

AMERADA HESS CORPORATION

732-750-6000
732-750-6105 (FAX)

1 HESS PLAZA
WOODBIDGE, NJ 07095-0961

July 2, 2002

Mr. Steve Sangesland
New York State DEC Region 2
47-40 21st Street
Long Island City, NY 11101

Via: Certified Mail # 7000 1670 0012 2877 6806
Return Receipt Requested

Re: Subsurface Investigation Report
Hess Station 32516 – Greenpoint
210 Greenpoint Avenue
Brooklyn, New York
NYSDEC Spill # 93-03243

Dear Mr. Sangesland:

Enclosed please find the Subsurface Investigation Report for the above-referenced Amerada Hess Corporation (Hess) site. This report contains data collected during the sampling event performed in May 2002.

If you have any questions, please contact Mr. Michael Matri at the letterhead address or directly at (732) 750-6432. Mr. Matri will be managing this site on behalf of Hess.

Sincerely,



for: Valerie A. Stoltzfus
Environmental Scientist

Enclosure

cc: Ed Russo – EnviroTrac (w/o Enc.)

**Subsurface Investigation Report
June 2002**

Hess Station 32516 – Greenpoint

NYSDEC #: 93-03243

210 Greenpoint Avenue

HESS #: 32516

Brooklyn, New York

SUMMARY

An on-site subsurface investigation was conducted on May 6, 2002. A total of six borings were completed for the collection of soil and groundwater samples. The locations of the soil borings are depicted in Figure 1. Summit Drilling Co., Inc. installed the borings utilizing a direct-push Geoprobe.

SOIL SAMPLING

Soil samples were collected from all six borings for soil characterization, field screening utilizing a photo-ionization detector (PID) for the detection of volatile organic compounds (VOCs), and laboratory analysis. Soil samples were collected continuously in four-foot intervals until the depth where groundwater was encountered, which ranged from 8 to 12 feet. A soil sample from each boring was selected for laboratory analysis based on visual observations and PID readings. Soil boring logs are attached. Soil samples were submitted to Accutest of Dayton, New Jersey and analyzed for VOCs via EPA Method 8260 plus MTBE (STARS List).

Laboratory analytical results for the soil samples indicate that VOCs were not detected above the New York State Department of Environmental Conservation (NYSDEC) Technical and Administrative Guidance Memorandum (TAGM) 4046 Soil Cleanup Objectives to Protect Groundwater Quality. A copy of the laboratory report and a table summarizing soil sampling results are attached.

GROUNDWATER SAMPLING

Groundwater samples were collected from all six borings. The groundwater samples were submitted to Toxikon Corporation of Bedford, Massachusetts and analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) via EPA Method 602.

Laboratory analytical results for the groundwater samples indicate that five of the six samples exceed the NYSDEC Groundwater Standards for BTEX and MTBE compounds. BTEX compounds were detected above the NYSDEC standards in Geoprobe Points (GP)-1, GP-2, GP-4, and GP-5. MTBE was detected above the NYSDEC standards in GP-1, GP-2, GP-3, and GP-4. A copy of the laboratory report and a table summarizing groundwater sampling results are attached.

RECOMMENDATIONS

Hess will submit a Remedial Action Plan (RAP) to the NYSDEC to address elevated concentrations of BTEX and MTBE in groundwater by the end of the third quarter of 2002. Hess will continue to conduct monthly product recovery events and quarterly groundwater sampling. Hess will also continue to operate the Kiosk SVE system.

