ENVIROMENTAL SITE ASSESSMENT WORKPLAN

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

May 20, 1997

Mr. William C. Olson
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

RE: **Site Reclamation**
Weir 'B' Tank Battery
NW^4, Sec 26, T-19S, R-36E
Lea County, NM

Dear Mr. Olson:

Pursuant to our telephone conversation on May 19, 1997, the following procedure, which was verbally agreed to, will be employed to prevent future groundwater degradation at the referenced site.

Monitor well #1 will be plugged with cement containing 5% bentonite to a depth sufficient to protect the groundwater. Hydrocarbon contaminated material will be excavated from the area adjacent to the monitor well location. The material will be excavated to the top of the groundwater or until the remaining material tests clean. The excavated material will be transported to an OCD approved disposal facility and will be replaced at the site with clean material (< 100ppm TPH, ,10 ppm benzene and <50 ppm BTEX). A monitor well to replace well #1 will be drilled in the excavated area to facilitate future groundwater testing (four quarters).

If contamination is encountered significantly in excess of the amount we discussed on May 19, the procedure may need to be revised. Any changes to the procedure will be done in consultation with the NMOCD and the landowner. If you have any questions or need additional information, please contact the undersigned at (915) 758-6741.

Sincerely,

Samuel Small, PE
Environmental Coordinator

xc: NMOCD - Hobbs District
Houston Environmental File
Seminole District Environmental File
Monument File

ALLSTATE SERVICES
P.O. BOX 11322
MIDLAND, TEXAS 79702
OFFICE: (915) 682-3547
FAX: (915) 682-4182

April 5, 1997

Mr. Sam Small
Mr. Rob Williams
P.O. Drawer 2
Monument, New Mexico 88265

Re: NMGSAU - Battery No. 40 (Oxy State E) and Battery No. 30 (AHC Weir "B")
Installation of Monitor Wells

Gentlemen:

Allstate Services Environmental was contacted by Amerada Hess Corporation to bid on the installation of monitor wells at the above indicated locations. The bid was granted in favor of ASE and March 21, 1997 was the selected kickoff date for drilling.

Background

The following information was included in the Request For Contractor Services:

Four monitor wells were to be drilled at the Oxy State "E" and one monitor well was to be drilled at the AHC Weir "B". Each well was to be drilled to a depth which would provide for setting 10 feet of well screen below ground water contact (anticipated TD of 30'). Wells were to be cased with two inch PVC pipe with 15' of well screen, gravel packed from the bottom of the hole to approximately 3 feet above the top of the screen, capped with about 2 feet of bentonite and grouted to surface using cement with 5% bentonite. Each well would have a a locking cap.

Each well would be developed and sampled in accordance with EPA approved procedures. Soil samples from each well were to be collected at five foot intervals and analyzed for TPH, BTEX and chloride content. A geologic log noting the depth to ground water will be kept for each well. Water samples will be analyzed for free product, BTEX and chloride content. A report containing the analytical results and well completion diagrams for each site will be submitted at the conclusion of the project. AHC will be responsible for disposing of wastes resulting from the project.

Installation Operations

On April 21, 1997, Allstate Services moved in and rigged up Scarborough Drilling Company on the Oxy State "E" location, and began drilling the first monitor well location in the area selected by Mr. 99Sam Small. **Oxy State "E" MW-1** was drilled to a TD of 32.40 feet from surface with the top of the water at 24.55'. Split spoon samples of soil were gathered at 5' intervals for a total of six

samples (see Appendix "A", Figures 1 and 2). Samples were placed in laboratory clean glass jars, properly labeled and immediately placed on ice for transport to Environmental Labs of Texas, Midland, Texas. Afterinstalling pipe, screen, gravel, bentonite and grout, the well stickup was surrounded with a small cement pad and a locking cap.

The rig was then moved to the second location as indicated by Mr. Small and the second well was drilled. The **Oxy State "E" MW-2** was drilled to a TD of 32.37 feet from the surface, with the top of the water at 23.29'. Split spoon samples of soil were gathered at 5' intervals for a total of six samples (see Appendix "A", Figures 3 and 4). Samples were placed in laboratory clean glass jars, properly labeled and immediately placed on ice for transport to Environmental Labs of Texas, Midland, Texas. After installing pipe, screen, gravel, bentonite and grout, the well stickup was surrounded with a small cement pad and a locking cap.

