# 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 12, 1997



**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**P 421 645 872**

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

RE: **Ground Water Investigation**
Durham State "A" Tank Battery
Chevron Graham NCT 'B' Tank Battery

Dear Mr. Olson

Pursuant to your letter of March 6, 1997, enclosed find the laboratory analytical data sheets requested in conditions (1) and (2). We are not submitting a closure and monitoring status report as requested in condition (4) as we have not yet begun work on the project. Bids have recently been let for the project and we anticipate work starting during the week of May 12, 1997. The Hobbs NMOCD District Office will be notified prior to work starting, as requested in condition (5).

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

Yours truly,

Samuel Small, PE
Environmental Coordinator

xc: NMOCD Hobbs District Office w/ enclosure
Houston Environmental File w/ enclosure
Seminole District Environmental File
Monument File

CARDINAL 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"

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 | 276 | 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 | 126 | 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 |

Chemist

03/20/97
Date

CARDINAL LABORATORIES

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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

CARDINAL LABORATORIES

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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

Burgett & Cooke
Chemist

3/20/97
Date

#6024

# Safety & Environmental Solutions, Inc.

703 E. Clinton, Suite 103, Hobbs, New Mexico 88240
(505)397-0510

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: SESI

Phone #:

FAX #:

Company Name & Address:

Project #:

Project Name: Amerada Hess

Project Location: Chevron NCBT + Durham State "A"

Sampler Signature: W.D. Veith

ANALYSIS REQUEST

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX: WATER | SOIL | AIR | SLUDGE | OTHER | PRESERVATIVE METHOD: HCL | HNO3 | ICE | NONE | OTHER | SAMPLING: DATE | TIME | BTEX 8112(0)/5030 | TPH 418.1 | TCLP Metals Ag As Ba Cd Cr Pb Hg Se | Total Metals Ag As Ba Cd Cr Pb Hg Se | TCLP Volatiles | TCLP Semi Volatiles | TDS | RCI | Cations + Anions |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H2858-1 | Chevron NCBT #1 | 1 | | ✓ | | | | | | | ✓ | | | 3-18-97 | | ✓ | | | | | | ✓ | | ✓ |
| -2 | " " #2 | 1 | | ✓ | | | | | | | ✓ | | | 3-18-97 | | ✓ | | | | | | ✓ | | ✓ |
| -3 | " " #3 | 1 | | ✓ | | | | | | | ✓ | | | " " | | ✓ | | | | | | ✓ | | ✓ |
| -4 | Durham State "A" #1 | 1 | | ✓ | | | | | | | ✓ | | | " " | | ✓ | | | | | | ✓ | | ✓ |
| -5 | " " #2 | 1 | | ✓ | | | | | | | ✓ | | | " " | | ✓ | | | | | | ✓ | | ✓ |
| -6 | " " #3 | 1 | | ✓ | | | | | | | ✓ | | | " " | | ✓ | | | | | | ✓ | | ✓ |
| -7 | " " #4 | 1 | | ✓ | | | | | | | ✓ | | | " " | | ✓ | | | | | | ✓ | | ✓ |

| Relinquished by: | Date: | Time: | Received by: |
|---|---|---|---|
| W.D. Veith | 3-18-97 | 1:50 | Amy Hill |
| Relinquished by: | Date: | Time: | Received by: |
| Relinquished by: | Date: | Time: | Received by Laboratory: |

REMARKS

CARDINAL 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: 10/07/96
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 Li
Wei Li, Chemist

10-7-96
Date

CARDINAL 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: 10/07/96
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

Date 10/7/96

CARDINAL LABORATORIES

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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

H2662B.XLS

CARDINAL LABORATORIES

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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

ARDINAL LABORATORIES
PHONE: (505) 393-2326 · 101 E. MARLAND · HOBBS, NEW MEXICO 88240

# Chain of Custody Record

Project I.D. C-1, C-2, C-3
Project Location Amerada Hess Chevron NCB7
Sampled By Dee Wathey
Client Name SESI
Address
Telephone

H 2662 -1 -2 -3 -4 -5 -6 -7

| Sample Number | Date | Time | Composite | Grab | Sample Location | Number of Containers | Analysis Required: BTEX | Cations | Anions | TDS | Heavy Metals | | | Remarks (Type sample, preservation, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 662-1 | | | | | C-1 | 2 | X | | | | | | | |
| ↓ | | | | | C-1 | 1 | | X | X | X | | | | |
| ↓ | | | | | C-1 | 1 | | | | | X | | | |
| -2 | | | | | C-2 | 2 | X | | | | | | | |
| ↓ | | | | | C-2 | 1 | | X | X | X | | | | |
| ↓ | | | | | C-2 | 1 | | | | | X | | | |
| -3 | | | | | C-3 | 2 | X | | | | | | | |
| ↓ | | | | | C-3 | 1 | | X | X | X | | | | |
| ↓ | | | | | C-3 | 1 | | | | | X | | | |

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Remarks | Shipped/Delivered |
|---|---|---|---|---|---|
| Dee Wathey | 9-30-96 | 4:28 | Wei Li | | |

# Chain of Custody Record

ARDINAL LABORATORIES
PHONE: (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

H12662-1 -6
-2 -7
-3
-4
-5

Project I.D. D-1, D-2, D-3, D-4
Project Location Amerada Hess Ducham State A
Sampled By Doc Whatley
Client Name SESI
Address
Telephone

| Sample Number | Date | Time | Composite | Grab | Sample Location | Number of Containers | Analysis Required: BTEX | Cations/Anions | TDS | Heavy Metals | Remarks (Type sample, preservation, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2662-4 | | | | | D-1 | 2 | X | | | | |
| ↓ | | | | | D-1 | 1 | | X | X | X | |
| ↓ | | | | | D-1 | 1 | | | | X | |
| 662-5 | | | | | D-2 | 2 | X | | | | |
| ↓ | | | | | D-2 | 1 | | X | X | X | |
| ↓ | | | | | D-2 | 1 | | | | X | |
| 662-6 | | | | | D-3 | 2 | X | | | | |
| ↓ | | | | | D-3 | 1 | | X | X | X | |
| ↓ | | | | | D-3 | 1 | | | | X | |
| 662-7 | | | | | D-4 | 2 | X | | | | |
| ↓ | | | | | D-4 | 1 | | X | X | X | |
| ↓ | | | | | D-4 | 1 | | | | X | |

| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | Remarks | Shipped/Delivered |
|---|---|---|---|---|---|
| Doc Whatley | 7.30.96 | 4:23 | | | |
| Relinquished by: (Signature) | Date | Time | Received by: (Signature) | | |

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: Chevron NCBT
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | TPH | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 1-1: | 319 | PPM | 5' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-2: | 44 | PPM | 10' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-3: | 34 | PPM | 15' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-4: | 26 | PPM | 25' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-5: | 69 | PPM | 30' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-6: | 95 | PPM | 35' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-7: | 147 | PPM | 40' | MW-1 Chevron NCBT |

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no sample at 20' due to a bridge in well bore.

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: Chevron NCBT
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| Sample #1-1 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 # 1-2 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 # 1-3 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 # 1-4 MW-1 25' | | | |
| 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 # 1-5 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 # 1-6 MW-1 35' | | | |
| Benzene | <0.2 | Mg/L | Headspace GC |
| Toluene | <0.2 | Mg/L | 8020/EPA |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| Sample # 1-7 MW-1 40' | | | |
| 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 20' due to a bridge in well bore.

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: Chevron NCBT
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | CL | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 1-1: | 2600 | PPM | 5' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-2: | 1200 | PPM | 10' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-3: | <1000 | PPM | 15' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-4: | <1000 | PPM | 25' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-5: | <1000 | PPM | 30' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-6: | <1000 | PPM | 35' | MW-1 Chevron NCBT |
| SAMPLE NO. 1-7: | <1000 | PPM | 40' | MW-1 Chevron NCBT |

COMMENTS: These samples were taken with split-spoon during drilling operations. There was no sample at 20' due to a bridge in well bore.

