

CLOSURE REPORT



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

June 3, 1998

CERTIFIED MAIL
RETURN RECEIPT NO. Z-235-437-278

Mr. Samuel Small
Amerada Hess Corporation
P.O. Box 840
Seminole, Texas 79360

**RE: SITE REMEDIATION REPORT
DURHAM STATE A TANK BATTERY**

Dear Mr. Small:

The New Mexico Oil Conservation Division (OCD) has reviewed Amerada Hess Corporation's (AHC) February 13, 1998 "GROUNDWATER INVESTIGATION AND CLOSURE REPORT, DURHAM STATE A TANK BATTERY, LEA COUNTY, NEW MEXICO". This document contains the results of AHC's remediation of contaminated soils and investigation of potential ground water contamination at the Durham State A Tank Battery site located in Unit L, Section 02, Township 20 South, Range 36, East, Lea County, New Mexico. The document also requests final closure approval of remedial actions and permission to plug and abandon the existing site monitor wells.

The OCD considers the soil and ground water closure actions at this site to be complete and final closure is approved. The OCD requires that the existing site monitor wells be plugged with a cement grout containing 3-5% bentonite.

Please be advised that OCD approval does not relieve AHC of liability if remaining contaminants are found to pose a future threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve AHC of responsibility for compliance with any other federal, state or local laws and regulations.

If you have any questions, please call me at (505) 827-7154.

Sincerely,

William C. Olson
Hydrologist
Environmental Bureau

xc: Wayne Price, OCD Hobbs District Office.

Z 235 437 278	
US Postal Service	
Receipt for Certified Mail	
No Insurance Coverage Provided.	
Do not use for International Mail (See reverse)	
Sent to	
Street & Number	
Post Office, State, & ZIP Code	
Postage	\$

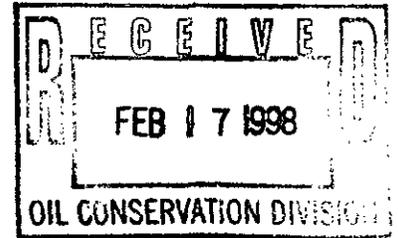
AMERADA HESS CORPORATION

SAMUEL W. SMALL, PE
OFFICE 915/758-6741
FAX 915/758-6768

P.O. BOX 840
SEMINOLE, TEXAS 79360
915/758-6700

February 13, 1997

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED
Z 437 801 533**



Mr. William C. Olson
New Mexico Oil Conservation Division
2042 S. Pacheco
Santa Fe, New Mexico 87505

**RE: Groundwater Investigation and
Closure Report
Durham State A Tank Battery
Lea County, New Mexico**

Dear Mr. Olson:

Enclosed find the final closure report for the groundwater investigation and site reclamation project conducted at the referenced abandoned battery location. Included with the report is the supporting laboratory data. Some of this information has previously been submitted to the NMOCD, but with the additional data your files will now be complete.

After you have had a chance to review the report, Amerada Hess would appreciate written confirmation that no additional testing of the monitor wells is required and that they may be plugged. As this is a State Land Trust lease, an annual fee of \$300/well will be required if the wells are to remain active.

If you have any questions or require additional information, please contact the undersigned at (915) 758-6741 or at the letterhead address.

Sincerely,

A handwritten signature in cursive script that reads "Samuel Small".

Samuel Small, PE
Environmental Coordinator

xc: NMOCD - Hobbs District
State Land Office - Hobbs
Houston Environmental File
Seminole District Environmental File
Monument Area File

CLOSURE REPORT

AMERADA HESS CORPORATION DURHAM STATE A BATTERY SITE (NMGSAU BATT. NO. 76)

The following closure report summarizes work performed at the abandoned battery site described below. Site restoration activities began at the site during March, 1996 and were completed in September, 1997. The work plan was developed in consultation with the New Mexico Oil Conservation Division.

I. Site Location and Description:

The site is located in the NW⁴, of the SW⁴ of Section 2, Township 20 South, Range 36 East, Lea County, New Mexico. USGS map coordinates are: Latitude 32° 36' 02" and Longitude 103° 19' 54". The surrounding area is primarily pasture land vegetated with native grasses, mesquite and shinary oak. Surface soil is comprised primarily of sand with some caliche rocks present.

II. Background:

The State A tank battery was built by Durham, Inc. to service a well drilled in 1936. The Durham State A well along with the battery was incorporated into the Amerada Hess Corporation (AHC) operated North Monument Grayburg San Andres Unit (NMGSAU) in 1992. In 1995 production from the lease was diverted to the NMGSAU Central Battery and the Durham State A battery was abandoned. In March, 1996 work commenced at the site to clean up existing hydrocarbon contaminated soil and restore the site to conditions compatible with the surrounding area. The scope of work at the site was expanded to include a groundwater investigation when water was encountered while excavating.

III. Conclusions:

Remediation of hydrocarbon contamination at the abandoned Durham State A battery site has been successfully completed and the potential for contaminating the groundwater with hydrocarbons at this site has been eliminated. Source material containing contaminants has been removed from the vadose zone immediately above the water table and the groundwater beneath the work site has been isolated from future contact with contaminated material by an impermeable clay cap. Hydrocarbon contaminated material remaining at the site has been remediated to TPH and BTEX concentrations pursuant to the program submitted by AHC to the NMOCD on December 18, 1996. Concentrations of BTEX are below SDW standards in water samples obtained from the monitor wells. Concentrations of TDS and chlorides are slightly elevated in the monitor wells, however, samples from other groundwater sources in the area indicate that this condition appears to be typical in the aquifer underlying the whole area. Fluid levels measured in the

monitor wells indicates that there is little or no pressure gradient and therefore little or no fluid migration across the site.

IV. Job Summary:

Contaminated material from directly beneath the original battery site and from a contaminated area immediately west of the site was excavated to a depth of approximately 42 feet (see site plat). Groundwater was encountered on March 20, 1996, excavation activities were immediately suspended, and the NMOCD was notified of the situation. During September, 1996, four (4) groundwater monitor wells were drilled adjacent to the excavated areas and water samples were obtained for analyses on September 30, 1996. Drill samples were collected at five (5) foot intervals while drilling each well and were analyzed for BTEX, TPH and chloride concentration. The water samples were analyzed for concentrations of BTEX, TDS, RCRA metals, and major cations and anions. A sample of water was obtained from the only active windmill in the area, located approximately 3/4 mile north east of the site, on November 18, 1996 and was analyzed for TDS and chloride concentrations. Samples of water from the groundwater monitor wells were obtained and analyzed for TDS, BTEX, and major cations and anions on March 18, 1997 and again on July 2, 1997 (the July samples were also retested for RCRA metals). On July 25, 1997, restoration activities were again resumed. The excavated areas were backfilled with five (5) feet of clean caliche (TPH < 100 ppm). The caliche was capped with two (2) feet of redbed clay and the remaining excavation was backfilled with material which had been remediated to TPH concentrations less than 1000 ppm and BTEX concentration less than 50 ppm (benzene concentration less than 10 ppm). The backfill material was deposited in the excavation in five (5) foot lifts, with composite samples taken from each lift for laboratory analysis. The site was then graded to contour and seeded with native grasses. Water samples were obtained from the groundwater monitor wells on September 5, 1997 and were analyzed for BTEX, TDS, RCRA metals and major cations and anions. Work at the site was completed on September 12, 1997.