ATTACHMENTS

Figure 1 – Geoprobe Groundwater Sampling Data on May 6, 2002

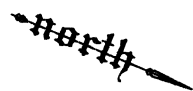
Geologic Logs

Table 1 – Summary of Soil Sampling Results

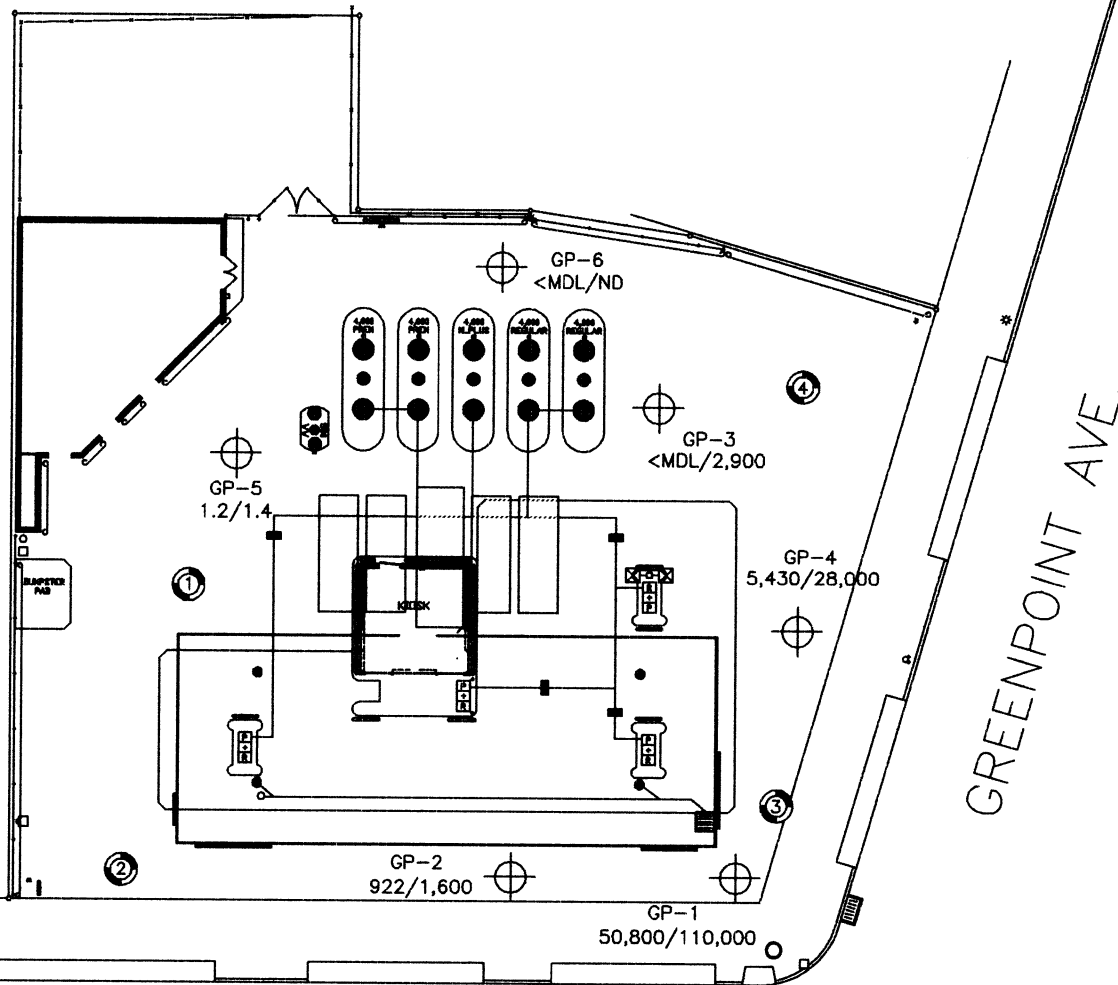
Table 2 – Summary of Groundwater Sampling Results

Laboratory Reports – Soil and Groundwater

COMMERCIAL & RESIDENTIAL



COMMERCIAL & RESIDENTIAL



LEGEND:

MONITORING WELL

GEOPROBE POINT

EXISTING UST

FORMER UST

) = NOT DETECTED

' = GEOPROBE POINT

XL = METHOD DETECTION LIMIT

EXAMPLE GEOPROBE POINT:

= GEOPROBE POINT

-2 = GEOPROBE POINT NUMBER

2/1,600 = BTEX/MTBE ON

MAY 6, 2002

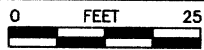
McGUINNESS BLVD.

GREENPOINT AVE.

COMMERCIAL & RESIDENTIAL

COMMERCIAL

NOTE: BASE MAP FROM ENVIRONMENTAL ALLIANCE



REVISION DATE:
MAY 30, 2002

SCALE:
1" = 25'

REVISED BY: TB

AMERADA HESS - GREENPOINT
210 GREENPOINT AVENUE
BROOKLYN, NEW YORK

GEOPROBE GROUNDWATER SAMPLING DATA
ON MAY 6, 2002

FIGURE #

1

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-1

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint	Address: 210 Greenpoint Ave., Brooklyn, NY	Date	DTW	Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.	Method: Geoprobe			Measuring Point Elevation
Date Started: 5/6/02	Date Completed: 5/6/02			Not Applicable
Completion Depth: 11'	ENVIROTRAC Geologist: Mike Alliegro			