On April 22, 1997, the **Oxy State "E" MW-3** was drilled to a TD of 32.70' FS with the top of the water at 21.66'. A total of six split spoon samples were collected at 5' intervals (see Appendix "A", Figures 5 and 6). Samples and well completion were handled as described previously for MW-1 and 2.

The **Oxy State "E" MW-4** was drilled to a TD of 32.61 FS with the TOW at 21.38'. A total of six split spoon samples were collected at 5' intervals (see Appendix "A", Figures 7 and 8). Samples and well completion were handled as described previously.

The **Weir "B" MW-1** was drilled to a TD of 35.61' FS with the TOW at 22.68'. A total of six split spoon samples were collected at 5' intervals (see Appendix "A", Figures 7 and 8). Samples and well completion were handled as described previously.

A second well for the location, the **Weir "B" MW-2**, was drilled to a TD of 34.54' FS with the TOW at 22.86'. A total of six split spoon samples were collected at 5' intervals (see Appendix "A", Figures 9 and 10). Samples and well completion were handled as described previously.

Well Development and Water Sampling Procedures

The volume of each well was determined after the top of the water and TD were measured. Three volumes of water were removed from the completed well, using a clean one quart bailer. Water samples were placed in laboratory clean sample jars/vials which were filled to the top so that no headspace was present. The samples were sealed with Teflon lined caps with a septum, labeled, and subsequently placed on ice in a covered, insulated cooler and chilled to 40 degrees F. Samples were then transferred to Environmental Labs of Texas, Midland, Texas.

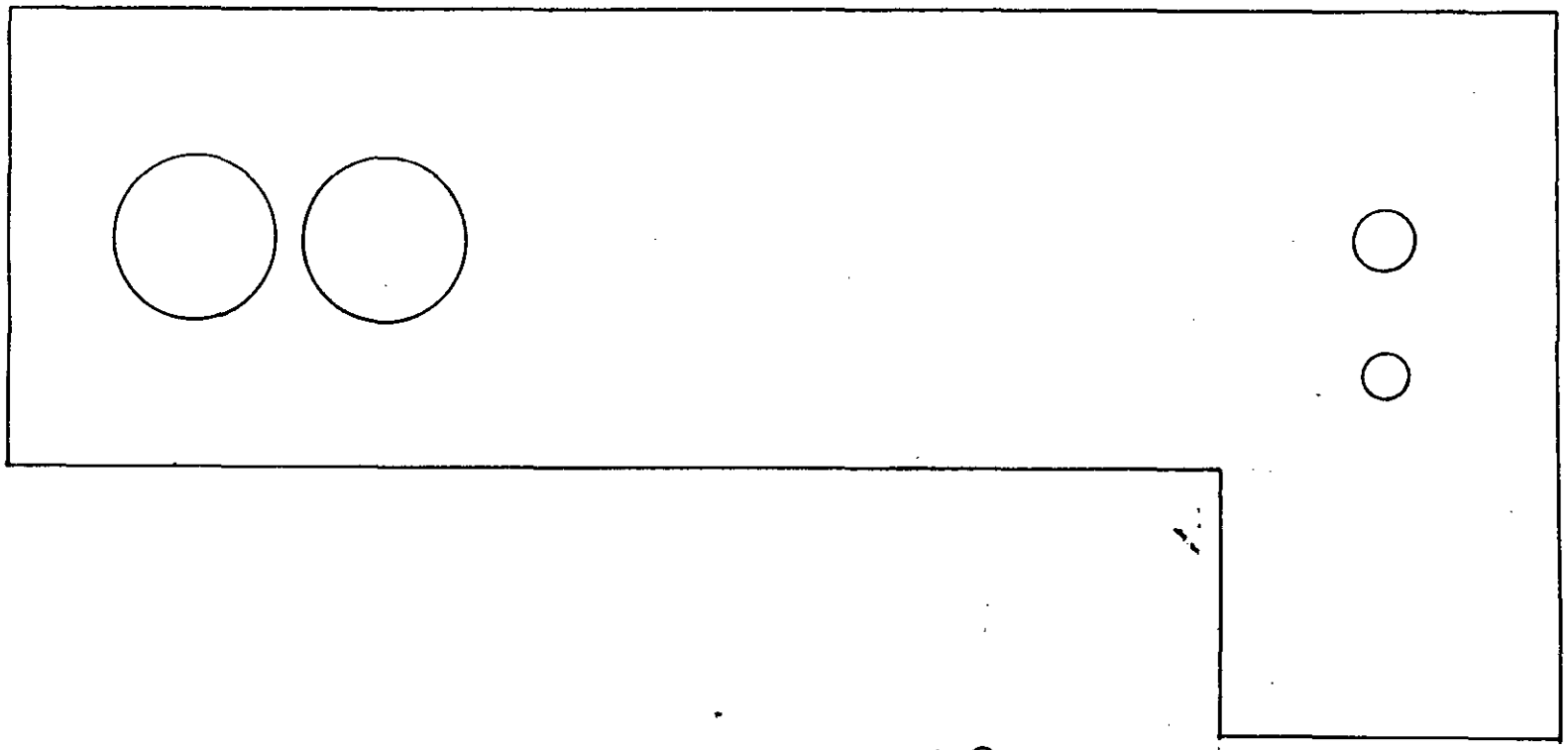
Should additional information be required please contact me personally. Your business is appreciated.