V. Monitor Well Data Summary:

Depth to Groundwater:

WELL	FLUID LEVEL FROM SURFACE	FLUID LEVEL SEA LEVEL
D-1	42'	3560
D-2	41.5'	3560.5
D-3	42'	3560
D-4	43'	3559

Drill Sample Analyses:

DEPTH	D-1			D-2		
	TPH (PPM)	BTEX (PPM)	Cl ⁻ (PPM)	TPH (PPM)	BTEX (PPM)	Cl ⁻ (PPM)
5'	49	< 0.2	1400	74	< 0.2	1500
10'	13	< 0.2	1200	66	< 0.2	1400
15'	9	< 0.2	< 1000	14	< 0.2	1000
20'						
23'	12	<0.2	< 1000	17	< 0.2	< 1000
25'						
30'	13	< 0.2	< 1000	12	< 0.2	< 1000
35'						
39'	7	< 0.2	< 1000	9	< 0.2	< 1000
40'						
45'				10	< 0.2	< 1000
50'				7	< 0.2	< 1000
58'	5	< 0.2	< 1000	7	< 0.2	< 1000

DEPTH	D-3			D-4		
	TPH (PPM)	BTEX (PPM)	Cl ⁻ (PPM)	TPH (PPM)	BTEX (PPM)	Cl ⁻ (PPM)
5'	137	< 0.2	1800			
10'	108	< 0.2	1400	18	< 0.2	2200
15'	26	< 0.2	1200	179	< 0.2	1800
20'						
23'	16	< 0.2	1000	47	< 0.2	1200
25'						
30'	7	< 0.2	< 1000	12	< 0.2	< 1000
35'						
39'	9	< 0.2	< 1000	7	< 0.2	< 1000
40'						
45'	10	< 0.2	< 1000	14	< 0.2	< 1000
50'	11	< 0.2	< 1000	10	< 0.2	< 1000
58'	4	< 0.2	< 1000	8	< 0.2	< 1000

Groundwater Sample Analysis:

DATE	HYDROCARBONS			SOLIDS	
	BENZENE mg/L	TOLUENE mg/l	ETHYL BENZENE mg/L	TOTAL XYLENES mg/L	TDS mg/L
WELL D-1					
9/30/96	< 1	< 1	< 1	< 1	1285
3/18/97	< 0.001	0.004	< 0.001	0.003	1053
7/2/97	< 0.001	< 0.001	< 0.001	0.003	1164
9/5/97	0.008	< 0.002	< 0.002	< 0.006	1028
WELL D-2					
9/30/96	< 1	< 1	< 1	< 1	1062
3/18/97	< 0.001	0.003	< 0.001	< 0.003	900
7/2/97	< 0.001	< 0.001	< 0.001	< 0.003	990
9/5/97	< 0.002	< 0.002	< 0.002	< 0.006	902
WELL D-3					
9/30/96	< 1	< 1	< 1	< 1	939
3/18/97	< 0.001	0.003	< 0.001	0.004	775
7/2/97	< 0.001	< 0.001	< 0.001	0.004	868
9/5/97	< 0.002	< 0.002	< 0.002	< 0.006	770
WELL D-4					
9/30/96	< 1	< 1	< 1	< 1	1064
3/18/97	< 0.001	0.003	< 0.001	0.003	1087
7/2/97	0.001	< 0.001	< 0.001	0.005	1085
9/5/97	< 0.002	< 0.002	< 0.002	< 0.006	991

Groundwater Sample Analysis: (con't)

DATE	RCRA METALS (PPM)							
	As	Ag	Ba	Cd	Cr	Pb	Hg	Se
WELL D-1								
9/30/96	0.013	< 0.1	< 2	< 0.1	< 0.5	< 0.5	< 0.001	< 0.01
3/18/97								
7/2/97	0.009	< 0.1	1.5	< 0.1	< 1	< 0.1	< 0.02	< 0.1
9/5/97	0.004	< 0.05	0.1	< 0.01	< 0.05	0.006	< 0.002	0.003
WELL D-2								
9/30/96	0.013	< 0.1	< 2	< 0.1	< 0.5	< 0.5	< 0.001	< 0.01
3/18/97								
7/2/97	0.009	< 0.1	1.9	< 0.1	< 1	< 0.1	< 0.02	< 0.1
9/5/97	0.005	< 0.05	0.3	< 0.01	< 0.05	< 0.002	< 0.002	< 0.002
WELL D-3								
9/30/96	0.017	< 0.1	< 2	< 0.1	< 0.5	< 0.5	< 0.001	< 0.01
3/18/97								
7/2/97	0.009	< 0.1	1.9	< 0.1	< 1	< 0.1	< 0.02	< 0.1
9/5/97	0.005	< 0.05	0.4	< 0.01	< 0.05	0.006	< 0.002	< 0.002
WELL D-4								
9/30/96	0.027	< 0.1	< 2	< 0.1	< 0.5	< 0.5	< 0.001	< 0.01
3/18/97								
7/2/97	0.011	< 0.1	1.7	< 0.1	< 1	< 0.1	< 0.02	< 0.1
9/5/97	0.009	< 0.05	< 0.1	< 0.01	< 0.05	< 0.002	< 0.002	< 0.002

Groundwater Sample Analysis: (con't)

DATE	ANIONS AND CATIONS (PPM)							
	Na	Ca	Mg	K	Cl	SO ₄	CO ₃	HCO ₃
WELL D-1								
9/30/96	142.5	232.3	45.3	10.52	336	108	0	301
3/18/97	227	125	41	4.3	300	89	0	381
7/2/97	176	116	41	3.7	296	112	0	381
9/5/97	170	133	44	0.5	308	165	0	356
WELL D-2								
9/30/96	92.5	247.3	44	20.74	220	80	0	273
3/18/97	131	115	46	4	280	74	0	361
7/2/97	113	113	40	2.8	216	84	0	371
9/5/97	94	141	24	2.5	208	85	0	342
WELL D-3								
9.30/96	195	259.3	37	18.74	276	50	0	342
3/18/97	223	61	33	2.9	280	43	0	410
7/2/97	239	73	18	2.8	260	43	0	449
9/5/97	159	74	27	3.8	232	53	0	320
WELL D-4								
9.30.96	327.5	235.8	33.8	13.82	334	57	0	361
3/18/97	310	32	20	1.8	320	59	0	400
7/2/97	327	36	20	12.6	324	68	0	454
9/5/97	324	46	11	2.6	316	74	0	425