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	24"	NM	118	0'-1' - (Fill Material) Medium grained brown SAND with some gravel; dry, no odor. 1'-2' - Medium grained brown SAND ; dry, no odor. 2'-2.5' - Medium grained brown SAND with some black staining; dry, odor. 4'-8' - Fine to medium grained brown SAND with trace of dark brown clay; moist, odor. Wet at 7.5'-8', water at 8'. 8'-11' - Fine grained brown SAND with trace of dark brown clay; wet, odor.
	4	36"	NM	348	
	8	48"	NM	377	
	11				

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-2

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint	Address: 210 Greenpoint Ave., Brooklyn, NY	Date	DTW	Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.	Method: Geoprobe			Measuring Point Elevation
Date Started: 5/6/02	Date Completed: 5/6/02			Not Applicable
Completion Depth: 11'	ENVIROTRAC Geologist: Mike Alliegro			

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Reco- very (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	36"	NM	54	0'-1' - (Fill Material) Medium grained brown SAND with some gravel; dry, no odor.
	4	36"	NM	50	1'-4' - Fine to medium grained light brown SAND with some gravel; dry, no odor.
	8	42"	NM	78	4'-8' - Fine to medium grained brown to dark brown SAND with trace of dark brown clay; moist, odor. Wet at 7.5'-8', water at 8'.
	11				8'-11' - Fine grained brown SAND with trace of dark brown clay; wet, odor.

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-3

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint		Address: 210 Greenpoint Ave., Brooklyn, NY		Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.		Method: Geoprobe		Measuring Point Elevation
Date Started: 5/6/02		Date Completed: 5/6/02		Not Applicable
Completion Depth: 11'		ENVIROTRAC Geologist: Mike Alliegro		

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	36"	NM	55	0'-3.5' - (Fill Material) Medium to coarse grained brown SAND with some gravel and brick; dry, no odor.
	4	8"	NM	53	3.5'-4' - Fine grained brown SAND ; dry, no odor. 4'-8' - Fine grained brown SAND ; dry no odor.
	8	48"	NM	68	8'-11' - Fine grained brown SAND with some clay; moist, no odor. Wet at 8.5'-9', water at 9'.
	11				

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-4

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint		Address: 210 Greenpoint Ave., Brooklyn, NY		Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.		Method: Geoprobe		Measuring Point Elevation
Date Started: 5/6/02		Date Completed: 5/6/02		Not Applicable
Completion Depth: 12'		ENVIROTRAC Geologist: Mike Alliegro		

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	36"	NM	76	<u>0'-1.5'</u> - (Fill Material) Medium to coarse grained brown SAND with some rock fragments; dry, no odor. <u>1.5'-4'</u> - Medium grained brown SAND with some pebbles; dry, no odor.
	4	32"	NM	76	<u>4'-4.5'</u> - Medium to coarse grained brown SAND ; dry, no odor. <u>4.5'-8'</u> - Fine grained brown to black SAND ; moist, odor. Wet at 7.5'-8', water at 8'.
	8	18"	NM	395	<u>8'-8.5'</u> - Medium to fine grained brown SAND ; wet, odor. <u>8.5'-9.5'</u> - Fine grained light brown SAND ; wet, odor.
	12				<u>9.5'-12'</u> - Fine grained dark brown SAND with some clay; wet, odor.

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-5

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint	Address: 210 Greenpoint Ave., Brooklyn, NY	Date	DTW	Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.	Method: Geoprobe			Measuring Point Elevation
Date Started: 5/6/02	Date Completed: 5/6/02			Not Applicable
Completion Depth: 12'	ENVIROTRAC Geologist: Mike Alliegro			

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Recovery (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	48"	NM	34	<u>0'-3.5'</u> - (Fill Material) Coarse grained grey SAND with some rock fragments; dry, no odor. <u>3.5'-4'</u> - Fine grained grey SAND ; dry, no odor.
	4	40"	NM	72	<u>4'-7.5'</u> - Medium to coarse grained grey SAND with trace of rock fragments; dry, no odor. <u>7.5'-8'</u> - Fine grained brown SAND ; moist, no odor.
	8	48"	NM	46	<u>8'-8.5'</u> - Medium to fine grained grey SAND with trace of rock fragments; moist, no odor. <u>8.5'-12'</u> - Fine grained brown SAND with some grey clay; wet, no odor. Wet at 8.5'-9', water at 9'.
	12				

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Geologic Log

ENVIROTRAC, LTD.