Yours truly,

K. C. Offield
Allstate Services Environmental

KCO:ck

Attachments: Appendix "A"



AMERADA HESS CORPORATION

WEIR 'B' TANK BATTERY

Not to Scale

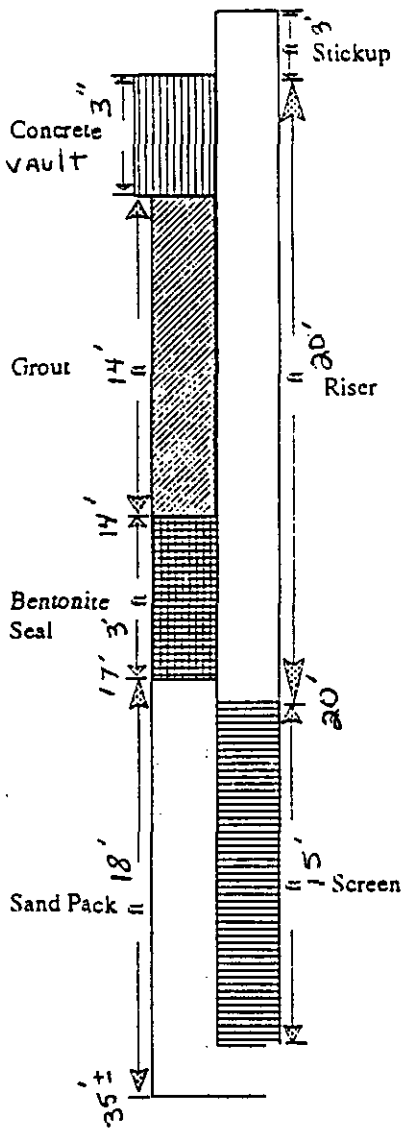
MONITORING WELL CONSTRUCTION DIAGRAM FIGURE 9

Weir "B"

Boring No: MW-1 Date Started: 4-22-97 Date Finished: 4-22-97

Surface Elevation: Top of Casing: Well Installed on Completion (Yes) No)

WELL DESIGN



WELL CONSTRUCTION MATERIALS

PROTECTIVE COVER: ☐ Manhole ☒ Prot. Casing Other

RISER MATERIAL: PVC Sch 40

WELL DIAMETER: 5 in 2" pipe

SCREEN MATERIAL: 8/16

SCREEN SLOT SIZE: ☐.010 ☒.020

BENTONITE PLUG ☒ GROUT ☒ w/5% Bentonite

SAND: Quantity 2½ Bags at 100 lbs. ea.

INITIAL WATER LEVEL 25' - 26'

WATER LEVEL AT DEVELOPMENT 22.68

TD 35.61 FS

DEVELOPMENT METHOD:

4-23-97 14:40

☒ Bailer ☐ Airlift ☐ Nitrogen ☐ Submersible Pump ☐ Other

Well Devel. Time: _____ Volume: 1.62 (3 casing vol = 20 Bailers)

Well Devel. Time: _____ Volume: _____

START DRLG @ 13:38
split spoon sample

DEPTH	TIME	SOIL TYPE	REMARKS	Sample I.D.
5'	13:45	CAUCHE	HEAVY SMELL	97-04-22 - mw1 - 5'
10'	13:50	SANDY	HEAVY SMELL	97-04-22 - mw1 - 10'
15'	13:55	SANDY	HEAVY SMELL	97-04-22 - mw1 - 15'
20'	14:00	SAND & CLAY	FREE-OIL	97-04-22 - mw1 - 20'
25'	14:07	WET-SANDY CLAY	NO-SMELL	97-04-22 - mw1 - 25'
30'	14:14	WET-CLAY	LIGHT SMELL	97-04-22 - mw1 - 30'
~~33'~~				~~97-04-22 - mw1 - 33'~~