VI. Windmill Well and Water Data:

Date	FLUID LEVEL FROM SURF.	FLUID LEVEL SEA LEVEL	TDS (mg/l)	Cl (mg/l)
3/26/91	37'	3568'		
11/18/96			3402	1483

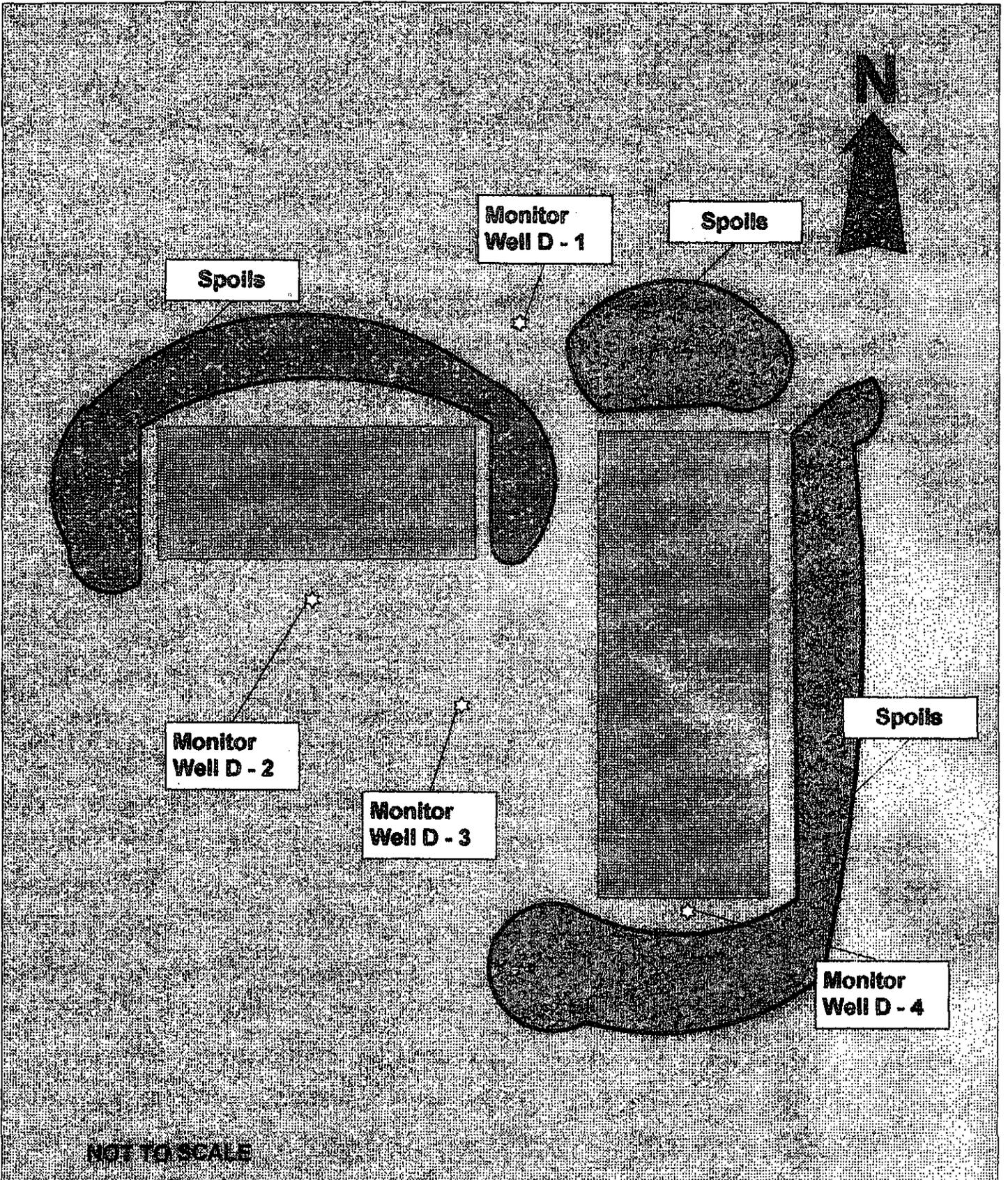
VII. Backfill Material Data:

SAMPLE DEPTH	DATE	TPH (mg/l)	BENZENE (mg/l)	TOLUENE (mg/l)	ETHYL-BENZENE (mg/l)	XYLENE (mg/l)
37' - 32'	5/27/97	64	< 0.1	< 0.1	< 0.1	0.172
32' - 30'	REDBED CLAY					
30' - 25'	8/11/97	558	< 0.002	< 0.002	< 0.002	0.007
25' - 20'	8/18/97	741	< 0.02	< 0.02	< 0.02	< 0.06
20' - 15'	8/22/97	633	< 0.002	< 0.002	0.002	< 0.006
15' - 10'	8/28/97	871	< 0.002	< 0.002	< 0.002	0.019
10' - 5'	9/9/97	430	< 0.002	< 0.002	< 0.002	< 0.006
5' - surf.	9/12/97	829	< 0.002	< 0.002	0.02	0.08

VIII. Remaining Work:

Revegetation progress at the site will be continuously monitored. Upon receipt of NMOCD approval the monitor wells will be plugged.

PLATS AND DIAGRAMS

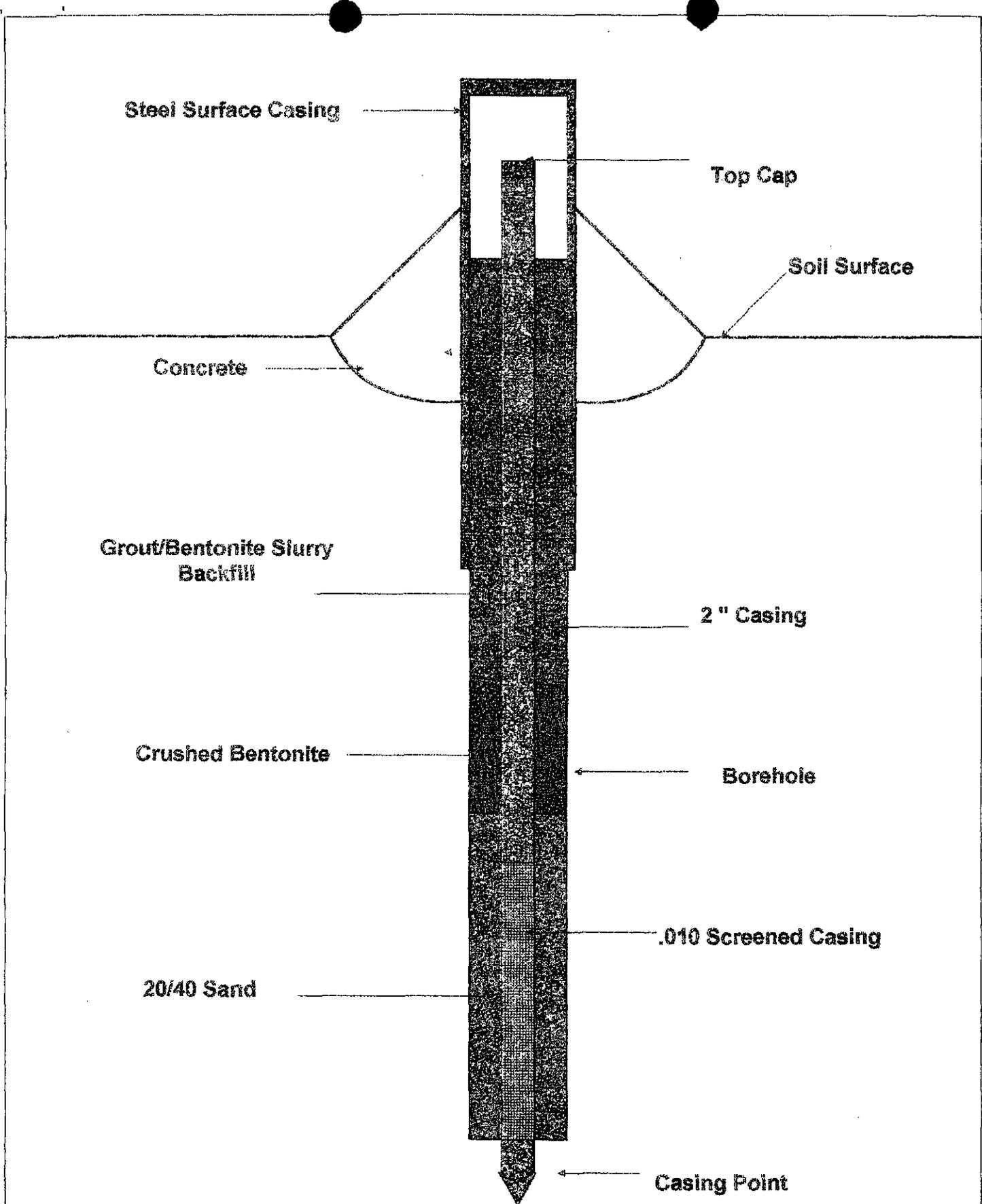


NOT TO SCALE

**Amerada Hess
Corporation**

**Site Plan
Durham State A**

**Safety & Environmental Solutions, Inc.
Hobbs, New Mexico**



Steel Surface Casing

Top Cap

Soil Surface

Concrete

Grout/Bentonite Slurry
Backfill

2" Casing

Crushed Bentonite

Borehole

.010 Screened Casing

20/40 Sand

Casing Point

DRILL SAMPLE ANALYSES

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1816
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	CL		DEPTH	LOCATION
SAMPLE NO. D-1:	1400	PPM	5'	MW-1 Durham State A
SAMPLE NO. D-2:	1200	PPM	10'	MW-1 Durham State A
SAMPLE NO. D-3:	<1000	PPM	15'	MW-1 Durham State A
SAMPLE NO. D-4:	<1000	PPM	23'	MW-1 Durham State A
SAMPLE NO. D-5:	<1000	PPM	30'	MW-1 Durham State A
SAMPLE NO. D-6:	<1000	PPM	39'	MW-1 Durham State A
SAMPLE NO. D-7:	<1000	PPM	58'	MW-1 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no sample at 35' due to spoon refusal.