80 B Air Park Drive, Ronkonkoma, NY 11779

Log of GP-6

Client: Amerada Hess Corporation		Depth to Water (ft. from measuring pt.)		Site Elevation Datum
Site Name: Greenpoint	Address: 210 Greenpoint Ave., Brooklyn, NY	Date	DTW	Approximately 10 feet above sea level.
Drilling Company: Summit Drilling Co., Inc.	Method: Geoprobe			Measuring Point Elevation
Date Started: 5/6/02	Date Completed: 5/6/02			Not Applicable
Completion Depth: 16'	ENVIROTRAC Geologist: Mike Alliegro			

Well Construction (NTS)	DEPTH (ft. below grade)	SAMPLES			SOIL DESCRIPTION
		Reco- very (in.)	Blow per 6 in.	PID (ppm)	
No Well Installed	0	18"	NM	32	0'-4' - (Fill Material) Medium to fine grained light brown SAND with some brick and asphalt; dry, no odor.
	4	40"	NM	72	4'-8' - Medium to coarse grained brown SAND with some rock fragments and trace of brick; dry, no odor.
	8	48"	NM	50	8'-12' - Fine grained brown SAND with some coarse sand and trace of clay; dry, no odor.
	12	48"	NM	80	12'-16' - Fine grained brown SAND with some clay; wet, no odor. Water at 12'.
	16				

NTS - Not to Scale

NM - Not Measured

NS - Not Sampled

Table 1 - Summary of Soil Sampling Results

Hess Station – Greenpoint
210 Greenpoint Avenue
Brooklyn, NY

Compound	GP-1 (1-4 ft.)	GP-2 (4-7.5 ft.)	GP-3 (4-8 ft.)	GP-4 (4-8 ft.)	GP-5 (4-7.5 ft.)	GP-6 (4-8 ft.)	NYSDEC TAGM 4046 Soil Cleanup Objectives
Benzene	ND	ND	ND	ND	ND	ND	60
n-Butylbenzene	ND	ND	ND	ND	ND	ND	18,000
sec-Butylbenzene	6.9	ND	ND	ND	4.4	ND	25,000
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	11,000
Ethylbenzene	7.2	ND	ND	2.7	12.3	ND	5,500
Isopropylbenzene	6.8	ND	ND	ND	4.0	ND	2,300
p-Isopropyltoluene	7.4	ND	ND	ND	16.5	ND	11,000
Methyl Tertiary-Butyl Ether	15.9	6.4	3.3	5.8	2.0	1.3	120
Naphthalene	16.8	ND	2.4	3.9	64.9	ND	13,000
n-Propylbenzene	9.5	ND	ND	1.9	7.4	ND	3,700
Toluene	11.4	ND	ND	2.4	12.1	ND	1,500
1,2,4-Trimethylbenzene	99.6	ND	2.4	2.9	48.2	ND	13,000
1,3,5-Trimethylbenzene	53.9	3.3	3.9	7.7	22.6	ND	3,300
m,p-Xylene	79.9	ND	2.7	4.3	49.8	ND	800
o-Xylene	89.5	ND	7.3	16.7	31.5	ND	600
Xylene (total)	169	ND	10.0	21.0	81.3	ND	1,200

Samples collected May 6, 2002

EPA Analytical Method 8260 plus MTBE (STARS List)

Concentrations presented in micrograms per kilogram (ug/kg)

ND – Compound not detected above method detection limit

Table 2 - Summary of Groundwater Sampling Results

Hess Station – Greenpoint
210 Greenpoint Avenue
Brooklyn, NY

Compound	GP-1	GP-2	GP-3	GP-4	GP-5	GP-6	NYSDEC Groundwater Standards
Benzene	3,900	600	< 50	1,600	1.2	< 1	0.7
Toluene	16,000	< 10	< 50	1,500	ND	ND	5
Ethylbenzene	8,900	76	< 50	460	ND	ND	5
Xylenes (total)	22,000	246	< 150	1,870	ND	ND	5
BTEX (total)	50,800	922	< MDL	5,430	1.2	< MDL	-
Methyl Tertiary-Butyl Ether	110,000	1,600	2,900	28,000	1.4	ND	10

Samples collected May 6, 2002

EPA Analytical Method 602

Concentrations presented in micrograms per liter (ug/L)

MDL – Method Detection Limit

ND – Compound not detected above method detection limit

Bold value indicates compound detected above NYSDEC Groundwater Standards

MAY 23 2002

Technical Report for

EnviroTrac

Hess, 210 Greenpoint Avenue, Brooklyn, NY

Accutest Job Number: N14011

Report to:

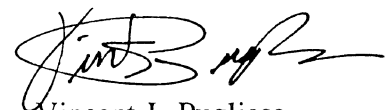
Envirotrac
80 B Air Park Drive
Ronkonkoma, NY 11779

ATTN: Ed Russo

Total number of pages in report: 9



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.