Top of WATER 25 - 26'

WEIR 'B' mw1

MONITORING WELL CONSTRUCTION DIAGRAM

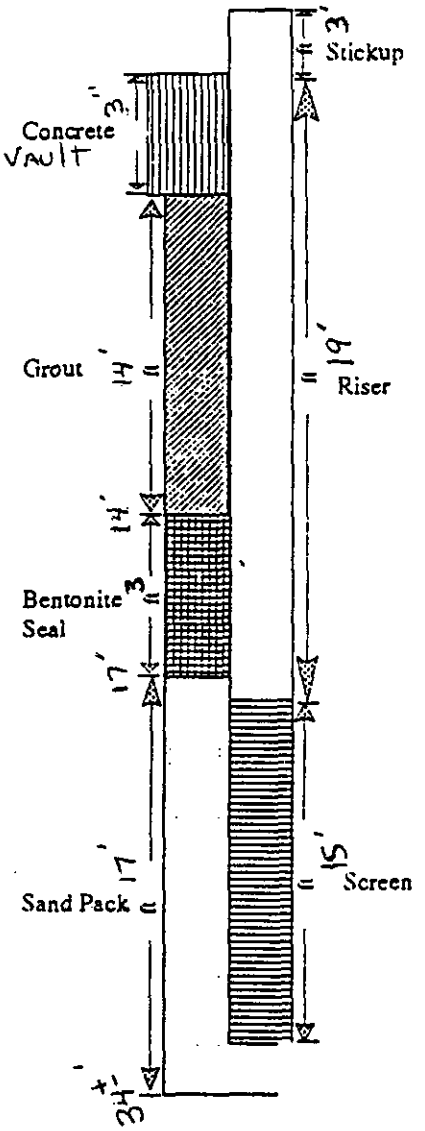
FIGURE 11

Weir "B"

Boring No: MW-2 Date Started: 4-22-97 Date Finished: 4-22-97

Surface Elevation: Top of Casing: Well Installed on Completion (Yes/No)

WELL DESIGN



WELL CONSTRUCTION MATERIALS

PROTECTIVE COVER: ☐ Manhole ☒ Prot. Casing Other

RISER MATERIAL: PVC Sch 40

WELL DIAMETER: 5 in 2" pipe

SCREEN MATERIAL: 8/16

SCREEN SLOT SIZE: ☐.010 ☒.020

BENTONITE PLUG ☒ GROUT ☒ w/ 5% Bentonite

SAND: Quantity 2 Bags at 100 lbs. ea.

INITIAL WATER LEVEL 24'

WATER LEVEL AT DEVELOPMENT 22.86

TD 34.54 FS

DEVELOPMENT METHOD:

4-23-97 10:10

☒ Bailer ☐ Airlift ☐ Nitrogen ☐ Submersible Pump ☐ Other

Well Devel. Time: _____ Volume: 1.46 gal (3 casing vol = 18 Bailers)

Well Devel. Time: _____ Volume: _____

Split spoon samples

DEPTH	TIME	SOIL TYPE	REMARKS	SAMPLE I.D.
5'	15:12	CALICHE	SLIGHT SMELL	97-04-22 mw2-5'
10'	15:17	CALICHE	NO-SMELL	97-04-22 mw2-10'
15'	15:22	SANDY CLAY	DAMP NO-SMELL	97-04-22 mw2-15'
20'	15:27	SAND+CLAY	DAMP NO SMELL	97-04-22 mw2-20'
25'	15:33	SAND	WET NO SMELL	97-04-22 mw2-25'
30'	15:38	SAND	WET NO-SMELL	97-04-22 mw2-30'

Top of water 24'

WEIR B mw-2

ENVIRONMENTAL LAB OF , INC.