WESTERN ENVIRONMENTAL CONSULTANTS
P.O. Box 1816
Hobbs, New Mexico 88240
(505) 392-5021

CHEMICAL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: Allen Hodge
SAMPLE MATRIX: Soil

SITE ID: Durham State A
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D-1 MW-1 5'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D-2 MW-1 10'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D-3 MW-1 15'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D-4 MW-1 23'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D-5 MW-1 30'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D-6 MW-1 39'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Eethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

Page two
Durham State A MW-1
BTEX Report

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D-7 MW-1 58'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no sample at 35' due to spoon refusal.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1316
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	TPH		DEPTH	LOCATION
SAMPLE NO. D-1:	49	PPM	5'	MW-1 Durham State A
SAMPLE NO. D-2:	13	PPM	10'	MW-1 Durham State A
SAMPLE NO. D-3:	09	PPM	15'	MW-1 Durham State A
SAMPLE NO. D-4:	12	PPM	23'	MW-1 Durham State A
SAMPLE NO. D-5:	13	PPM	30'	MW-1 Durham State A
SAMPLE NO. D-6:	07	PPM	39'	MW-1 Durham State A
SAMPLE NO. D-7:	05	PPM	58'	MW-1 Durham State A

COMMENTS: These :
was no sample at 35' due

*Had 8 samples
BUT NOT ON
LOG OR NOTES*

drilling operations. There

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1816
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	CL		DEPTH	LOCATION
SAMPLE NO. D2-1:	1500	PPM	5'	MW-2 Durham State A
SAMPLE NO. D2-2:	1400	PPM	10'	MW-2 Durham State A
SAMPLE NO. D2-3:	1000	PPM	15'	MW-2 Durham State A
SAMPLE NO. D2-4:	<1000	PPM	23'	MW-2 Durham State A
SAMPLE NO. D2-5:	<1000	PPM	30'	MW-2 Durham State A
SAMPLE NO. D2-6:	<1000	PPM	39'	MW-2 Durham State A
SAMPLE NO. D2-7:	<1000	PPM	45'	MW-2 Durham State A
SAMPLE NO. D2-8:	<1000	PPM	50'	MW-2 Durham State A
SAMPLE NO. D2-9:	<1000	PPM	58'	MW-2 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS
P.O. Box 1816
Hobbs, New Mexico 88240
(505) 392-5021

CHEMICAL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: Allen Hodge
SAMPLE MATRIX: Soil

SITE ID: Durham State A
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D2-1 MW-2 5'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-2 MW-2 10'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-3 MW-2 15'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-4 MW-2 23'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-5 MW-2 30'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-6 MW-2 39'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Eethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

Page two
Durham State A MW-2
BTEX Report

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D2-7 MW-2 45'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-8 MW-2 50'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D2-9 MW-2 58'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1316
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	TPH		DEPTH	LOCATION
SAMPLE NO. D2-1:	74	PPM	5'	MW-2 Durham State A
SAMPLE NO. D2-2:	66	PPM	10'	MW-2 Durham State A
SAMPLE NO. D2-3:	14	PPM	15'	MW-2 Durham State A
SAMPLE NO. D2-4:	17	PPM	23'	MW-2 Durham State A
SAMPLE NO. D2-5:	12	PPM	30'	MW-2 Durham State A
SAMPLE NO. D2-6:	09	PPM	39'	MW-2 Durham State A
SAMPLE NO. D2-7:	10	PPM	45'	MW-2 Durham State A
SAMPLE NO. D2-8	07	PPM	50'	MW-2 Durham State A
SAMPLE NO. D2-9	07	PPM	58'	MW-2 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1816
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	CL		DEPTH	LOCATION
SAMPLE NO. D3-1:	1800	PPM	5'	MW-3 Durham State A
SAMPLE NO. D3-2:	1400	PPM	10'	MW-3 Durham State A
SAMPLE NO. D3-3:	1200	PPM	15'	MW-3 Durham State A
SAMPLE NO. D3-4:	1000	PPM	23'	MW-3 Durham State A
SAMPLE NO. D3-5:	<1000	PPM	30'	MW-3 Durham State A
SAMPLE NO. D3-6:	<1000	PPM	39'	MW-3 Durham State A
SAMPLE NO. D3-7:	<1000	PPM	45'	MW-3 Durham State A
SAMPLE NO. D3-8	<1000	PPM	50'	MW-3 Durham State A
SAMPLE NO. D3-9	<1000	PPM	58'	MW-3 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS
P.O. Box 1816
Hobbs, New Mexico 88240
(505) 392-5021

CHEMICAL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: Allen Hodge
SAMPLE MATRIX: Soil

SITE ID: Durham State A
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D3-1 MW-3 5'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-2 MW-3 10'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-3 MW-3 15'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-4 MW-3 23'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-5 MW-3 30'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-6 MW-3 39'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Eethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

Page two
Durham State A MW-3
BTEX Report

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D3-7 MW-3 45'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-8 MW-3 50'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D3-9 MW-3 58'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1316
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	TPH		DEPTH	LOCATION
SAMPLE NO. D3-1:	137	PPM	5'	MW-3 Durham State A
SAMPLE NO. D3-2:	108	PPM	10'	MW-3 Durham State A
SAMPLE NO. D3-3:	26	PPM	15'	MW-3 Durham State A
SAMPLE NO. D3-4:	16	PPM	23'	MW-3 Durham State A
SAMPLE NO. D3-5:	07	PPM	30'	MW-3 Durham State A
SAMPLE NO. D3-6:	09	PPM	39'	MW-3 Durham State A
SAMPLE NO. D3-7:	10	PPM	45'	MW-3 Durham State A
SAMPLE NO. D3-8:	11	PPM	50'	MW-3 Durham State A
SAMPLE NO. D3-9:	04	PPM	58'	MW-3 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1816
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	CL		DEPTH	LOCATION
SAMPLE NO. D4-1:	2200	PPM	10'	MW-4 Durham State A
SAMPLE NO. D4-2:	1800	PPM	15'	MW-4 Durham State A
SAMPLE NO. D4-3:	1200	PPM	23'	MW-4 Durham State A
SAMPLE NO. D4-4:	<1000	PPM	30'	MW-4 Durham State A
SAMPLE NO. D4-5:	<1000	PPM	39'	MW-4 Durham State A
SAMPLE NO. D4-6:	<1000	PPM	45'	MW-4 Durham State A
SAMPLE NO. D4-7:	<1000	PPM	50'	MW-4 Durham State A
SAMPLE NO. D4-8	<1000	PPM	58'	MW-4 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no five foot sample, drilling through spoils from old excavation.

WESTERN ENVIRONMENTAL CONSULTANTS
P.O. Box 1816
Hobbs, New Mexico 88240
(505) 392-5021

CHEMICAL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: Allen Hodge
SAMPLE MATRIX: Soil

SITE ID: Durham State A
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D4-1 MW-4 10'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-2 MW-4 15'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-3 MW-4 23'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-4 MW-4 30'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-5 MW-4 39'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-6 MW-4 45'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Eethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

Page two
Durham State A MW-4
BTEX Report

<u>Parameter</u>	<u>Value</u>	<u>Units</u>	<u>Test Method</u>
Sample # D4-7 MW-4 50'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	
Sample # D4-8 MW-4 58'			
Benzene	<0.2	Mg/L	Headspace GC
Toluene	<0.2	Mg/L	8020/EPA
Ethylbenzene	<0.2	Mg/L	
Xylene (OMP)	<0.2	Mg/L	

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no five foot sample, drilling through spoils from old excavation.