**WESTERN ENVIRONMENTAL CONSULTANTS**
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(505) 392 - 5021

# SOIL ANALYSIS REPORT

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

FACILITY: Chevron NCBT
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | CL | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 2-1: | 1700 | PPM | 5' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-2: | 3300 | PPM | 10' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-3: | 1000 | PPM | 23' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-4: | <1000 | PPM | 28' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-5: | <1000 | PPM | 37' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-6: | <1000 | PPM | 47' | MW-2 Chevron NCBT |

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

WESTERN ENVIRONMENTAL CONSULTANTS
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(505) 392-5021

# CHEMICAL ANALYSIS REPORT

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

SITE ID: Chevron NCBT
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| Sample # 2-1 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 # 2-2 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 # 2-3 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 # 2-4 MW-2 28' | | | |
| 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 # 2-5 MW-2 37' | | | |
| 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 # 2-6 MW-2 47' | | | |
| Benzene | <0.2 | Mg/L | Headspace GC |
| Toluene | <0.2 | Mg/L | 8020/EPA |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

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

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# SOIL ANALYSIS REPORT

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

FACILITY: Chevron NCBT
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | TPH | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 2-1: | 12 | PPM | 5' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-2: | 774 | PPM | 10' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-3: | 11 | PPM | 23' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-4: | 14 | PPM | 28' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-5: | 09 | PPM | 37' | MW-2 Chevron NCBT |
| SAMPLE NO. 2-6: | 06 | PPM | 47' | MW-2 Chevron NCBT |

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

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# SOIL ANALYSIS REPORT

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

FACILITY: Chevron NCBT
Test Method: EPA 325.3
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | CL | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 3-1: | 1400 | PPM | 5' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-2: | 2400 | PPM | 10' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-3: | 1000 | PPM | 15' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-4: | <1000 | PPM | 20' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-5: | <1000 | PPM | 28' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-6: | <1000 | PPM | 36' | MW-3 Chevron NCBT |

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

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# CHEMICAL ANALYSIS REPORT

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

SITE ID: Chevron NCBT
ORDERED BY: Dyke Browning
TEST METHOD: 8020
SAMPLE RECEIVED: Cool and intact

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| Sample # 3-1 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 # 3-2 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 # 3-3 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 # 3-4 MW-3 20' | | | |
| 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 # 3-5 MW-3 28' | | | |
| 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 # 3-6 MW-3 36' | | | |
| Benzene | <0.2 | Mg/L | Headspace GC |
| Toluene | <0.2 | Mg/L | 8020/EPA |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

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

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# SOIL ANALYSIS REPORT

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

FACILITY: Chevron NCBT
Test Method: EPA 418.1
Order No.: Dyke Browning
SAMPLE RECEIVED: Cool and intact

| | TPH | | DEPTH | LOCATION |
|---|---|---|---|---|
| SAMPLE NO. 3-1: | 17 | PPM | 5' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-2: | 259 | PPM | 10' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-3: | 93 | PPM | 15' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-4: | 21 | PPM | 20' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-5: | 12 | PPM | 28' | MW-3 Chevron NCBT |
| SAMPLE NO. 3-6: | 05 | PPM | 36' | MW-3 Chevron NCBT |

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

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# 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
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# 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

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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**
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(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 s [had 8 samples] drilling operations. There was no sample at 35' due [but not on log or notes]

**WESTERN ENVIRONMENTAL CONSULTANTS**
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# 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

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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
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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
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(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
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(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

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 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 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

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 |
| Eehylbenzene | <0.2 | Mg/L | |
| Xylene (OMP) | <0.2 | Mg/L | |

| Parameter | Value | Units | Test Method |
|---|---|---|---|
| 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 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 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.

# Safety & Environmental Solutions, Inc.

703 E. Clinton, Suite 103, Hobbs, New Mexico 88240
(505)397-0510

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #:

FAX #:

Company Name & Address:
Amerada Hess

Project #:

Project Name:
Chevron/NCBT

Project Location:

Sampler Signature:
Dee Watley

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX: WATER | MATRIX: SOIL | MATRIX: AIR | MATRIX: SLUDGE | MATRIX: OTHER | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: HNO3 | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: NONE | PRESERVATIVE METHOD: OTHER | SAMPLING: DATE | SAMPLING: TIME | ANALYSIS REQUEST: BTEX 8020/5030 | ANALYSIS REQUEST: TPH 418.1 | ANALYSIS REQUEST: TCLP Metals Ag As Ba Cd Cr Pb Hg Se | ANALYSIS REQUEST: Total Metals Ag As Ba Cd Cr Pb Hg Se | ANALYSIS REQUEST: TCLP Volatiles | ANALYSIS REQUEST: TCLP Semi Volatiles | ANALYSIS REQUEST: TDS | ANALYSIS REQUEST: RCI | ANALYSIS REQUEST: Chlorides |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Well #1 | 7 | | | X | | | | | | X | | | 9-24-96 | 9:00AM | X | X | | | | | | X |
| | Well #2 | 6 | | | X | | | | | | X | | | 9-24-96 | 11:00AM | X | X | | | | | | X |
| | Well #3 | 6 | | | X | | | | | | X | | | 9-24-96 | 2:00pm | X | X | | | | | | X |
| | | | | | | | | | | | | | | | | | | | | | | | | |
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| Relinquished by: | Date: | Times: | Received by: |
|---|---|---|---|
| Dee Watley | 9-24-96 | 9-25-96 / 4:20pm | |
| Relinquished by: | Date: | Times: | Received by: |
| Relinquished by: | Date: | Times: | Received by Laboratory: |

REMARKS

# Safety & Environmental Solutions, Inc.

703 E. Clinton, Suite 103, Hobbs, New Mexico 88240
(505)397-0510

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #:

FAX #:

Company Name & Address:
Amerada Hess

Project #:

Project Name:
Durham State "A"

Project Location:

Sampler Signature:
D. Wlatly

| LAB # (LAB USE ONLY) | FIELD CODE | # CONTAINERS | Volume/Amount | MATRIX: WATER | MATRIX: SOIL | MATRIX: AIR | MATRIX: SLUDGE | MATRIX: OTHER | PRESERVATIVE METHOD: HCL | PRESERVATIVE METHOD: HNO3 | PRESERVATIVE METHOD: ICE | PRESERVATIVE METHOD: NONE | PRESERVATIVE METHOD: OTHER | SAMPLING: DATE | SAMPLING: TIME | ANALYSIS REQUEST: BTEX 8020/5030 | ANALYSIS REQUEST: TPH 418.1 | ANALYSIS REQUEST: TCLP Metals Ag As Ba Cd Cr Pb Hg Se | ANALYSIS REQUEST: Total Metals Ag As Ba Cd Cr Pb Hg Se | ANALYSIS REQUEST: TCLP Volatiles | ANALYSIS REQUEST: TCLP Semi Volatiles | ANALYSIS REQUEST: TDS | ANALYSIS REQUEST: RCI | ANALYSIS REQUEST: Chlorides | ANALYSIS REQUEST: Extra | ANALYSIS REQUEST: Extra |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Well # D | 7 | | | X | | | | | | X | | | 9-25-96 | 6:00pm | X | X | | | | | | | X | | |
| | Well # D-2 | 9 | | | X | | | | | | X | | | 9-25-96 | 9:00pm | X | X | | | | | | | X | | |
| | Well # D3 | 9 | | | X | | | | | | X | | | 9-25-96 | 2:30pm | X | X | | | | | | | X | | |
| | Well # D4 | 8 | | | X | | | | | | X | | | 9-25-96 | 5:00pm | X | X | | | | | | | X | | |

| Relinquished by: | Date: | Time: | Received by: |
|---|---|---|---|
| D. Wlatly | 9-24-96 | 4:00pm | |
| | | | |
| | | | |

REMARKS

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

March 6, 1997

**CERTIFIED MAIL**
**RETURN RECEIPT NO. P-269-269-274**

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

**RE: GROUND WATER INVESTIGATIONS**
**DURHAM STATE "A" TANK BATTERY**
**CHEVRON GRAHAM NCT "B" TANK BATTERY**

Dear Mr. Small:

The New Mexico Oil Conservation Division (OCD) has completed a review of Amerada Hess Corporation's (AHC) December 18, 1996 "GROUND WATER INVESTIGATIONS DURHAM STATE "A" TANK BATTERY SITE, CHEVRON GRAHAM NCT "B" TANK BATTERY SITE". This document contains the results of AHC's soil and ground water investigations at the Durham State "A" tank battery and the Chevron Graham NCT "B" Tank Battery located in Unit P, Sec 2, T20S, R36E NMPM, Lea County, New Mexico. The documents also contain AHC's proposals for backfilling of the investigations and monitoring of ground water quality at the sites.

The above referenced proposals are approved with the following conditions:

1. AHC will supply the OCD with the laboratory analytical data sheets and associated quality assurance/quality control data for the sampling results contained in the above referenced document.