FIGURE 12

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

Receiving Date: 04/23/97
Sample Type: SOIL
Project #: MW 1 & MW 2
Project Name: WEIR "B"
Project Location: LEA CO., NEW MEXICO

Analysis Date: 04/23/97
Sampling Date: 04/22/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	m,p-XYLENE (mg/kg)	o-XYLENE (mg/kg)	TPH (mg/kg)	Chlorides In Soil (mg/kg)
10923	970422 MW1 5'	<0.200	<0.200	5.563	12.579	3.588	15,650	122
10924	970422 MW1 10'	1.104	<0.200	6.198	14.360	4.251	13,150	80
10925	970422 MW1 15'	<0.200	<0.200	7.551	19.539	5.215	12,250	80
10926	970422 MW1 20'	<0.200	<0.200	10.004	24.848	6.399	20,250	95
10927	970422 MW1 25'						10	
10928	970422 MW1 30'						<10	
10929	970422 MW2 5'						<10	
10930	970422 MW2 10'						<10	
10931	970422 MW2 15'						<10	
10932	970422 MW2 20'						<10	
10933	970422 MW2 25'						<10	
10934	970422 MW2 30'						<10	
	% IA	102	110	118	117	116	105	109
	% EA	124	125	114	117	111	106	
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10	

METHODS: EPA 418.1, SW 846-8020,5030,9252

Michael R. Fowler

Michael R. Fowler

4-25-97

Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

FIGURE 13

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

Receiving Date: 04/24/97
Sample Type: WATER
Project #: WEIR B
Project Location: MONUMENT, NEW MEXICO

Analysis Date: 04/24/97
Sampling Date: 04/23/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	m,p-XYLENE (mg/L)	o-XYLENE (mg/L)	TPH (mg/L)	Chlorides (mg/L)
10973	97-04-23 MW1	0.012	<0.001	0.019	0.034	0.006	19	85
10974	97-04-23 MW2	<0.001	<0.001	<0.001	0.006	0.003	<1	67
	% IA	107	103	105	104	103	104	109
	% EA	95	102	101	100	99		
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1	

METHODS: EPA 418.1, SW 846-8020,5030,9252

Michael R. Fowler

4-25-97
Date

12600 West I-20 East • Odessa, Texas 79765 • (915) 563-1800 • Fax (915) 563-1713

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

May 15, 1997

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 421 645 922

Mr. Wayne Price
NMOCD
P.O. Box 1980
Hobbs, New Mexico 88240-1980

RE: Possible Groundwater Contamination
Oxy State 'E' Tank Battery Site
Weir 'B' Tank Battery Site
Lea County, New Mexico

Dear Mr. Price:

This letter will confirm our telephone conversation of April 28,1997 concerning possible groundwater contamination discovered at the abandoned Oxy State 'E' tank battery site (SW^4, Sec 30, T-19S, R-37E, Lea County) and at the active Weir 'B' tank battery site (NW^4, Sec 26, T-19S, R-36E, Lea County). I am including copies of the soil and water analyses obtained from the monitor wells Amerada Hess Corporation (AHC) had drilled at both locations. The consultants report has not been submitted to AHC yet.

If you have any questions or need additional information, please contact me at (915) 758-6741.

Sincerely,

Samuel Small, PE
Environmental Coordinator

xc: NMOCD - Santa Fe
Houston Environmental File
Seminole District File

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

Receiving Date: 04/24/97
Sample Type: WATER
Project #: OXY STATE "E"
Project Location: MONUMENT, NEW MEXICO

Analysis Date: 04/24/97
Sampling Date: 04/23/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	m,p-XYLENE (mg/L)	o-XYLENE (mg/L)	TPH (mg/L)	Chlorides (mg/L)
10969	97-04-23 MW1	<0.001	<0.001	<0.001	<0.001	<0.001	<1	184
10970	97-04-23 MW2	0.001	<0.001	<0.001	0.002	0.002	2	138
10971	97-04-23 MW3	0.003	<0.001	<0.001	0.001	<0.001	1	638
10972	97-04-23 MW4	0.002	<0.001	<0.001	0.002	<0.001	4	851
	% IA	107	103	105	104	103	104	109
	% EA	95	102	101	100	99		
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1	

METHODS: EPA 418.1, SW 846-8020,5030,9252

Michael R. Fowler

Michael R. Fowler

4-25-97

Date

ENVIRONMENTAL LAB OF TEXAS, INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

RECEIVING DATE: 04/21/97
SAMPLE TYPE: SOIL
PROJECT #: AMERADA HESS OXY STATE "E"
PROJECT NAME:MONITOR WELLS
PROJECT LOCATION: NEAR MONUMENT, NM