WESTERN ENVIRONMENTAL CONSULTANTS

P.O. Box 1316
Hobbs New, Mexico 88240
(505) 392 - 5021

SOIL ANALYSIS REPORT

DATE: 09/30/96
CLIENT: S.E.S.
SUPERVISOR: A. Hodge
Sample Matrix: Soil

FACILITY: Durham State A
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

	TPH		DEPTH	LOCATION
SAMPLE NO. D4-1:	18	PPM	10'	MW-4 Durham State A
SAMPLE NO. D4-2:	179	PPM	15'	MW-4 Durham State A
SAMPLE NO. D4-3:	47	PPM	23'	MW-4 Durham State A
SAMPLE NO. D4-4:	12	PPM	30'	MW-4 Durham State A
SAMPLE NO. D4-5:	07	PPM	39'	MW-4 Durham State A
SAMPLE NO. D4-6:	14	PPM	45'	MW-4 Durham State A
SAMPLE NO. D4-7:	10	PPM	50'	MW-4 Durham State A
SAMPLE NO. D4-8	08	PPM	58'	MW-4 Durham State A

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no five foot sample, drilling through spoils from old excavation.

GROUNDWATER ANALYSES



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

PHONE (806) 796-2800 • 5262 34th ST. • LUBBOCK, TX 79407

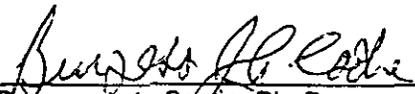
ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DEE WHATLEY
703 E. CLINTON
HOBBS, NM 88240
FAX TO:

Receiving Date: 09/30/96
Reporting Date: 10/04/96
Project Number: NOT GIVEN
Project Name: C1-C3, D1-D4
Project Location: AMERADA HESS, CHEVRON
NCBT & DURHAM ST. A

Sampling Date: 09/30/96
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: WL
Analyzed By: BC/GP

LAB NUMBER	SAMPLE ID	TPH (mg/L)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL BENZENE (ppb)	TOTAL XYLENES (ppb)
ANALYSIS DATE:		10/2/96	10/1/96	10/1/96	10/1/96	10/1/96
H2662-1	C-1	1.12	<1	<1	<1	<1
H2662-2	C-2	0.59	<1	<1	<1	<1
H2662-3	C-3	0.50	<1	<1	<1	<1
H2662-4	D-1	0.50	<1	<1	<1	<1
H2662-5	D-2	1.22	<1	<1	<1	<1
H2662-6	D-3	0.55	<1	<1	<1	<1
H2662-7	D-4	2.61	<1	<1	<1	<1
Quality Control		198	91.4	82.6	80.2	239
True Value QC		200	88.2	85.8	83.4	254
% Accuracy		99.0	104	96.3	96.1	94.1
Relative Percent Difference		1.0	2.5	3.9	9.4	5.5

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


Burgess J. A. Cooke, Ph. D.

10/4/96
Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

PHONE (806) 796-2800 • 5262 34th ST. • LUBBOCK, TX 79407

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 09/30/96
 Reporting Date: 10/07/96
 Project Number: NOT GIVEN
 Project Name: C1-C3, D1-D4
 Project Location: AMERADA HESS, CHEVRON
 NCBT & DURHAM ST. A

Analysis Date: 10/04/96
 Sampling Date: 09/30/96
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: WL
 Analyzed By: GP

LAB NUMBER	SAMPLE ID	TDS (mg/L)
H2662-1	C-1	1284
H2662-2	C-2	2194
H2662-3	C-3	2655
H2662-4	D-1	1285
H2662-5	D-2	1062
H2662-6	D-3	939
H2662-7	D-4	1064
Quality Control		NR
True Value QC		NR
% Accuracy		NR
Relative Percent Difference		3.2

METHOD: EPA 600/4-79-020, 160.1



 Chemist

10/7/96

 Date



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

PHONE (806) 796-2800 • 5262 34th ST. • LUBBOCK, TX 79407

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DEE WHATLEY
703 E. CLINTON
HOBBS, NM 88240
FAX TO:

Receiving Date: 09/30/96
Reporting Date: 10/09/96
Project Number: NOT GIVEN
Project Name: C1-C3, D1-D4
Project Location: AMERADA HESS, CHEVRON NCBT
& DURHAM ST. A

Sampling Date: 09/30/96
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: WL
Analyzed By: WL

RCRA METALS

LAB NUMBER	SAMPLE ID	As ppm	Ag ppm	Ba ppm	Cd ppm	Cr ppm	Pb ppm	Hg ppm	Se ppm
ANALYSIS DATE:		10/7/96	10/4/96	10/2/96	10/4/96	10/8/96	10/4/96	10/8/96	10/5/96
H2662-1	C-1	0.013	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-2	C-2	0.013	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-3	C-3	0.013	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-4	D-1	0.013	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-5	D-2	0.013	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-6	D-3	0.017	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
H2662-7	D-4	0.027	<0.1	<2	<0.1	<0.5	<0.5	<0.001	<0.01
Quality Control		11.1	0.490	18.23	0.107	1.072	0.50	21.0	44.9
True Value QC		10.0	0.500	20.00	0.100	1.000	0.50	25.0	50.0
% Accuracy		111	98.0	91.1	107	107.2	100	84.0	89.8
Relative Percent Difference		1.2	0.2	14.7	0.6	1.1	0	0	9.0

METHODS: EPA 600/4-79-02	206.2	272.1	208.1	213.1	218.1	239.1	245.1	270.2
--------------------------	-------	-------	-------	-------	-------	-------	-------	-------

Wei Li

Wei Li, Chemist

10-9-96

Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

PHONE (806) 796-2800 • 5262 34th ST. • LUBBOCK, TX 79407

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 09/30/96
 Reporting Date: 10/07/96
 Project Number: NOT GIVEN
 Project Name: C1-C3, D1-D4
 Project Location: AMERADA HESS, CHEVRON NCBT
 & DURHAM ST. A

Sampling Date: 09/30/96
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: WL
 Analyzed By: GP/WL

LAB NUMBER	SAMPLE ID	Na ppm	Ca ppm	Mg ppm	K ppm	Cl ppm	SO4 ppm	CO3 ppm	HCO3 ppm
------------	-----------	-----------	-----------	-----------	----------	-----------	------------	------------	-------------

ANALYSIS DATE:	10/3/96	10/3/96	10/3/96	10/3/96	10/4/96	10/4/96	10/4/96	10/4/96
H2662-1 C-1	227.6	158.5	41.8	7.18	440	123	trace	288
H2662-2 C-2	260.0	253.5	63.8	8.49	592	136	0	298
H2662-3 C-3	215.0	365.0	72.5	10.17	715	102	0	205
H2662-4 D-1	142.5	232.3	45.3	10.52	336	108	0	301
H2662-5 D-2	92.5	247.3	44.0	20.74	220	80	0	273
H2662-6 D-3	195.0	259.3	37.0	18.74	276	50	0	342
H2662-7 D-4	327.5	235.8	33.8	13.82	334	57	0	361
Quality Control	0.52	1.04	1.00	5.05	103	98	NR	NR
True Value QC	0.50	1.00	1.00	5.00	100	100	NR	NR
% Accuracy	104	104	100	101	103	98	NR	NR
Relative Percent Difference	0.7	0.8	0	7.2	3.0	2.0	0	0
METHODS: EPA 600/4-79-02					352.3	375.4		
Std. Methods	3111B	3111B	3111B	3111B			2320B	2320B

Wei LJ

Wei Li, Chemist

10-7-96

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SAFETY & ENVIROMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 03/18/97
 Reporting Date: 03/20/97
 Project Number: NOT GIVEN
 Project Name: AMERADA HESS
 Project Location: CHEVRON NCBT & DURHAM STATE "A"

Sampling Date: 03/18/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		03/19/97	03/19/97	03/19/97	03/19/97
H2854-1	CHEVRON NCBT #1	<0.001	0.002	<0.001	<0.003
H2854-2	CHEVRON NCBT #2	<0.001	0.002	<0.001	<0.003
H2854-3	CHEVRON NCBT #3	<0.001	0.004	<0.001	0.003
H2854-4	DURHAM ST. "A" #1	<0.001	0.004	<0.001	0.003
H2854-5	DURHAM ST. "A" #2	<0.001	0.003	<0.001	<0.003
H2854-6	DURHAM ST. "A" #3	<0.001	0.003	<0.001	0.004
H2854-7	DURHAM ST. "A" #4	<0.001	0.003	<0.001	0.003
Quality Control		0.091	0.104	0.108	0.326
True Value QC		0.100	0.100	0.100	0.300
% Accuracy		91.3	104	108	109
Relative Percent Difference		9.5	4.0	7.6	7.9