Vincent J. Pugliese
President

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, MA, MD, NC, PA, RI, SC, VA

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Sample Summary

EnviroTrac

Job No: N14011

Hess, 210 Greenpoint Avenue, Brooklyn, NY

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
N14011-1	05/06/02	09:45 MA	05/10/02	SO	Soil	GP-1 (1-4FEET)
N14011-2	05/06/02	10:45 MA	05/10/02	SO	Soil	GP-2 (4-7.5FEET)
N14011-3	05/06/02	11:45 MA	05/10/02	SO	Soil	GP-3 (4-8FEET)
N14011-4	05/06/02	12:45 MA	05/10/02	SO	Soil	GP-4 (4-8FEET)
N14011-5	05/06/02	13:45 MA	05/10/02	SO	Soil	GP-5 (4-7.5FEET)
N14011-6	05/06/02	14:45 MA	05/10/02	SO	Soil	GP-6 (4-8FEET)

Report of Analysis

Client Sample ID:	GP-1 (1-4FEET)	Date Sampled:	05/06/02
Lab Sample ID:	N14011-1	Date Received:	05/10/02
Matrix:	SO - Soil	Percent Solids:	85.9
Method:	SW846 8260B		
Project:	Hess, 210 Greenpoint Avenue, Brooklyn, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48253.D	1	05/16/02	SJM	n/a	n/a	VG2074
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.3	ug/kg	
104-51-8	n-Butylbenzene	ND	6.5	ug/kg	
135-98-8	sec-Butylbenzene	6.9	6.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.5	ug/kg	
100-41-4	Ethylbenzene	7.2	1.3	ug/kg	
98-82-8	Isopropylbenzene	6.8	6.5	ug/kg	
99-87-6	p-Isopropyltoluene	7.4	6.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	15.9	1.3	ug/kg	
91-20-3	Naphthalene	16.8	6.5	ug/kg	
103-65-1	n-Propylbenzene	9.5	6.5	ug/kg	
108-88-3	Toluene	11.4	1.3	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	99.6	6.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	53.9	6.5	ug/kg	
	m,p-Xylene	79.9	2.6	ug/kg	
95-47-6	o-Xylene	89.5	1.3	ug/kg	
1330-20-7	Xylene (total)	169	2.6	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		70-124%
17060-07-0	1,2-Dichloroethane-D4	86%		62-130%
2037-26-5	Toluene-D8	92%		75-125%
460-00-4	4-Bromofluorobenzene	79%		67-141%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GP-2 (4-7.5FEET)	
Lab Sample ID:	N14011-2	Date Sampled: 05/06/02
Matrix:	SO - Soil	Date Received: 05/10/02
Method:	SW846 8260B	Percent Solids: 79.2
Project:	Hess, 210 Greenpoint Avenue, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48251.D	1	05/16/02	SJM	n/a	n/a	VG2074
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.4	ug/kg	
104-51-8	n-Butylbenzene	ND	6.9	ug/kg	
135-98-8	sec-Butylbenzene	ND	6.9	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.9	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	ug/kg	
98-82-8	Isopropylbenzene	ND	6.9	ug/kg	
99-87-6	p-Isopropyltoluene	ND	6.9	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	6.4	1.4	ug/kg	
91-20-3	Naphthalene	ND	6.9	ug/kg	
103-65-1	n-Propylbenzene	ND	6.9	ug/kg	
108-88-3	Toluene	ND	1.4	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	6.9	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.3	6.9	ug/kg	J
	m,p-Xylene	ND	2.7	ug/kg	
95-47-6	o-Xylene	ND	1.4	ug/kg	
1330-20-7	Xylene (total)	ND	2.7	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-124%
17060-07-0	1,2-Dichloroethane-D4	90%		62-130%
2037-26-5	Toluene-D8	90%		75-125%
460-00-4	4-Bromofluorobenzene	93%		67-141%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GP-3 (4-8FEET)	
Lab Sample ID:	N14011-3	Date Sampled: 05/06/02
Matrix:	SO - Soil	Date Received: 05/10/02
Method:	SW846 8260B	Percent Solids: 87.0
Project:	Hess, 210 Greenpoint Avenue, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48252.D	1	05/16/02	SJM	n/a	n/a	VG2074
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.2	ug/kg	
104-51-8	n-Butylbenzene	ND	6.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	6.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.0	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	6.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	3.3	1.2	ug/kg	
91-20-3	Naphthalene	2.4	6.0	ug/kg	J
103-65-1	n-Propylbenzene	ND	6.0	ug/kg	
108-88-3	Toluene	ND	1.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	2.4	6.0	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	3.9	6.0	ug/kg	J
	m,p-Xylene	2.7	2.4	ug/kg	
95-47-6	o-Xylene	7.3	1.2	ug/kg	
1330-20-7	Xylene (total)	10.0	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		70-124%
17060-07-0	1,2-Dichloroethane-D4	92%		62-130%
2037-26-5	Toluene-D8	92%		75-125%
460-00-4	4-Bromofluorobenzene	91%		67-141%