ANALYSIS DATE: 04/22/97
SAMPLING DATE: 04/21/97
SAMPLE CONDITION: Intact/Iced

ELT#	FIELD CODE	TPH (mg/kg)
10891	97-4-21-MW1-5	20
10892	97-4-21-MW1-10	10
10893	97-4-21-MW1-15	<10
10894	97-4-21-MW1-20	10
10895	97-4-21-MW1-25	70
10896	97-4-21-MW1-30	40
10897	97-04-21-MW2-5	20
10898	97-04-21-MW2-10	20
10899	97-04-21-MW2-15	20
10900	97-04-21-MW2-20	50
10901	97-04-21-MW2-25	50
10902	97-04-21-MW2-30	20
	QUALITY CONTROL	278
	TRUE VALUE	264
	% PRECISION	105

Methods: EPA 418.1

Michael R. Fowler

4-22-97
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

RECEIVING DATE: 04/23/97
SAMPLE TYPE: SOIL
PROJECT #: AMERADA HESS OXY STATE "E"
PROJECT LOCATION: LEA COUNTY, NEW MEXICO

ANALYSIS DATE: 04/23/97
SAMPLING DATE: 04/22/97
SAMPLE CONDITION: Intact/Iced

ELT#	FIELD CODE	TPH (mg/kg)
10935	97-04-22 M.W. 3-5	<10
10936	97-04-22 M.W. 3-10	<10
10937	97-04-22 M.W. 3-15	10
10938	97-04-22 M.W. 3-20	20
10939	97-04-22 M.W. 3-25	<10
10940	97-04-22 M.W. 3-30	<10
10941	97-04-22 M.W. 4-5	<10
10942	97-04-22 M.W. 4-10	<10
10943	97-04-22 M.W. 4-15	<10
10944	97-04-22 M.W. 4-20	<10
10945	97-04-22 M.W. 4-25	<10
10946	97-04-22 M.W. 4-30	<10
	QUALITY CONTROL	276
	TRUE VALUE	264
	% PRECISION	105

Methods: EPA 418.1

Michael R. Fowler

4-23-97
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

Receiving Date: 04/24/97
Sample Type: WATER
Project #: WEIR B
Project Location: MONUMENT, NEW MEXICO

Analysis Date: 04/24/97
Sampling Date: 04/23/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYLBENZENE (mg/L)	m,p-XYLENE (mg/L)	o-XYLENE (mg/L)	TPH (mg/L)	Chlorides (mg/L)
10973	97-04-23 MW1	0.012	<0.001	0.019	0.034	0.006	19	85
10974	97-04-23 MW2	<0.001	<0.001	<0.001	0.006	0.003	<1	87
	% IA	107	103	105	104	103	104	109
	% EA	95	102	101	100	99		
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1	

METHODS: EPA 418.1, SW 846-8020,5030,9252

Michael R. Fowler

4-25-97
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ALLSTATE SERVICES
MR. RANDY OFFIELD
P.O. BOX 11322
MIDLAND, TEXAS 79702
FAX: 915-682-4182

Receiving Date: 04/23/97
Sample Type: SOIL
Project #: MW 1 & MW 2
Project Name: WEIR "B"
Project Location: LEA CO., NEW MEXICO

Analysis Date: 04/23/97
Sampling Date: 04/22/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYLBENZENE (mg/kg)	m,p-XYLENE (mg/kg)	o-XYLENE (mg/kg)	TPH (mg/kg)	Chlorides In Soil (mg/kg)
10923	970422 MW1 5'	<0.200	<0.200	5.563	12.579	3.588	15,650	122
10924	970422 MW1 10'	1.104	<0.200	8.188	14.360	4.251	13,150	80
10925	970422 MW1 15'	<0.200	<0.200	7.551	19.539	5.215	12,250	80
10926	970422 MW1 20'	<0.200	<0.200	10.004	24.848	6.399	20,250	95
10927	970422 MW1 25'						10	
10928	970422 MW1 30'						<10	
10929	970422 MW2 5'						<10	
10930	970422 MW2 10'						<10	
10931	970422 MW2 15'						<10	
10932	970422 MW2 20'						<10	
10933	970422 MW2 25'						<10	
10934	970422 MW2 30'						<10	
	% IA	102	110	118	117	118	105	109
	% EA	124	125	114	117	111	106	
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10	

METHODS: EPA 418.1, SW 846-8020,5030,9252

Michael R. Fowler

4-25-97
Date