METHOD: EPA SW 846-8260, 5030, GC/MS

Burgess L. Cooke
 Chemist

3/20/97
 Date



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIROMENTAL SOLUTIONS, INC.
ATTN: DEE WHATLEY
703 E. CLINTON
HOBBS, NM 88240
FAX TO:

Receiving Date: 03/18/97
Reporting Date: 03/20/97
Project Number: NOT GIVEN
Project Name: AMERADA HESS
Project Location: CHEVRON NCBT & DURHAM STATE "A"

Analysis Date: 03/18/97
Sampling Date: 03/18/97
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	TDS (mg/L)
H2854-1	CHEVRON NCBT #1	1455
H2854-2	CHEVRON NCBT #2	1941
H2854-3	CHEVRON NCBT #3	1782
H2854-4	DURHAM ST. "A" #1	1053
H2854-5	DURHAM ST. "A" #2	900
H2854-6	DURHAM ST. "A" #3	775
H2854-7	DURHAM ST. "A" #4	1087
Quality Control		NR
True Value QC		NR
% Accuracy		NR
Relative Percent Difference		0.1

METHOD: EPA 600/4-79-020, 160.1



Chemist

03/20/97

Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 03/18/97
 Reporting Date: 03/20/97
 Project Number: NOT GIVEN
 Project Name: AMERADA HESS
 Project Location: CHEVRON NCBT & DURHAM STATE "A"

Sampling Date: 03/18/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: AH/BC

LAB NUMBER	SAMPLE ID	Na ppm	Ca ppm	Mg ppm	K ppm	Cl ppm	SO4 ppm	CO3 ppm	HCO3 ppm
ANALYSIS DATE:		03/20/97	03/19/97	03/19/97	03/19/97	03/19/97	03/19/97	03/19/97	03/19/97
H2854-1	CHEV. NCBT #1	248	155	54	4.1	540	131	0	317
H2854-2	CHEV. NCBT #2	278	155	102	3.9	700	160	0	322
H2854-3	CHEV. NCBT #3	244	179	85	4.2	740	85	0	249
H2854-4	DURH. ST. "A" #1	227	125	41	4.3	300	89	0	381
H2854-5	DURH. ST. "A" #2	131	115	46	4.0	280	74	0	361
H2854-6	DURH. ST. "A" #3	223	61	33	2.9	280	43	0	410
H2854-7	DURH. ST. "A" #4	310	32	20	1.8	320	59	0	400
Quality Control		NR	NR	NR	NR	480	105	NR	NR
True Value QC		NR	NR	NR	NR	500	100	NR	NR
% Accuracy		NR	NR	NR	NR	96.0	105	NR	NR
Relative Percent Difference		NR	NR	NR	NR	0	4.8	0	0
METHODS: EPA 600/4-79-02						352.3	375.4		
Std. Methods		3111B	3111B	3111B	3111B			2320B	2320B

Dee Whatley
 Chemist

03/20/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable analysis. Cardinal shall be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profit, incurred by client, its subsidiaries, affiliates or subcontractors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240
 FAX TO:

Receiving Date: 07/02/97
 Reporting Date: 07/07/97
 Project Number: NOT GIVEN
 Project Name: AMERADA HESS MONITOR WELLS
 Project Location: MONUMENT, NM

Sampling Date: 07/02/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		07/03/97	07/03/97	07/03/97	07/03/97
H3036-1	#1 CHEVRON NCBT	<0.001	<0.001	<0.001	<0.003
H3036-2	#2 CHEVRON NCBT	<0.001	<0.001	<0.001	<0.003
H3036-3	#3 CHEVRON NCBT	<0.001	<0.001	<0.001	<0.003
H3036-4	#4 DURHAM ST A 1	<0.001	<0.001	<0.001	0.004
H3036-5	#5 DURHAM ST A 2	<0.001	<0.001	<0.001	<0.003
H3036-6	#6 DURHAM ST A 3	<0.001	<0.001	<0.001	0.004
H3036-7	#7 DURHAM ST A 4	0.001	<0.001	<0.001	0.005
Quality Control		0.112	0.113	0.114	0.339
True Value QC		0.100	0.100	0.100	0.300
% Accuracy		112	113	114	113
Relative Percent Difference		4.4	0.9	0.9	2.4

METHOD: EPA SW 846-8020, 5030, Gas Chromatography

Dee Whatley
 Chemist

7/7/97
 Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240

Receiving Date: 07/02/97
 Reporting Date: 07/14/97
 Project Number: NOT GIVEN
 Project Name: AMERADA HESS MONITOR WELLS
 Project Location: MONUMENT, NM

Sampling Date: 07/02/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: GP

RCRA METALS

LAB NUMBER SAMPLE ID As Ag Ba Cd Cr Pb Hg Se
 ppm ppm ppm ppm ppm ppm ppm ppm

ANALYSIS DATE:	07/09/97	07/09/97	07/09/97	07/09/97	07/09/97	07/09/97	07/08/97	07/09/97
H3036-1 #1 CHEVRON NCBT	0.013	<0.1	1.7	<0.1	<1	<0.1	<0.02	<0.1
H3036-2 #2 CHEVRON NCBT	0.010	<0.1	1.6	<0.1	<1	<0.1	<0.02	<0.1
H3036-3 #3 CHEVRON NCBT	0.009	<0.1	1.5	<0.1	<1	<0.1	<0.02	<0.1
H3036-4 #4 DURHAM ST A 1	0.009	<0.1	1.5	<0.1	<1	<0.1	<0.02	<0.1
H3036-5 #5 DURHAM ST A 2	0.009	<0.1	1.9	<0.1	<1	<0.1	<0.02	<0.1
H3036-6 #6 DURHAM ST A 3	0.009	<0.1	1.9	<0.1	<1	<0.1	<0.02	<0.1
H3036-7 #7 DURHAM ST A 4	0.011	<0.1	1.7	<0.1	<1	<0.1	<0.02	<0.1
Quality Control	0.053	4.01	5.00	1.965	4.99	2.00	0.0099	0.094
True Value QC	0.050	4.00	5.00	2.000	5.00	2.00	0.0100	0.100
% Recovery	106	101	100	98	99	100	99	94
Relative Percent Difference	5.3	0.3	7.6	0.4	10.9	1.4	3.1	11.1

METHODS: EPA 600/4-79-020	206.2	272.1	208.1	213.1	218.1	239.1	245.1	270.2
METHODS: SW-846	7060A	7760A	7080A	7130	7190	7420	7470A	7740

Ben Joseph Cook
 Chemist

7/14/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
 PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON
 HOBBS, NM 88240

Receiving Date: 07/02/97
 Reporting Date: 07/07/97
 Project Number: NOT GIVEN
 Project Name: AMERADA HESS MONITOR WELLS
 Project Location: MONUMENT, NM

Sampling Date: 07/02/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL & INTACT
 Sample Received By: AH
 Analyzed By: AH/BC

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (umhos/cm)	T-Alkalinity (mgCaCO3/L)
ANALYSIS DATE:		07/07/97	07/02/97	07/02/97	07/02/97	07/02/97	07/02/97
H3036-1	#1 CHEVRON NCBT	260	135	58	3.2	2226	256
H3036-2	#2 CHEVRON NCBT	387	284	106	4.1	4350	264
H3036-3	#3 CHEVRON NCBT	254	186	64	5.3	2790	196
H3036-4	#4 DURHAM ST A 1	176	116	41	3.7	1607	312
H3036-5	#5 DURHAM ST A 2	113	113	40	2.8	1284	304
H3036-6	#6 DURHAM ST A 3	239	73	18	2.8	1362	368
H3036-7	#7 DURHAM ST A 4	327	36	20	12.6	1703	372
Quality Control		NR	46	50	NR	1413	NR
True Value QC		NR	50	50	NR	1413	NR
% Accuracy		NR	92	100	NR	100	NR
Relative Percent Difference		NR	0	0	NR	0	NR
METHODS:		SM3500-Ca-D		3500-Mg E	8049	120.1	310.1

