Water Elevation (ft)

Appendix VII

1970 and 1972 Aerial Photographs – AOC 7 Area

2007
2006
2002
1995
1986
1980
1979
1972
1970
1969
1966
1963
1957
1954
1947
1940
1931
1:200 ft.
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