2. Ground water from the monitor wells will be sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene (BTEX), total dissolved solids (TDS) and major cations and anions using EPA approved methods.

3. The OCD defers comment on plugging of the monitor wells until the OCD has an opportunity to review a final closure and monitoring report.

4. AHC will submit a report on the closure and monitoring actions to the OCD by May 1, 1996. The report will contain:

   a. A description of all activities which occurred during the closure and monitoring including conclusions and recommendations.

b. A summary of the laboratory analytic results of the soil remedial actions, backfilling and water quality monitoring including the laboratory analysis data sheets and all relevant quality assurance/quality control data.

c. A water table elevation map for each site using the water table elevation of the ground water in all monitor wells.

5. AHC will notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.

6. All documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve AHC of liability if contamination exists which is beyond the scope of the plan or if the plan fails to adequately monitor contamination related to AHC's activities. In addition, OCD approval does not relieve AHC of responsibility for compliance with any other federal, state or local laws and/or regulations.

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

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor
Wayne Price, OCD Hobbs Office
David Deardorff, New Mexico State Land Office

P 269 269 274

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PS Form **3800**, April 1995

# 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

December 18, 1996

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**Z 422 727 927**

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

RE: **Ground Water Investigations**
Durham State A Battery Site
Chevron Graham NCT B Battery Site

During the week of September 23, 1996, ground water monitor wells were drilled adjacent to the excavations at the abandoned Chevron NCT B and Durham State A battery sites. The wells were drilled pursuant to the Tank Battery Site Reclamation Plan submitted by Amerada Hess Corporation (AHC) on June 5, 1996 and the NMOCD letter of June 13, 1996, approving the plan with conditions. Soil samples were obtained from each well at approximate five foot intervals and were analyzed for TPH, BTEX and chloride concentrations. Ground water samples were obtained after completing each well and were analyzed for RCRA metals, cations and anions, TDS and BTEX. Plats of each site with the well locations indicated are attached along with a typical wellbore completion diagram, driller's logs and a summary of the test results (Tables 1 & 2).

As a result of the ground water investigations, AHC proposes to resume battery site reclamation activities by backfilling the excavations at both battery sites with five (5) feet of clean material (< 100 ppm TPH , < 50 ppm BTEX and < 10 ppm benzene), capped with two (2) feet of clay. The remainder of backfill material used to bring the locations to grade, approximately 30 feet, will be the caliche and soil removed from the excavations which will be remediated to 1000 ppm TPH, 50 ppm BTEX and 10 ppm benzene. AHC, also proposes to re-sample the monitor wells in March, 1997 and if no appreciable change is noted in the TDS or chloride concentrations and if there is no visible or analytical evidence of hydrocarbon contamination, the seven monitor wells will be plugged with cement containing 5% bentonite.

TDS and chloride concentrations exceed Safe Drinking Water Standards (SDWS) in six of the seven wells including the up-gradient well at the Durham State A (site D-1 on the plat). The ground water gradient in this area is generally assumed to be from the NW to the SE, which is confirmed by fluid levels measured at the two sites and in nearby water wells (Table 3). Fluid levels observed in the monitor wells indicate that there is little or no gradient across the locations. On November 25, 1996, water from the seven monitor wells was re-sampled and analyzed for TDS and chloride concentrations. Analytical results are consistent with the initial tests, however, a slight sheen was noted on the water sample obtained from well D-4 (analysis attached).

On Nov. 18, 1996 a water sample was obtained from the only active windmill observed in the vicinity of the battery sites. The windmill is located in the SE, SW of Sec 35, T 19S, R 36E, approximately 3/4 mile NNE of the Durham State A site and approximately 7/8 mile NW of the Chevron NCT B site (topographic map and analysis attached). TDS and chloride concentrations in this well also exceed SDWS. The State Engineer's office was contacted to obtain information on other water wells in the area. The only

other 'active' well is located in the NE, NE, SE of Sec 11, T 20S, R 36E, approximately 7/8 mile South of the Chevron NCT B site. A water sample from this well was analyzed on Jun. 14, 1990 and had a chloride concentration of 1320 ppm, no TDS concentration was determined. Fluid level information for both water wells is included in Table 3.

The elevated TDS and chloride concentrations in this aquifer appear to be naturally occurring or to be attributable to a source other than the referenced abandoned battery sites. In any case, reducing the TDS and chloride concentrations to a level below SDWS by abatement activities other than natural attenuation at either battery site is not feasible. AHC's recommended closure plan will insure that no further degradation of the aquifer will result from contaminated soil remaining at the two battery sites.

If you have any questions or need additional information please contact the undersigned at (915) 758-6741 or at the letterhead address. Bids will be solicited to close the excavations as soon as AHC receives a response from the NMOCD to the proposed closure plan.

Sincerely.

Samuel Small, PE

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

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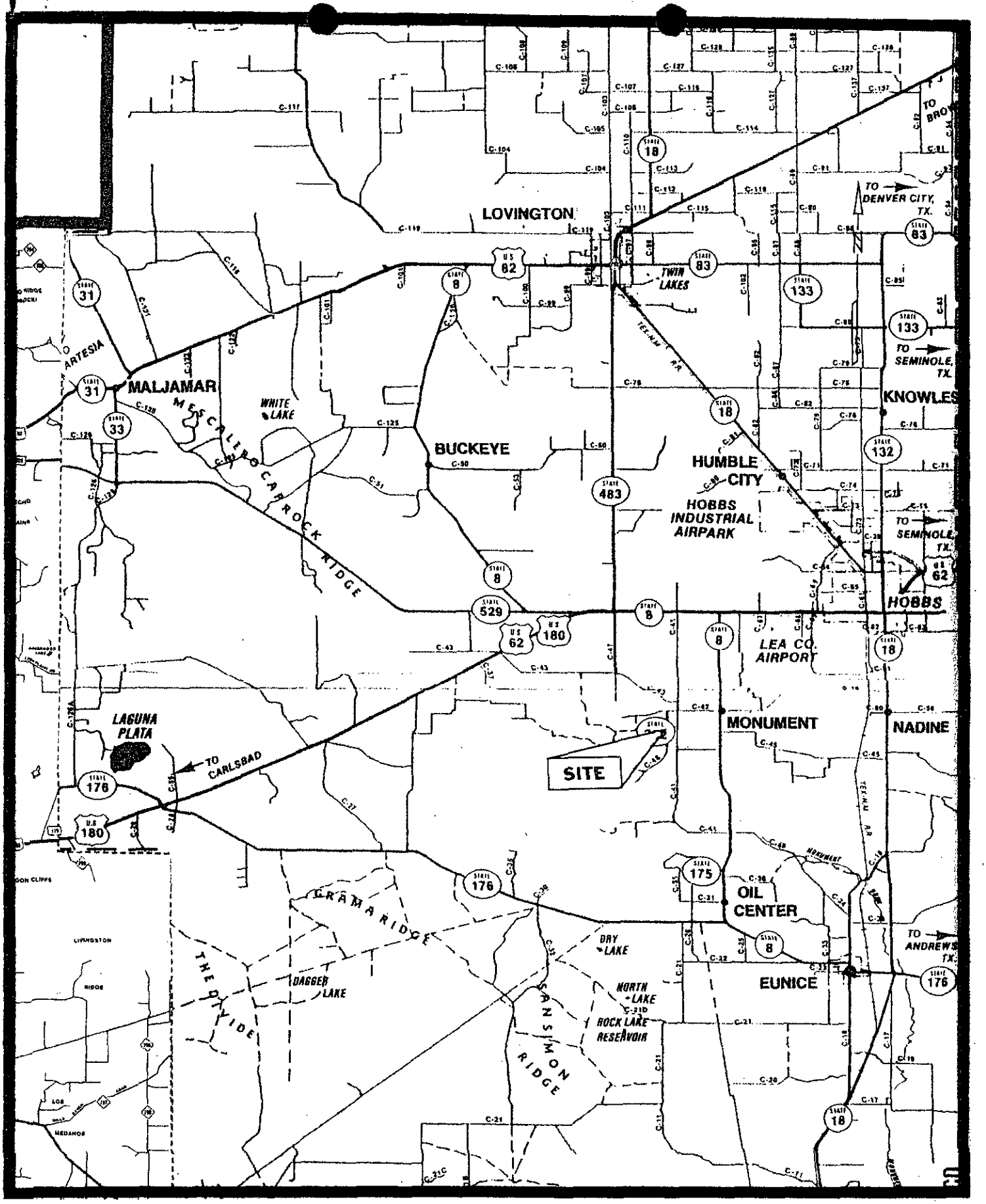