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/L)	SO4 (mg/L)	CO3 (mg/L)	HCO3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		07/02/97	07/03/97	07/02/97	07/02/97	07/02/97	07/02/97
H3036-1	#1 CHEVRON NCBT	520	150	0	312	7.41	1495
H3036-2	#2 CHEVRON NCBT	1112	156	0	322	7.36	2950
H3036-3	#3 CHEVRON NCBT	692	112	0	239	7.44	1948
H3036-4	#4 DURHAM ST A 1	296	112	0	381	7.43	1164
H3036-5	#5 DURHAM ST A 2	216	84	0	371	7.31	990
H3036-6	#6 DURHAM ST A 3	260	43	0	449	7.50	868
H3036-7	#7 DURHAM ST A 4	324	68	0	454	7.65	1085
Quality Control		200	97	NR	NR	7.04	NR
True Value QC		200	100	NR	NR	7.00	NR
% Accuracy		100	97	NR	NR	101	NR
Relative Percent Difference		0	1.6	NR	NR	0.6	NR
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Dee Whatley
 Chemist

7/7/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. Cardinal is not liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

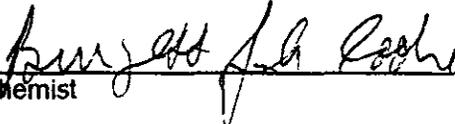
ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DEE WHATLEY
703 E. CLINTON, SUITE 103
HOBBS, NM 88240
FAX TO: 505-397-4388

Receiving Date: 09/05/97
Reporting Date: 09/08/97
Project Number: 3421
Project Name: AMERADA MONITOR WELLS
Project Location: CHEVRON NCBT & DURHAM ST. A

Sampling Date: 09/05/97
Sample Type: GROUNDWATER
Sample Condition: COOL, INTACT
Sample Received By: AH
Analyzed By: BC

LAB NUMBER	SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE		09/05/97	09/05/97	09/05/97	09/05/97
H3178-1	C-1	<0.002	<0.002	<0.002	<0.006
H3178-2	C-2	<0.002	0.016	<0.002	<0.006
H3178-3	C-3	<0.002	<0.002	<0.002	<0.006
H3178-4	D-1	0.008	<0.002	<0.002	<0.006
H3178-5	D-2	<0.002	<0.002	<0.002	<0.006
H3178-6	D-3	<0.002	<0.002	<0.002	<0.006
H3178-7	D-4	<0.002	<0.002	<0.002	<0.006
Quality Control		0.095	0.095	0.088	0.263
True Value QC		0.090	0.090	0.087	0.260
% Recovery		105	106	101	101
Relative Percent Difference		10.3	6.8	13.8	2.2

METHOD: EPA SW 846-8020, 5030, Gas Chromatography


Chemist

9/8/97
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: DEE WHATLEY
703 E. CLINTON, STE 103
HOBBS, NM 88240
FAX TO: 505-397-4388

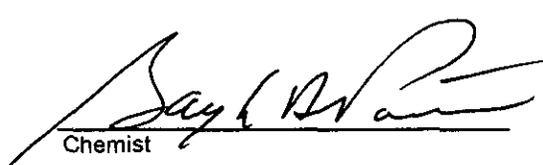
Receiving Date: 09/05/97
Reporting Date: 09/12/97
Project Number: 3421
Project Name: AMERADA MONITOR WELLS
Project Location: CHEVRON NCBT & DURHAM ST. A

Sampling Date: 09/05/97
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/GP

TOTAL METALS

LAB NO.	SAMPLE ID	As (ppm)	Ag (ppm)	Ba (ppm)	Cd (ppm)	Cr (ppm)	Pb (ppm)	Hg (ppm)	Se (ppm)
ANALYSIS DATE:		09/11/97	09/11/97	09/11/97	09/11/97	09/11/97	09/11/97	09/11/97	09/11/97
H3178-1	C-1	0.007	<0.05	0.1	<0.01	<0.05	0.015	<0.002	0.002
H3178-2	C-2	0.010	<0.05	0.2	<0.01	<0.05	0.008	<0.002	<0.002
H3178-3	C-3	0.004	<0.05	0.1	<0.01	<0.05	0.014	<0.002	<0.002
H3178-4	D-1	0.004	<0.05	0.1	<0.01	<0.05	0.006	<0.002	0.003
H3178-5	D-2	0.005	<0.05	0.3	<0.01	<0.05	<0.002	<0.002	<0.002
H3178-6	D-3	0.005	<0.05	0.4	<0.01	<0.05	0.006	<0.002	<0.002
H3178-7	D-4	0.009	<0.05	<0.1	<0.01	<0.05	<0.002	<0.002	<0.002
Quality Control		0.094	4.020	20.10	1.018	0.980	0.022	0.0092	0.098
True Value QC		0.100	4.000	20.00	1.000	1.000	0.020	0.0100	0.100
% Recovery		94	101	101	102	98	110	92	98
Relative Standard Deviation		1.3	0.7	0.8	0.5	0.7	14	1	2.1

METHODS: EPA 600/4-91/010	206.2	272.1	208.1	213.1	218.1	239.2	245.1	270.2
---------------------------	-------	-------	-------	-------	-------	-------	-------	-------


Chemist

09/12/97
Date



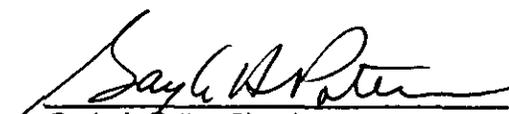
ANALYTICAL RESULTS FOR
 SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
 ATTN: DEE WHATLEY
 703 E. CLINTON, SUITE 103
 HOBBS, NM 88240
 FAX TO: 505-397-4388

Receiving Date: 09/05/97
 Reporting Date: 09/10/97
 Project Number: 3421
 Project Name: AMERADA MONITOR WELLS
 Project Location: CHEVRON NCBT & DURHAM ST. A

Sampling Date: 09/05/97
 Sample Type: GROUNDWATER
 Sample Condition: COOL, INTACT
 Sample Received By: AH
 Analyzed By: AH/BC

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (umhos/cm)	T-Alkalinity (mgCaCO3/L)
ANALYSIS DATE:		09/10/97	09/08/97	09/08/97	09/09/97	09/08/97	09/08/97
H3178-1	C-1	209	162	56	14.3	2135	244
H3178-2	C-2	328	400	151	13.5	5132	276
H3178-3	C-3	290	198	77	2.0	2745	192
H3178-4	D-1	170	133	44	0.5	1665	356
H3178-5	D-2	94	141	24	2.5	1363	280
H3178-6	D-3	159	74	27	3.8	1428	320
H3178-7	D-4	324	46	11	2.6	1799	348
Quality Control		NR	NR	NR	NR	1429	NR
True Value QC		NR	NR	NR	NR	1413	NR
% Accuracy		NR	NR	NR	NR	101	NR
Relative Percent Difference		NR	NR	NR	NR	0.4	NR
METHODS:		SM3500-Ca-D		3500-Mg E	8049	120.1	310.1

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/L)	SO4 (mg/L)	CO3 (mg/L)	HCO3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		09/08/97	09/09/97	09/08/97	09/08/97	09/08/97	09/08/97
H3178-1	C-1	508	145	0	298	7.23	1424
H3178-2	C-2	1360	180	0	337	7.09	3659
H3178-3	C-3	680	115	0	234	7.35	2000
H3178-4	D-1	308	165	0	356	7.27	1028
H3178-5	D-2	208	85	0	342	7.16	902
H3178-6	D-3	232	53	0	320	7.27	770
H3178-7	D-4	316	74	0	425	7.48	991
Quality Control		484	98.5	NR	NR	7.04	NR
True Value QC		500	100	NR	NR	7.00	NR
% Accuracy		96.8	98.5	NR	NR	101	NR
Relative Percent Difference		0	1.5	NR	NR	0.3	NR
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1