ND = Not detected
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: GP-4 (4-8FEET)	
Lab Sample ID: N14011-4	Date Sampled: 05/06/02
Matrix: SO - Soil	Date Received: 05/10/02
Method: SW846 8260B	Percent Solids: 83.0
Project: Hess, 210 Greenpoint Avenue, Brooklyn, NY	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48257.D	1	05/16/02	SJM	n/a	n/a	VG2074
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.2	ug/kg	
104-51-8	n-Butylbenzene	ND	6.0	ug/kg	
135-98-8	sec-Butylbenzene	ND	6.0	ug/kg	
98-06-6	tert-Butylbenzene	ND	6.0	ug/kg	
100-41-4	Ethylbenzene	2.7	1.2	ug/kg	
98-82-8	Isopropylbenzene	ND	6.0	ug/kg	
99-87-6	p-Isopropyltoluene	ND	6.0	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	5.8	1.2	ug/kg	
91-20-3	Naphthalene	3.9	6.0	ug/kg	J
103-65-1	n-Propylbenzene	1.9	6.0	ug/kg	J
108-88-3	Toluene	2.4	1.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	2.9	6.0	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	7.7	6.0	ug/kg	
	m,p-Xylene	4.3	2.4	ug/kg	
95-47-6	o-Xylene	16.7	1.2	ug/kg	
1330-20-7	Xylene (total)	21.0	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%		70-124%
17060-07-0	1,2-Dichloroethane-D4	82%		62-130%
2037-26-5	Toluene-D8	92%		75-125%
460-00-4	4-Bromofluorobenzene	95%		67-141%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GP-5 (4-7.5FEET)		Date Sampled:	05/06/02
Lab Sample ID:	N14011-5	Date Received:	05/10/02	
Matrix:	SO - Soil	Percent Solids:	88.7	
Method:	SW846 8260B			
Project:	Hess, 210 Greenpoint Avenue, Brooklyn, NY			

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48269.D	1	05/16/02	SJM	n/a	n/a	VG2075
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.2	ug/kg	
104-51-8	n-Butylbenzene	ND	6.2	ug/kg	
135-98-8	sec-Butylbenzene	4.4	6.2	ug/kg	J
98-06-6	tert-Butylbenzene	ND	6.2	ug/kg	
100-41-4	Ethylbenzene	12.3	1.2	ug/kg	
98-82-8	Isopropylbenzene	4.0	6.2	ug/kg	J
99-87-6	p-Isopropyltoluene	16.5	6.2	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	2.0	1.2	ug/kg	
91-20-3	Naphthalene	64.9	6.2	ug/kg	
103-65-1	n-Propylbenzene	7.4	6.2	ug/kg	
108-88-3	Toluene	12.1	1.2	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	48.2	6.2	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	22.6	6.2	ug/kg	
	m,p-Xylene	49.8	2.5	ug/kg	
95-47-6	o-Xylene	31.5	1.2	ug/kg	
1330-20-7	Xylene (total)	81.3	2.5	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		70-124%
17060-07-0	1,2-Dichloroethane-D4	87%		62-130%
2037-26-5	Toluene-D8	89%		75-125%
460-00-4	4-Bromofluorobenzene	94%		67-141%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	GP-6 (4-8FEET)	Date Sampled:	05/06/02
Lab Sample ID:	N14011-6	Date Received:	05/10/02
Matrix:	SO - Soil	Percent Solids:	89.0
Method:	SW846 8260B		
Project:	Hess, 210 Greenpoint Avenue, Brooklyn, NY		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G48270.D	1	05/16/02	SJM	n/a	n/a	VG2075
Run #2							