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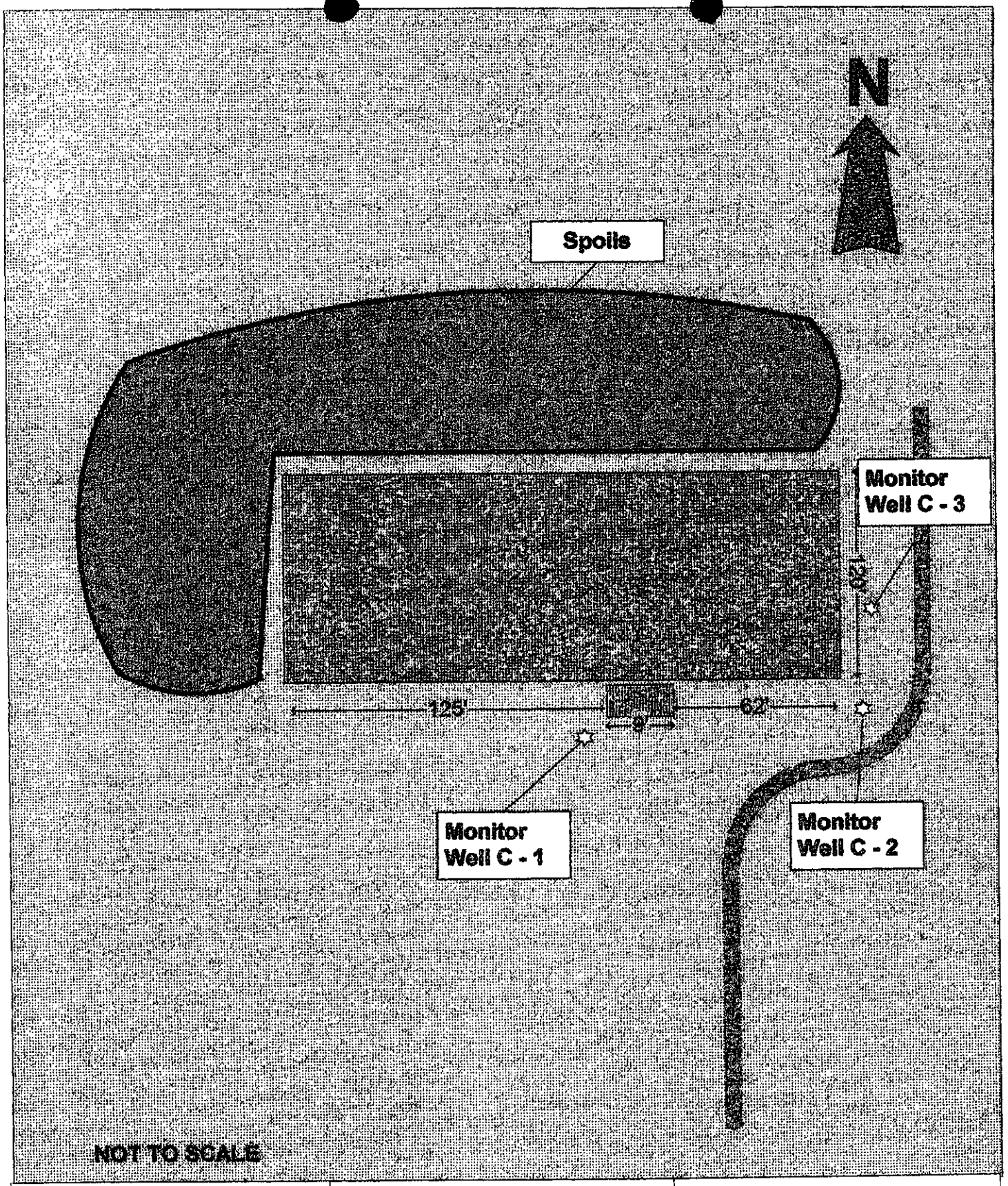
|---|---|---|
| **Amerada Hess Corporation** | **Vicinity Map** | **Safety & Environmental Solutions, Inc. Hobbs, New Mexico** |

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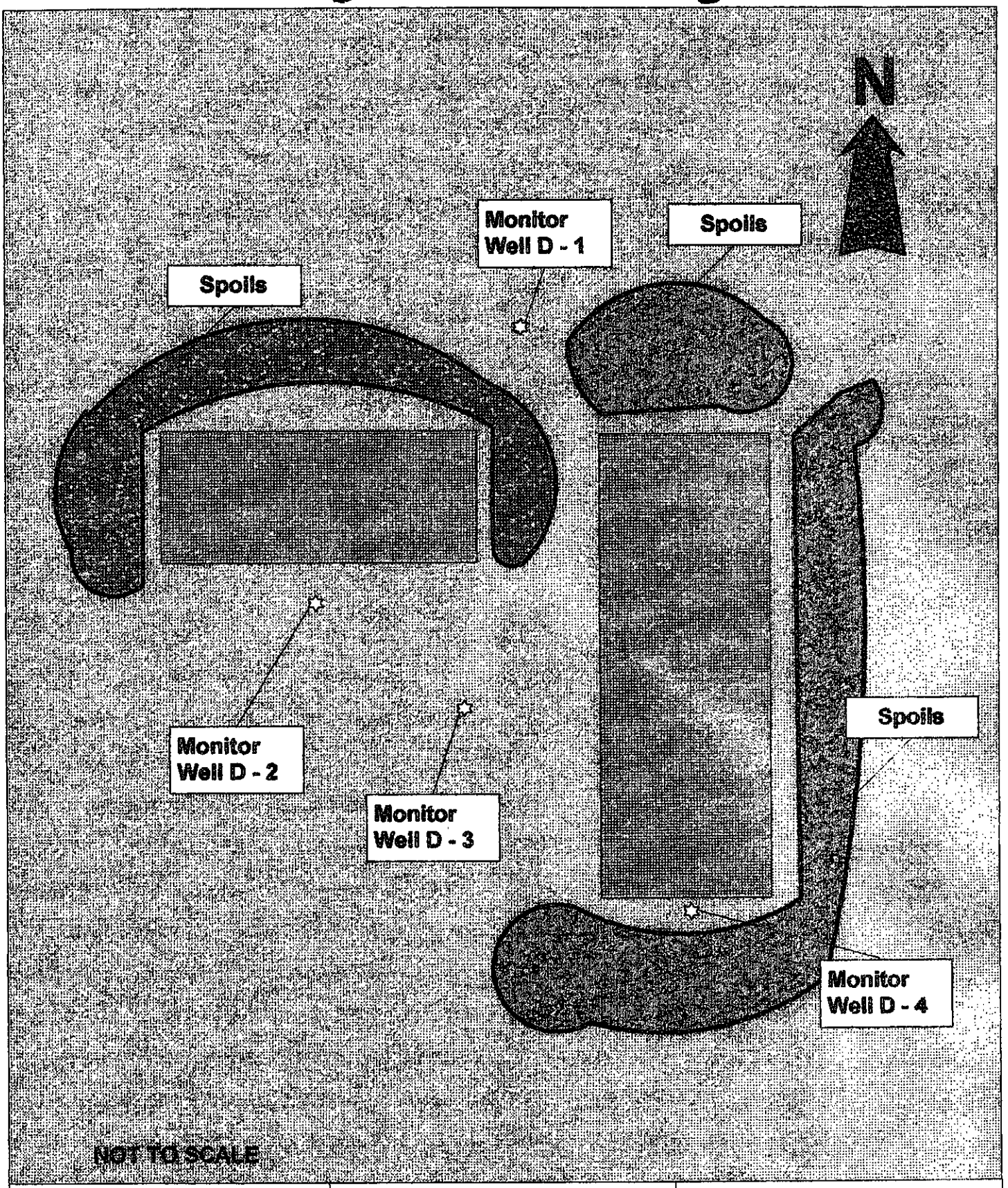
| Amerada Hess Corporation | Site Plan Chevron NCBT | Safety & Environmental Solutions, Inc. Hobbs, New Mexico |