 Gayle A. Potter, Chemist

09/11/97
 Date

WINDMILL WATER ANALYSES



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

PHONE (806) 796-2800 • 5262 34th ST. • LUBBOCK, TX 79407

ANALYTICAL RESULTS FOR
AMERADA HESS CORP.
ATTN: S.W. SMALL
P.O. BOX 840
SEMINOLE, TX 79360
FAX TO: 915-758-6741

Receiving Date: 11/18/96
Reporting Date: 11/19/96
Project Number: NOT GIVEN
Project Name: WM35
Project Location: NMGBSAU

Sampling Date: 11/18/96
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TDS (mg/L)	Cl (mg/L)
ANALYSIS DATE:		11/19/96	11/18/96
H2708-1	NMGBSAU	3402	1483
Quality Control		NR	208
True Value QC		NR	200
% Accuracy		NR	104
Relative Percent Difference		3.2	1.9
METHODS: EPA 600/4-79-02		160.1	325.3

Burjess R. Cashe
Chemist

11/19/96
Date

BACKFILL MATERIAL ANALYSES

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

RE ENVIRONMENTAL SERVICES
ATTN: MR. ROB ELAM
P.O. BOX 13418
ODESSA, TEXAS 79768-3418
FAX: 915-368-0804

Receiving Date: 05/27/97
Sample Type: SOIL
Project #: MONUMENT, N.M.

Analysis Date: TPH 05/27/97
Analysis Date: BTEX & TPH 05/28/97
Sampling Date: 05/27/97
Sample Condition: Intact

ELT#	FIELD CODE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	m,p-XYLENE (mg/kg)	o-XYLENE (mg/kg)	TPH (mg/kg)
11254	BOTTOM FILL	<0.100	<0.100	<0.100	<0.100	<0.100	<10
11260	DURHAM STATE A-B	<0.100	<0.100	<0.100	0.172	<0.100	64
	% IA	90	95	100	100	98	104
	% EA	92	108	108	108	105	93
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: EPA SW 846-8020,5030, 418.1


Michael R. Fowler

5-28-97
Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

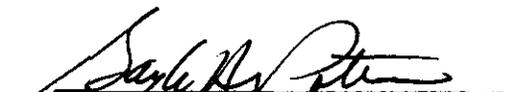
ANALYTICAL RESULTS FOR
 AMERADA HESS
 ATTN: MARK VINSON
 P.O. DRAWER D
 MONUMENT, NM 88265
 FAX TO:

Receiving Date: 08/12/97
 Reporting Date: 08/13/97
 Project Number: NOT GIVEN
 Project Name: NMGSAU BATT #76
 Project Location: MONUMENT

Sampling Date: 08/12/97
 Sample Type: SOIL
 Sample Condition: COOL, INTACT
 Sample Received By: BC
 Analyzed By: BC

LAB NUMBER SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:	08/11/97	08/11/97	08/11/97	08/11/97	08/11/97
H3125-1 NMGSAU BATT #76	558	<0.002	<0.002	<0.002	0.007
Quality Control	203	0.089	0.090	0.086	0.247
True Value QC	200	0.090	0.090	0.087	0.260
% Recovery	102	100	100	99.2	95.0
Relative Percent Difference	1.9	4.0	9.2	6.7	6.7

METHODS: TRPHC - EPA 800/7-79-020, 418.1; BTEX - EPA SW-846-8020


 Gayle A. Potter

08/14/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. Cardinal shall be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

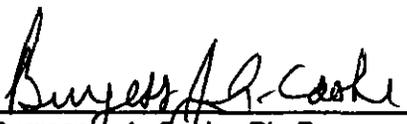
ANALYTICAL RESULTS FOR
 AMERADA HESS
 ATTN: MARK VINCENT
 P.O. DRAWER D
 MONUMENT, TX 88265
 FAX TO:

Receiving Date: 08/18/97
 Reporting Date: 08/19/97
 Project Number: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: NOT GIVEN

Sampling Date: 08/18/97
 Sample Type: SOIL
 Sample Condition: COOL, INTACT
 Sample Received By: AH
 Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		08/18/97	08/18/97	08/18/97	08/18/97	08/18/97
H3139-1	NMGSAU BATT #76	741	<0.020	<0.020	<0.020	<0.060
Quality Control		199	0.091	0.095	0.111	0.325
True Value QC		200	0.100	0.100	0.100	0.300
% Recovery		99.5	91.4	95.2	111	108
Relative Percent Difference		0.5	4.2	4.6	3.2	2.5

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


 Burgess A. Cooke, Ph. D.

8/19/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates, or agents arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 AMERADA HESS
 ATTN: MARK VINCENT
 P.O. DRAWER D
 MONUMENT, NM 88265
 FAX TO:

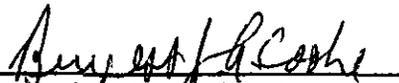
Receiving Date: 08/22/97
 Reporting Date: 08/25/97
 Project Number: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: NOT GIVEN

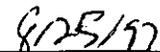
Sampling Date: 08/22/97
 Sample Type: SOIL
 Sample Condition: COOL, INTACT
 Sample Received By: AH
 Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
------------	-----------	----------------	--------------------	--------------------	-----------------------------	-----------------------------

ANALYSIS DATE:		08/22/97	08/22/97	08/22/97	08/22/97	08/22/97
H3149-1	NMGSAU BATT #76	633	<0.002	<0.002	<0.002	<0.006
Quality Control		190	0.101	0.098	0.092	0.267
True Value QC		200	0.090	0.090	0.087	0.260
% Recovery		95	112	110	105	103
Relative Percent Difference		0.7	9.0	2.8	1.3	0.7

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


 Burgess J. A. Cooke, Ph. D.


 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or subcontractors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 AMERADA HESS
 ATTN: MARK VINCENT
 P.O. DRAWER D
 MONUMENT, NM 88265
 FAX TO:

Receiving Date: 08/28/97
 Reporting Date: 08/29/97
 Project Number: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: NOT GIVEN

Sampling Date: 08/28/97
 Sample Type: SOIL
 Sample Condition: COOL, INTACT
 Sample Received By: AH
 Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		08/28/97	08/28/97	08/28/97	08/28/97	08/28/97
H3161-1	NMGSAU T/B #76	871	<0.002	<0.002	<0.002	0.019
Quality Control		195	0.086	0.090	0.084	0.249
True Value QC		200	0.090	0.090	0.087	0.260
% Recovery		97.5	95.5	100	96.5	95.8
Relative Percent Difference		1.6	2.9	4.8	7.0	3.6

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020

Burgess J. A. Cooke
 Burgess J. A. Cooke, Ph. D.

9/29/97
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



**ARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

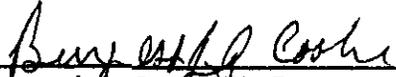
**ANALYTICAL RESULTS FOR
AMERADA HESS
ATTN: MARK VINSON
P.O. DRAWER D
MONUMENT, NM 88265
FAX TO:**

Receiving Date: 09/09/97
Reporting Date: 09/10/97
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NOT GIVEN

Sampling Date: 09/09/97
Sample Type: SOIL
Sample Condition: COOL, INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		09/09/97	09/09/97	09/09/97	09/09/97	09/09/97
H3183-1	NMGSAU #76	430	<0.002	<0.002	<0.002	<0.006
Quality Control		201	0.101	0.093	0.088	0.255
True Value QC		200	0.090	0.090	0.087	0.260
% Recovery		101	112	103	101	98.1
Relative Percent Difference		2.6	10.6	7.7	10.5	12.1

METHODS: TRPHC - EPA 600/7-79-020, 418.1; BTEX - EPA SW-846-8020


Burgess J. A. Cooke, Ph. D.

9/10/97
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