VOA STARS List

CAS No.	Compound	Result	RL	Units	Q
71-43-2	Benzene	ND	1.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.5	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.3	1.1	ug/kg	
91-20-3	Naphthalene	ND	5.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.5	ug/kg	
108-88-3	Toluene	ND	1.1	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.5	ug/kg	
	m,p-Xylene	ND	2.2	ug/kg	
95-47-6	o-Xylene	ND	1.1	ug/kg	
1330-20-7	Xylene (total)	ND	2.2	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		70-124%
17060-07-0	1,2-Dichloroethane-D4	86%		62-130%
2037-26-5	Toluene-D8	88%		75-125%
460-00-4	4-Bromofluorobenzene	93%		67-141%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

TOXIKON CORPORATION
15 WIGGINS AVENUE
BEDFORD, MA 01730
TEL: (781) 275-3330

MAY 9 2 2002

May 13, 2002

ED RUSSO
ENVIROTRAC
80-B AIR PARK DRIVE
RONKONKOMA, NY 11779

TEL: (631) 471-1500
FAX (631) 471-6363

RE: HESS GREENPOINT / BROOKLYN, NY

Order No.: 0205107

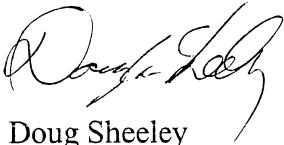
Dear ED RUSSO:

Toxikon received 6 samples on 05/08/02 for the analyses presented in the following report.

Unless noted in the report, there were no problems with the analyses and all data for associated QC met EPA or laboratory specifications.

If you have any questions regarding these test results, please feel free to call.

Sincerely,



Doug Sheeley

Certifications: MA: MA 064, NH: 204099D and 204099E, ME: MA064, RI: 55, VT: MA064, TN: MA064
NY: 10778, NC: 286, PA 68-461, CT: PH 0563, NJ: 59538, MD: 185

CLIENT: ENVIROTRAC
Project: HESS GREENPOINT / BROOKLYN, NY
Lab Order: 0205107

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Collection Date	Date Received
0205107-01A	GP-1	05/06/02 10:00:00 AM	05/08/02
0205107-02A	GP-2	05/06/02 11:00:00 AM	05/08/02
0205107-03A	GP-3	05/06/02 12:00:00 PM	05/08/02
0205107-04A	GP-4	05/06/02 1:00:00 PM	05/08/02
0205107-05A	GP-5	05/06/02 2:00:00 PM	05/08/02
0205107-06A	GP-6	05/06/02 3:00:00 PM	05/08/02

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-1
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 10:00:00 AM
Lab ID:	0205107-01A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	3900	100		µg/L	100	05/10/02 8:00:00 PM
Ethylbenzene	8900	100		µg/L	100	05/10/02 8:00:00 PM
m,p-Xylene	11000	2000		µg/L	100	05/10/02 8:00:00 PM
Methyl tert-butyl ether	110000	1000		µg/L	100	05/10/02 8:00:00 PM
o-Xylene	11000	100		µg/L	100	05/10/02 8:00:00 PM
Toluene	16000	1000		µg/L	100	05/10/02 8:00:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-2
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 11:00:00 AM
Lab ID:	0205107-02A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	600	10		µg/L	10	05/10/02 9:05:00 PM
Ethylbenzene	76	10		µg/L	10	05/10/02 9:05:00 PM
m,p-Xylene	220	20		µg/L	10	05/10/02 9:05:00 PM
Methyl tert-butyl ether	1600	10		µg/L	10	05/10/02 9:05:00 PM
o-Xylene	26	10		µg/L	10	05/10/02 9:05:00 PM
Toluene	ND	10		µg/L	10	05/10/02 9:05:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-3
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 12:00:00 PM
Lab ID:	0205107-03A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	ND	50		µg/L	50	05/11/02 1:43:00 PM
Ethylbenzene	ND	50		µg/L	50	05/11/02 1:43:00 PM
m,p-Xylene	ND	100		µg/L	50	05/11/02 1:43:00 PM
Methyl tert-butyl ether	2900	50		µg/L	50	05/11/02 1:43:00 PM
o-Xylene	ND	50		µg/L	50	05/11/02 1:43:00 PM
Toluene	ND	50		µg/L	50	05/11/02 1:43:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-4
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 1:00:00 PM
Lab ID:	0205107-04A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	1600	10		µg/L	10	05/10/02 11:14:00 PM
Ethylbenzene	460	10		µg/L	10	05/10/02 11:14:00 PM
m,p-Xylene	1300	20		µg/L	10	05/10/02 11:14:00 PM
Methyl tert-butyl ether	28000	500		µg/L	10	05/10/02 11:14:00 PM
o-Xylene	570	10		µg/L	10	05/10/02 11:14:00 PM
Toluene	1500	10		µg/L	10	05/10/02 11:14:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-5
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 2:00:00 PM
Lab ID:	0205107-05A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	1.2	1.0		µg/L	1	05/11/02 3:16:00 PM
Ethylbenzene	ND	1.0		µg/L	1	05/11/02 3:16:00 PM
m,p-Xylene	ND	2.0		µg/L	1	05/11/02 3:16:00 PM
Methyl tert-butyl ether	1.4	1.0		µg/L	1	05/11/02 3:16:00 PM
o-Xylene	ND	1.0		µg/L	1	05/11/02 3:16:00 PM
Toluene	ND	1.0		µg/L	1	05/11/02 3:16:00 PM