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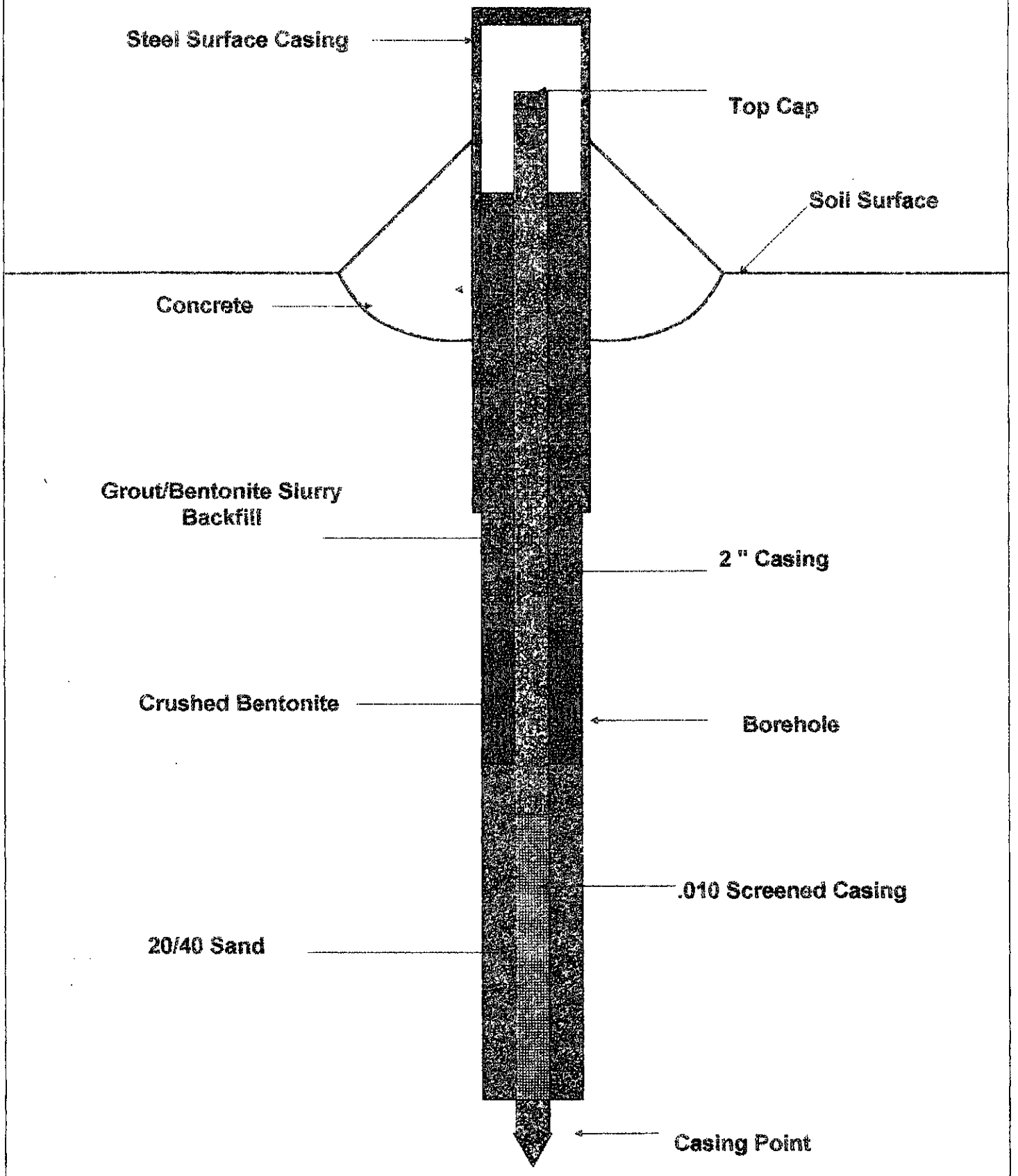
|---|---|---|
| Amerada Hess Corporation | Site Plan Durham State A | Safety & Environmental Solutions, Inc. Hobbs, New Mexico |




Amerada Hess Corporation — Ground Water Monitor Well — Seiler & Environmental Solutions, Inc.

## WATER ANALYSES
## CHEVRON NCT B AND DURHAM STATE A

### TABLE 1

| WELL | C-1 | C-2 | C-3 | | D-1 | D-2 | D-3 | D-4 |
|---|---|---|---|---|---|---|---|---|
| **TOTAL DISSOLVED SOLIDS AND CATIONS AND ANIONS (PPM)** | | | | | | | | |
| TDS (mg/l) | 1284 | 2194 | 2655 | | 1285 | 1062 | 939 | 1064 |
| Na | 227.6 | 260 | 215 | | 142.5 | 92.5 | 195 | 372.5 |
| Ca | 158.5 | 253.5 | 365 | | 232.3 | 247.3 | 259.3 | 235.8 |
| Mg | 41.8 | 63.8 | 72.5 | | 45.3 | 44 | 37 | 33.8 |
| K | 7.18 | 8.49 | 10.17 | | 10.52 | 20.74 | 18.74 | 13.82 |
| Cl | 440 | 592 | 715 | | 336 | 220 | 276 | 334 |
| $SO_4$ | 123 | 136 | 102 | | 108 | 80 | 50 | 57 |
| $CO_3$ | Tr | 0 | 0 | | 0 | 0 | 0 | 0 |
| $HCO_3$ | 228 | 298 | 205 | | 301 | 273 | 342 | 361 |
| **TPH AND BTEX (PPB)** | | | | | | | | |
| TPH (mg/l) | 1.12 | 0.59 | 0.5 | | 0.5 | 1.22 | 0.55 | 2.61 |
| Benzene | <1 | <1 | <1 | | <1 | <1 | <1 | <1 |
| Toluene | <1 | <1 | <1 | | <1 | <1 | <1 | <1 |
| Ethyl Benzene | <1 | <1 | <1 | | <1 | <1 | <1 | <1 |
| Xylene | <1 | <1 | <1 | | <1 | <1 | <1 | <1 |
| **RCRA METALS (PPM)** | | | | | | | | |
| As | 0.013 | 0.013 | 0.013 | | 0.013 | 0.013 | 0.017 | 0.027 |
| Ag | <0.1 | <0.1 | <0.1 | | <0.1 | <0.1 | <0.1 | <0.1 |
| Ba | <2 | <2 | <2 | | <2 | <2 | <2 | <2 |
| Cd | <0.1 | <0.1 | <0.1 | | <0.1 | <0.1 | <0.1 | <0.1 |
| Cr | <0.5 | <0.5 | <0.5 | | <0.5 | <0.5 | <0.5 | <0.5 |
| Pb | <0.5 | <0.5 | <0.5 | | <0.5 | <0.5 | <0.5 | <0.5 |
| Hg | <0.001 | <0.001 | <0.001 | | <0.001 | <0.001 | <0.001 | <0.001 |
| Se | <0.01 | <0.01 | <0.01 | | <0.01 | <0.01 | <0.01 | <0.01 |

**SOIL ANALYSES**
**CHEVRON NCT B AND DURHAM STATE A**

**TABLE 2**

| DEPTH (FT) | WELL | C-1 | C-2 | C-3 | | D-1 | D-2 | D-3 | D-4 |
|---|---|---|---|---|---|---|---|---|---|
| **TPH (PPM)** | | | | | | | | | |
| 5 | | 319 | 12 | 17 | | 49 | 74 | 137 | |
| 10 | | 44 | 774 | 259 | | 13 | 66 | 108 | 18 |
| 15 | | 34 | | 93 | | 9 | 14 | 26 | 179 |
| 20 | | | | 21 | | | | | |
| 23 | | | 11 | | | 12 | 17 | 16 | 47 |
| 25 | | 26 | | | | | | | |
| 28 | | | 14 | 12 | | | | | |
| 30 | | 69 | | | | 13 | 12 | 7 | 12 |
| 35 | | 95 | | | | | | | |
| 36 | | | | 5 | | | | | |
| 37 | | | 9 | | | | | | |
| 39 | | | | | | 7 | 9 | 9 | 7 |
| 40 | | 147 | | | | | | | |
| 45 | | | | | | | 10 | 10 | 14 |
| 47 | | | 6 | | | | | | |
| 50 | | | | | | | 7 | 11 | 10 |
| 58 | | | | | | 5 | 7 | 4 | 8 |

**SOIL ANALYSES**
**CHEVRON NCT B AND DURHAM STATE A**

**TABLE 2**

| DEPTH (FT) | WELL | C-1 | C-2 | C-3 | | D-1 | D-2 | D-3 | D-4 |
|---|---|---|---|---|---|---|---|---|---|
| **BTEX (PPM)** | | | | | | | | | |
| 5 | | <0.2 | <0.2 | <0.2 | | <0.2 | <0.2 | <0.2 | |
| 10 | | <0.2 | <0.2 | <0.2 | | <0.2 | <0.2 | <0.2 | <0.2 |
| 15 | | <0.2 | | <0.2 | | <0.2 | <0.2 | <0.2 | <0.2 |
| 20 | | | | <0.2 | | | | | |
| 23 | | | <0.2 | | | <0.2 | <0.2 | <0.2 | <0.2 |
| 25 | | <0.2 | | | | | | | |
| 28 | | | <0.2 | <0.2 | | | | | |
| 30 | | <0.2 | | | | <0.2 | <0.2 | <0.2 | <0.2 |
| 35 | | <0.2 | | | | | | | |
| 36 | | | | <0.2 | | | | | |
| 37 | | | <0.2 | | | | | | |
| 39 | | | | | | <0.2 | <0.2 | <0.2 | <0.2 |
| 40 | | <0.2 | | | | | | | |
| 45 | | | | | | | <0.2 | <0.2 | <0.2 |
| 47 | | | <0.2 | | | | | | |
| 50 | | | | | | | <0.2 | <0.2 | <0.2 |
| 58 | | | | | | <0.2 | <0.2 | <0.2 | <0.2 |

**SOIL ANALYSES**
**CHEVRON NCT B AND DURHAM STATE A**

**TABLE 2**

| DEPTH (FT) | WELL | C-1 | C-2 | C-3 | | D-1 | D-2 | D-3 | D-4 |
|---|---|---|---|---|---|---|---|---|---|
| **CHLORIDES (PPM)** | | | | | | | | | |
| 5 | | 2600 | 1700 | 1400 | | 1400 | 1500 | 1800 | |
| 10 | | 1200 | 3300 | 2400 | | 1200 | 1400 | 1400 | 2200 |
| 15 | | <1000 | | 1000 | | <1000 | 1000 | 1200 | 1800 |
| 20 | | | | <1000 | | | | | |
| 23 | | | 1000 | | | <1000 | <1000 | 1000 | 1200 |
| 25 | | <1000 | | | | | | | |
| 28 | | | <1000 | <1000 | | | | | |
| 30 | | <1000 | | | | <1000 | <1000 | <1000 | <1000 |
| 35 | | <1000 | | | | | | | |
| 36 | | | | <1000 | | | | | |
| 37 | | | <1000 | | | | | | |
| 39 | | | | | | <1000 | <1000 | <1000 | <1000 |
| 40 | | <1000 | | | | | | | |
| 45 | | | | | | | <1000 | <1000 | <1000 |
| 47 | | | <1000 | | | | | | |
| 50 | | | | | | | <1000 | <1000 | <1000 |
| 58 | | | | | | <1000 | <1000 | <1000 | <1000 |

## FLUID LEVEL DATA

## TABLE 3

| WELL | FLUID LEVEL FROM SURFACE | FLUID LEVEL SEA LEVEL [4] |
|---|---|---|
| C-1 | 31 [1] | 3543 |
| C-2 | 33 [1] | 3541 |
| C-3 | 33 [1] | 3541 |
| D-1 | 42 [1] | 3560 |
| D-2 | 41.5 [1] | 3560.5 |
| D-3 | 42 [1] | 3560 |
| D-4 | 43 [1] | 3559 |
| | | |
| WINDMILL 35 | 37 [2] | 3568 |
| WINDMILL 11 | 30 [3] | 3530 |

Notes: 1) Fluid level on 11/25/96
2) Fluid level on 03/26/91
3) Fluid level on 01/30/91
4) Ground level elevations taken from topographic map

# Safety & Environmental Solutions, Inc.

## Monitor Well Sampling Report
## Amerada Hess Company

On November 25, 1996, Safety & Environmental Solutions, Inc. (SES) was engaged by Amerada Hess Company to sample the monitor wells located on the Chevron NCTB and Durham State A leases. Three casing volumes were bailed from each well before the samples were taken. The samples were preserved on ice and transported under chain of custody to Cardinal Laboratories for analysis.

The top of water was encountered at the following depths during the sampling procedure:

| Well # | Depth to Top of Water |
|---|---|
| C - 1 | 31' |
| C - 2 | 33' |
| C - 3 | 33' |
| D - 1 | 42' |
| D - 2 | 41.5' |
| D - 3 | 42' |
| D - 4 | 43' |

The results of the laboratory analysis (See attached lab report) as compared to the first analysis on September 30, 1996 are as follows:

| Sample | TDS 9/30/96 mg/L | TDS 11/25/96 mg/L | CL 9/30/96 mg/L | CL 11/25/96 mg/L |
|---|---|---|---|---|
| C - 1 | 1284 | 1473 | 440 | 454 |
| C - 2 | 2194 | 1761 | 592 | 586 |
| C - 3 | 2655 | 1954 | 715 | 680 |
| D - 1 | 1285 | 1056 | 336 | 282 |
| D - 2 | 1062 | 898 | 220 | 208 |
| D - 3 | 939 | 858 | 276 | 250 |
| D - 4 | 1064 | 1060 | 334 | 326 |

*703 E. Clinton Suite 103*
*505/397-0510* *Hobbs, New Mexico 88240* *Fax 505/393-4388*

**BORING/WELL REPORT** Date 9-24-96

Company: SES Representative(s): D.

Site: Duran State A Monument, N.M. Boring/Well I.D.: D-1

Harrison Drilling Crew: Cooper, Miller

Rig: TH-60 Service Truck: E-92 Auger/Bit Size: 4 3/4

| | | | |
|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: |
| Drilling Time | Start: 2:30 P.M. | Stop: | |
| Completion Time | Start: | Stop: 4:45 P.M. | |
| Decon Time | Start: | Stop: | |
| DEMOB/Rig Down | Start: | Stop: | Mileage: |

Lost Time Total: Remarks:

Total Depth: 58' Depth to Ground Water: 41 Sample Interval: 5, 10, 15, 23, 30, 39, 45, 50+58

Casing Depth: 57' Screened Interval: 37'-57'

## MATERIALS

20' Screen (2" OR 4") (.010 OR .020) 40' Blank (2" OR 4")

1 Casing Points 1 Locking Caps

____ Locks ____ Centralizers

5 Sand (10/20 ro 20/40) 1/2 Pellets/Chips

3 Bentonite Grout 2 Sackrete

____ Plastic ____ Drums

1 Surface Completion Type: AG. manhole

____ Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:

Sample description on back.

**BORING/WELL REPORT** Date 9-25-96

Company: SES Representative(s): D. [redacted]

Site: Duram State A (Amerada Hess) Monument, N.M. Boring/Well I.D.: D-2

Harrison Drilling Crew: Reza, Miller

Rig: TH-60 Service Truck: F-95 Auger/Bit Size: 4 3/4

| | | | | |
|---|---|---|---|---|
| MOB/Rig Up Time | Start: 5:00 A.M. | Stop: 6:30 A.M. | Mileage: 21 F-95 |
| Drilling Time | Start: 6:30 A.M. | Stop: [redacted] A.M. 10:00 A.M |
| Completion Time | Start: [redacted] 10:00 A.M. | Stop: 10:30 A.M |
| Decon Time | Start: | Stop: |
| DEMOB/Rig Down | Start: | Stop: | Mileage: |

Lost Time Total: Remarks:

Total Depth: 58' Depth to Ground Water: 41.70 Sample Interval: 5, 10, 15, 23, 30, 39, 45, 50 & 58

Casing Depth: 57' Screened Interval: 37'-57'

## MATERIALS

20' Screen (2" OR 4") (.010 OR .020) 40' [redacted]' Blank (2" OR 4")

1 Casing Points 1 Locking Caps

_____ Locks _____ Centralizers

4 Sand (~~10/20~~ to 20/40) ½ Pellets Chips

6 Bentonite Grout 2 Sackrete

_____ Plastic _____ Drums

1 Surface Completion Type: A.G. manhole

_____ Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:
mob, rig up, drill, sample, set casing, pour sand & chips + move to D-3

Sample description on back

**BORING/WELL REPORT** Date 9-25-96

Company: SES Representative(s): D. [redacted]

Site: Durham State A B (Amerada Hess) Monument, U.M. Boring/Well I.D.: D-3

Harrison Drilling Crew: Reza, Miller

Rig: TH-60 Service Truck: F-95 Auger/Bit Size: 4 3/4

| | | | | |
|---|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: | |
| Drilling Time | Start: 12:30 P.M. | Stop: 2:30 P.M. | | |
| Completion Time | Start: 2:30 P.M. | Stop: 3:00 P.M. | | |
| Decon Time | Start: | Stop: | | |
| DEMOB/Rig Down | Start: | Stop: | Mileage: | |