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
	B - Analyte detected in the associated Method Blank	E - Value above quantitation range
	* - Value exceeds Maximum Contaminant Level	

Toxikon

Date: 13-May-02

CLIENT:	ENVIROTRAC	Client Sample ID:	GP-6
Lab Order:	0205107	Tag Number:	
Project:	HESS GREENPOINT / BROOKLYN, NY	Collection Date:	05/06/02 3:00:00 PM
Lab ID:	0205107-06A	Matrix:	GROUNDWATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
PURGEABLE AROMATICS		E602				Analyst: NN
Benzene	ND	1.0		µg/L	1	05/11/02 5:35:00 PM
Ethylbenzene	ND	1.0		µg/L	1	05/11/02 5:35:00 PM
m,p-Xylene	ND	2.0		µg/L	1	05/11/02 5:35:00 PM
Methyl tert-butyl ether	ND	1.0		µg/L	1	05/11/02 5:35:00 PM
o-Xylene	ND	1.0		µg/L	1	05/11/02 5:35:00 PM
Toluene	ND	1.0		µg/L	1	05/11/02 5:35:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits
J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank	E - Value above quantitation range
* - Value exceeds Maximum Contaminant Level	

WORK ORDER #: 02-05-107

DUE DATE: 05-15-02

EnviroTrac Ltd.

80-B Air Park Drive
 Ronkonkoma, NY 11779
 (631) 471-1500 Fax (631) 471-6363
 Contact: Ed Russo

CHAIN OF CUSTODY - TOXIKON

Bill To: Amerada Hess
 1 Hess Plaza
 Woodbridge, NJ 07095
 Attn: Valerie Stoltzfus

Hess - Greenpoint
210 Greenpoint Ave
Brooklyn, NY

Lab ID	Date Sampled	Time Sampled	Sampler Initial	Matrix	No. of Cont.	Presrv.	EnviroTrac Sample ID	Analyses Required	Turnaround Requested
①	5/6/2002	10:00	MA/ER	GW	3	HCl	GP-1	BTEX/MTBE 602	Normal
②	5/6/2002	11:00	MA/ER	GW	3	HCl	GP-2	BTEX/MTBE 602	Normal
③	5/6/2002	12:00	MA/ER	GW	3	HCl	GP-3	BTEX/MTBE 602	Normal
④	5/6/2002	13:00	MA/ER	GW	3	HCl	GP-4	BTEX/MTBE 602	Normal
⑤	5/6/2002	14:00	MA/ER	GW	3	HCl	GP-5	BTEX/MTBE 602	Normal
⑥	5/6/2002	15:00	MA/ER	GW	3	HCl	GP-6	BTEX/MTBE 602	Normal

Relinquished by: <i>GR</i>	Time/Date: 5-7-02 16:00	Received By:	Time/Date	Comments: GW = Ground Water GP = GeoProbe Sampling Location
Relinquished by: EAST. COV. -	Time/Date: 5-8-02 09:00	Received By: <i>J. Mahan</i>	Time/Date: 5-8-02 09:00	

Cooler Temp = 4°C