Lost Time Total: 10:30 A.M - 12:00 P.M. Remarks: Work on ~~dat~~ drive line

Total Depth: 58' Depth to Ground Water: 41' Sample Interval: 5, 10, 15, 23, 30, 37, 45, 50 + 58

Casing Depth: 57' Screened Interval: 37'-57'

## MATERIALS

| | |
|---|---|
| 20' Screen (2" OR 4") (.010 OR .020) | 46' [redacted] Blank (2" OR 4") |
| 1 Casing Points | 1 Locking Caps |
| _____ Locks | _____ Centralizers |
| 4 Sand (0/20 to 20/40) | 1/2 Pellets/Chips |
| 6 Bentonite Grout | 2 Sackrete |
| _____ Plastic | _____ Drums |

1 Surface Completion Type: A.6 manhole

_____ Misc. Add. Materials: _____

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:
work on drive line, rig up, drill, sample, set casing, pour sand + chips + move to D-4

Sample description on back

**BORING/WELL REPORT** Date 9-25-96

Company: SES Representative(s): D. [redacted]

Site: Durham Steel (Armada Hose) - Monument, N.M. Boring/Well I.D.: D-4

Harrison Drilling Crew: Reza, Mike

Rig: TH-60 Service Truck: F-95 Auger/Bit Size: 4 3/4

| | | | | |
|---|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: | |
| Drilling Time | Start: 3:00 P.M. | Stop: 4:45 P.M. | | |
| Completion Time | Start: 4:45 P.M. | Stop: 8:00 P.M. | | |
| Decon Time | Start: | Stop: | | |
| DEMOB/Rig Down | Start: 8:00 P.M. | Stop: 8:30 P.M. | Mileage: | 21 F-95 TH-60 |

Lost Time Total: Remarks:

Total Depth: 58' Depth to Ground Water: 47' Sample Interval: D 15, 23, 30, 39, 45, 50+58

Casing Depth: 57' Screened Interval: 37'-57'

## MATERIALS

20' Screen (2" OR 4") (.010 OR .020) — 40' Blank (2" OR 4")

1 Casing Points — 1 Locking Caps

____ Locks — ____ Centralizers

4 Sand (10/20 or 20/40) — ½ Pellets/Chips

6 Bentonite Grout — 2 Sackrete

____ Plastic — ____ Drums

1 Surface Completion Type: AG manhole

____ Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:

rig up, drill, sample, set casing, pour sand & chips, rig down, grout up 3 mw & install manholes on 7 mw & de-mob to Hobbs

Sample description on back

**BORING/WELL REPORT** Date 9-24-96

Company: SES Representative(s): D.

Site: Chevron NCTB Monument, N.M. Boring/Well I.D.: C-1

Harrison Drilling Crew: Cooper, Miller

Rig: TH-60 Service Truck: F-92 Auger/Bit Size: 4 3/4

| | | | |
|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: |
| Drilling Time | Start: 6:45 A.M. | Stop: | |
| Completion Time | Start: | Stop: 9:00 A.M. | |
| Decon Time | Start: | Stop: | |
| DEMOB/Rig Down | Start: | Stop: | Mileage: |

Lost Time Total: Remarks:

Total Depth: 48' Depth to Ground Water: 37' Sample Interval: 5, 10, 15, 25, 30, 35, 40

Casing Depth: 48' Screened Interval: 33'-48'

1

## MATERIALS

15' Screen (2" OR 4") (.010 OR .020)

35' Blank (2" OR 4")

1 Casing Points

1 Locking Caps

_____ Locks

_____ Centralizers

3 Sand (10/20 ro 20/40)

1/2 Pellets/Chips

2 Bentonite Grout

2 Sackrete

_____ Plastic

_____ Drums

1 Surface Completion Type: A.G. Manhole

_____ Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:

Sample description on back

BORING/WELL REPORT Date 9-24-94

Company: SES Representative(s): D.

Site: Chevron NCTB Monument, K.M. Boring/Well I.D. C-2

Harrison Drilling Crew: Cooper, Miller

Rig: TH-60 Service Truck: F-92 Auger/Bit Size: 4 3/4

| | | | |
|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: |
| Drilling Time | Start: 10:00 A.M. | Stop: | |
| Completion Time | Start: | Stop: 11:45 A.M. | |
| Decon Time | Start: | Stop: | |
| DEMOB/Rig Down | Start: | Stop: | Mileage: |

Lost Time Total: Remarks:

Total Depth: 48' Depth to Ground Water: 37' Sample Interval: 5, 10, 23, 28, 37, 47

Casing Depth: 48' Screened Interval: 33'-48' 7

## MATERIALS

15' Screen (2" OR 4") (.010 OR .020)

35' Blank (2" OR 4")

1 Casing Points

1 Locking Caps

Locks

Centralizers

4 Sand (10/20 to 20/40)

1/2 Pellets/Chips

2 Bentonite Grout

2 Sackrete

Plastic

Drums

1 Surface Completion Type: A.G. manhole

Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:

Sample description on back

**BORING/WELL REPORT** Date 9-24-92

Company: SES Representative(s): D.

Site: Chevron NCTB Monument U.M. Boring/Well I.D.: 3

Harrison Drilling Crew: Cooper, Miller

Rig: TH-60 Service Truck: E-92 Auger/Bit Size: 4 3/4

| | | | |
|---|---|---|---|
| MOB/Rig Up Time | Start: | Stop: | Mileage: |
| Drilling Time | Start: 12:00 P.M. | Stop: | |
| Completion Time | Start: | Stop: 1:30 P.M. | |
| Decon Time | Start: | Stop: | |
| DEMOB/Rig Down | Start: | Stop: | Mileage: |

Lost Time Total: Remarks:

Total Depth: 48' Depth to Ground Water: 37' Sample Interval: 5, 10, 15, 20, 25, 36

Casing Depth: 48' Screened Interval: 33'-48'

## MATERIALS

| | |
|---|---|
| 15' Screen (2" OR 4") (.010 OR .020) | 35' Blank (2" OR 4") |
| 1 Casing Points | 1 Locking Caps |
| Locks | Centralizers |
| 4 Sand (10/20 ro 20/40) | 1/2 Pellets/Chips |
| 2 Bentonite Grout | 2 Sackrete |
| Plastic | Drums |

1 Surface Completion Type: A.G. manhole

Misc. Add. Materials:

REMARKS / SUBCONTRACT EXPENSE / MISC. EXPENSE / EXPENDABLES:

Sample description on back

CARDINAL 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
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 |

Chemist

11/19/96
Date

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

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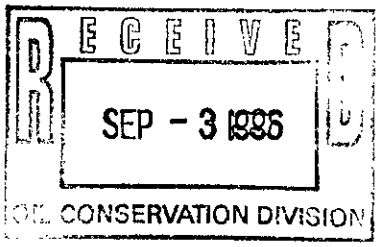


August 29, 1996

New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Attn: Mr. William C. Olson

Re: **Ground water Investigation**
**Durham State A**
**Chevron Graham NCT B**
**Lea County, NM**

Pursuant to your letter of June 13, 1996, this letter is being submitted as a report on the current status of the project. Water Development Easement applications to permit the drilling of the seven monitor wells were submitted to the State Land Office on July 17, 1996. As of this date, Amerada Hess has not received approval of the Easement Applications from the SLO. Work will commence when the easements are received.

If you have any questions, 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 Area File

AMERADA HESS CORPORATION

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

POST OFFICE BOX 840
SEMINOLE, TEXAS 79360
915/758-6700

June 24, 1996

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**Z 422 727 883**

New Mexico State Engineer's Office
District 2
P.O. Box 1717
Roswell, New Mexico 88201-1717
Attn: Mr. Johnny Hernandez, PE

RE: **Groundwater Investigations**
~~Durham State 'A' Tank Battery~~
Chevron Graham NCT 'B' Tank Battery

Dear Mr. Hernandez,

Pursuant to my phone conversation with Mr. Fresquez on 06/17/96, Amerada Hess Corporation (AHC) is advising the State Engineer's Office, in writing, of our intention to drill seven monitor wells in central Lea County for the purpose of sampling the groundwater. The wells will be drilled to a depth of approximately 60 feet, or 10 feet below the depth at which groundwater is first encountered. Only enough water will be removed from each well to obtain a representative sample, approximately 30 to 50 gallons. If it becomes necessary to produce significantly larger volumes, your office will be notified prior to our doing so. The wells are being drilled to sample the groundwater for possible hydrocarbon contamination resulting from previous operators' surface activities at tank batteries which were located on each site. Three (3) wells are to be drilled in the $SE^4$, $SE^4$ of Sec. 2, Twp 20S, Rge 36E and four (4) wells are to be drilled in the $NW^4$, $SW^4$ of Sec. 2, Twp 20S, Rge 36E; detailed well locations will be provided upon completion of drilling activities. Both sites are located on State Land Office leases. AHC anticipates drilling the wells during August, 1996.

Please advise the undersigned, at the letterhead address, of any additional information which the State Engineer's Office may require, or if it will be necessary for AHC to submit permit applications for the above activity.

Sincerely,

Samuel Small, PE
Environmental Coordinator

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 13, 1996

**CERTIFIED MAIL**
**RETURN RECEIPT NO. P-269-269-161**

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

**RE: GROUND WATER INVESTIGATIONS**
**DURHAM STATE "A" TANK BATTERY**
**CHEVRON GRAHAM NCT "B" TANK BATTERY**

Dear Mr. Small:

The New Mexico Oil Conservation Division (OCD) has completed a review of Amerada Hess Corporation's (AHC) March 20, 1996 and April 2, 1996 correspondence and AHC's June 5, 1996 "TANK BATTERY SITE RECLAMATION DURHAM STATE "A" TANK BATTERY & CHEVRON GRAHAM NCT "B" TANK BATTERY, LEA COUNTY, NEW MEXICO". These documents contain AHC's notification of encountering ground water during soil remedial actions at the Durham State "A" tank battery and the Chevron Graham NCT "B" Tank Battery located in Unit P, Sec 2, T20S, R36E NMPM, Lea County, New Mexico. The documents also contain AHC's work plan for investigation of the potential occurrence of ground water contamination at the sites.

The above referenced work plan is approved with the following conditions:

1. All monitor wells will be constructed as set out below:

   a. A minimum of fifteen feet of well screen will be installed, with at least five feet of well screen above the water table and ten feet of well screen below the water table.

   b. An appropriately sized gravel pack will be set around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.

   c. A 2-3 foot bentonite plug will be placed above the gravel pack.

   d. The remainder of the hole will be grouted to the surface with cement containing 5 % bentonite.

2. AHC will develop each well upon completion using EPA approved procedures.

3. All wastes will be disposed of at an OCD approved facility or in an OCD approved manner.

4. Ground water from the monitor wells will be sampled and analyzed for concentrations of benzene, toluene, ethylbenzene, xylene (BTEX), total dissolved solids (TDS), major cations and anions and heavy metals using EPA approved methods.

   **NOTE: Since the New Mexico Water Quality Control Commission does not have a ground water standard for total petroleum hydrocarbons (TPH), the OCD does not require AHC to sample ground water for concentrations of TPH.**

5. AHC will submit a report on the investigation to the OCD by August 30, 1996. The report will contain:

   a. A description of all activities which occurred during the investigation, conclusions and recommendations including a discussion and the results of the soil remedial actions.

   b. A summary of the laboratory analytic results of soil and water quality sampling.

   c. A water table elevation map for each site using the water table elevation of the ground water in all monitor wells.

   d. A geologic log and well completion diagram for each well.

6. AHC will notify the OCD at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and/or split samples.

7. All documents submitted for approval will be submitted to the OCD Santa Fe Office with copies provided to the OCD Hobbs District Office.

Please be advised that OCD approval does not relieve AHC of liability if contamination exists which is beyond the scope of the plan or if the activities fail to adequately determine the extent of contamination. In addition, OCD approval does not relieve AHC of responsibility for compliance with any other federal, state or local laws and/or regulations.

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

Sincerely,

William C. Olson
Hydrogeologist
Environmental Bureau

xc: Jerry Sexton, OCD Hobbs District Supervisor
Wayne Price, OCD Hobbs Office
Dwain Glidewell, New Mexico State Land Office

P 269 269 161

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# AMERADA HESS CORPORATION

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

POST OFFICE BOX 840
SEMINOLE, TEXAS 79360
915/758-6700

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**
**Z 422 727 881**



June 5, 1996

Oil Conservation Division
Environmental Bureau
2040 S. Pacheco
Santa Fe, New Mexico 87505
Attn: Mr. William Olson

Re: **Tank Battery Site Reclamation**
Durham State 'A' Tank Battery &
Chevron Graham NCT 'B' Tank Battery
Lea County, New Mexico

Dear Mr. Olson:

To facilitate closure of excavations at the above referenced sites, Amerada Hess Corporation (AHC) proposes drilling monitor wells at both sites to delineate remaining vadose zone contamination and to ascertain the existence and extent of any ground water contamination. Future closure activities at the excavations will be predicated on evaluation of the monitor well program.

AHC proposes drilling three (3) wells to the south (down gradient) of the Graham NCT 'B' excavation and three (3) wells to the south (down gradient), one (1) well to the north (up gradient) and one (1) well between the excavations at the State 'A' site. An up gradient well is not needed at the Graham NCT 'B' site because the excavation indicated that there is no contamination to the north. The wells will be drilled to a depth sufficient to penetrate approximately twenty (20) feet of aquifer and will be located as close to the excavations as safe operating practices will allow. Drilling samples will be collected at five (5) foot intervals and analyzed, using EPA approved protocols, for TPH and VOC content. The wells will be cased with 2' PVC pipe and water samples will be collected, using standard sampling procedures, and analyzed for VOC, TPH, chlorides and TDS using EPA approved protocols.

If the above proposal meets with NMOCD approval, work will commence shortly after AHC receives notification. If you have any questions or suggestions, please contact the undersigned at the letterhead address or at (915) 758-6741.

Sincerely,

Samuel Small, PE
Environmental Coordinator

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

## Bill Olson

**From:** Wayne Price
**Sent:** Thursday, March 21, 1996 9:54 AM
**To:** Roger Anderson
**Cc:** Jerry Sexton; Bill Olson
**Subject:** Ground Water Contamination Notification
**Importance:** High

Attention: Roger Anderson,

Re: North Monument Greyburg/San Andres unit Remediation Project
Durham St. "A" nw/4 sw/4 sec 2- Ts 20s- R 36e (NM St. Land).

Sam Small has notified our office that they have excavated into the ground water. There is a small amount of visual contamination floating on the water. He is going to notify your office and will be working on a site assessment plan.

In the mean time they are going to fence the site for safety & environmental reasons and pull off of site until they present a plan.

AMERADA HESS CORPORATION

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

POST OFFICE BOX 840
SEMINOLE, TEXAS 79360
915/758-6700



CERTIFIED MAIL
RETURN RECEIPT REQUESTED
Z 422 727 877

MARCH 20, 1996

NEW MEXICO OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE, NEW MEXICO 87505
ATTN: MR. ROGER ANDERSON

This is a follow-up notice regarding the discovery by Amerada Hess Corporation (AHC), as operator of the North Monument Graybury San Andres Unit (NMGSAU), of hydrocarbon-impacted soil (containing approximately 9,500 ppm TPH) at the groundwater level, during the clean-up of a tank battery site in the Northwest quarter of the Southwest quarter of Section 2, Township 20 South, Range 36 East, Lea County, New Mexico. The material discovered on March 19, 1996, was immediately reported by AHC to Mr. Wayne Price, of the NMOCD Hobbs District Office, who visited the site accompanied by Mr. Eric Nelson, of the State Land Office. AHC has ceased all further excavation operations and secured the site, pending further discussions with and guidance from the NMOCD.

The site is located on a State lease, which apparently was owned and operated by Durham: and the material was discovered by AHC while working on a project to consolidate individual lease batteries into one central facility for the NMGSAU. Therefore, the source of the contamination is no longer present.

After consultation with the NMOCD, AHC will determine the extent of the hydrocarbon-impacted soil, and if required, will submit Phase I and II abatement plans.

If you should have any questions or would like further information concerning this matter, please contact the undersigned at (915) 758-6741.

AMERADA HESS CORPORATION

SAMUEL W. SMALL
ENVIRONMENTAL COORDINATOR

SWS/kg

XC: NMOCD, HOBBS DISTRICT
STATE LAND OFFICE, HOBBS
HOUSTON ENVIRONMENTAL FILE
SEMINOLE ENVIRONMENTAL FILE
MONUMENT