

1R - 280

REPORTS

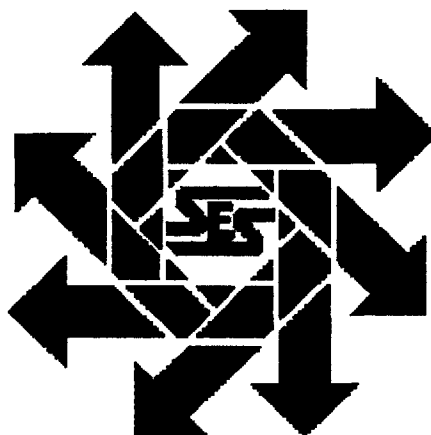
DATE:

8/2003 - MW

1R280

**ChevronTexaco
Dynegy – Monument Site
Monitor Well Report
Section 14, R36E, T20S
Lea County, New Mexico**

August 14, 2003



Prepared for:

**ChevronTexaco
P.O. Box 1949
Eunice, New Mexico 88231**

By:

**Safety & Environmental Solutions, Inc.
703 E. Clinton, Suite 102
Hobbs, New Mexico 88240
(505) 397-0510**

TABLE OF CONTENTS

I. Background.....	1
II. Work Performed	1
III. Analytical Results.....	2
VI. Figures and Appendices.....	2
Figure 1 – Vicinity Map	3
Figure 2 – Potentiometric Map	4
Appendix A – Cumulative Well Water Quality Data.....	5
Appendix B – Analytical Results.....	6

I. Background

The subject property is located in Lea County approximately 5 miles southwest of Monument, New Mexico (See Vicinity Map). Mr. James Cooper currently owns the surface rights of the property and the mineral rights are under lease to Chevron. The property has been the site of condensate/liquid product leaks from a pipeline previously operated by Warren Petroleum as well as an abandoned burn pit.

Safety & Environmental Solutions, Inc. (SESI) performed sampling and data collection on the six (6) ground water monitor wells at the site. Well #4 is shallow compared to other wells and was not sampled during some visits due to a lack of sufficient groundwater. The casing size in all wells is 4".

II. Work Performed

A field technician with SESI arrived at the site on August 14, 2003. The technician measured the depth to the top of the water table and the total depth of each well. The depth to the top of ground water was measured using a Solinst water level indicator. These measurements were used to construct a potentiometric map that shows groundwater flow direction. Monitor Well 4 has water in the bottom well cap only and was not used in constructing the map. The total depth of each well was measured in order to compute the proper casing volumes. A data summary is shown below:

Well ID	Date	Top of Casing Elevation (ft.)	Depth to Water (ft.)	Groundwater Potentiometric Elevation (ft.)	Total Well Depth (ft.)	Free Product Thickness (ft.)
MW – 1	08/14/03	3565.24	38.90	3526.34	49.00	0.00
MW – 2	08/14/03	3564.21	37.98	3526.23	45.75	0.00
MW – 3	08/14/03	3564.06	37.81	3526.25	46.93	0.00
MW – 4	08/14/03	3564.62			37.63	0.00
MW – 5	08/14/03	3564.58	38.11	3526.47	44.90	0.00
MW – 6	08/14/03	3564.58	38.36	3526.22	43.25	0.00

Ground water samples were taken from each well after a submersible pump was used to purge the wells. Three to five casing volumes of water were removed from each well (with the exception of MW-4) until pH and temperature of the water were stabilized. The development water was stored in a 400-gallon drum under the custody of Safety & Environmental Solutions, Inc. for disposal upon completion of analytical testing. The samples were obtained and placed in appropriate containers, preserved and transported under chain of custody to Cardinal Laboratories of Hobbs, New Mexico for analysis. (See Analytical Data)

III. Analytical Results

The analysis of the groundwater samples performed by Cardinal Laboratories is summarized in the tables below. Cumulative well water quality data are presented in Appendix A.

Contaminant	WQCC Standard (mg/L)	MW #1 (mg/L)	MW #2 (mg/L)	MW #3 (mg/L)	MW #4 (mg/L)	MW #5 (mg/L)	MW #6 (mg/L)
Chloride	250	3,500	1,360	1,120	NS	2,800	1,140
Benzene	0.005	<0.002	<0.002	<0.002	NS	<0.002	<0.002
Toluene	0.750	<0.002	<0.002	<0.002	NS	<0.002	<0.002
Ethyl Benzene	0.750	<0.002	<0.002	<0.002	NS	<0.002	<0.002
Total Xylenes	0.620	<0.006	<0.006	<0.006	NS	<0.006	<0.006

*Red exceeds WQCC Standards

*NS- Not Sampled

IV. Figures and Appendices

Figures:

Figure 1. Vicinity Map

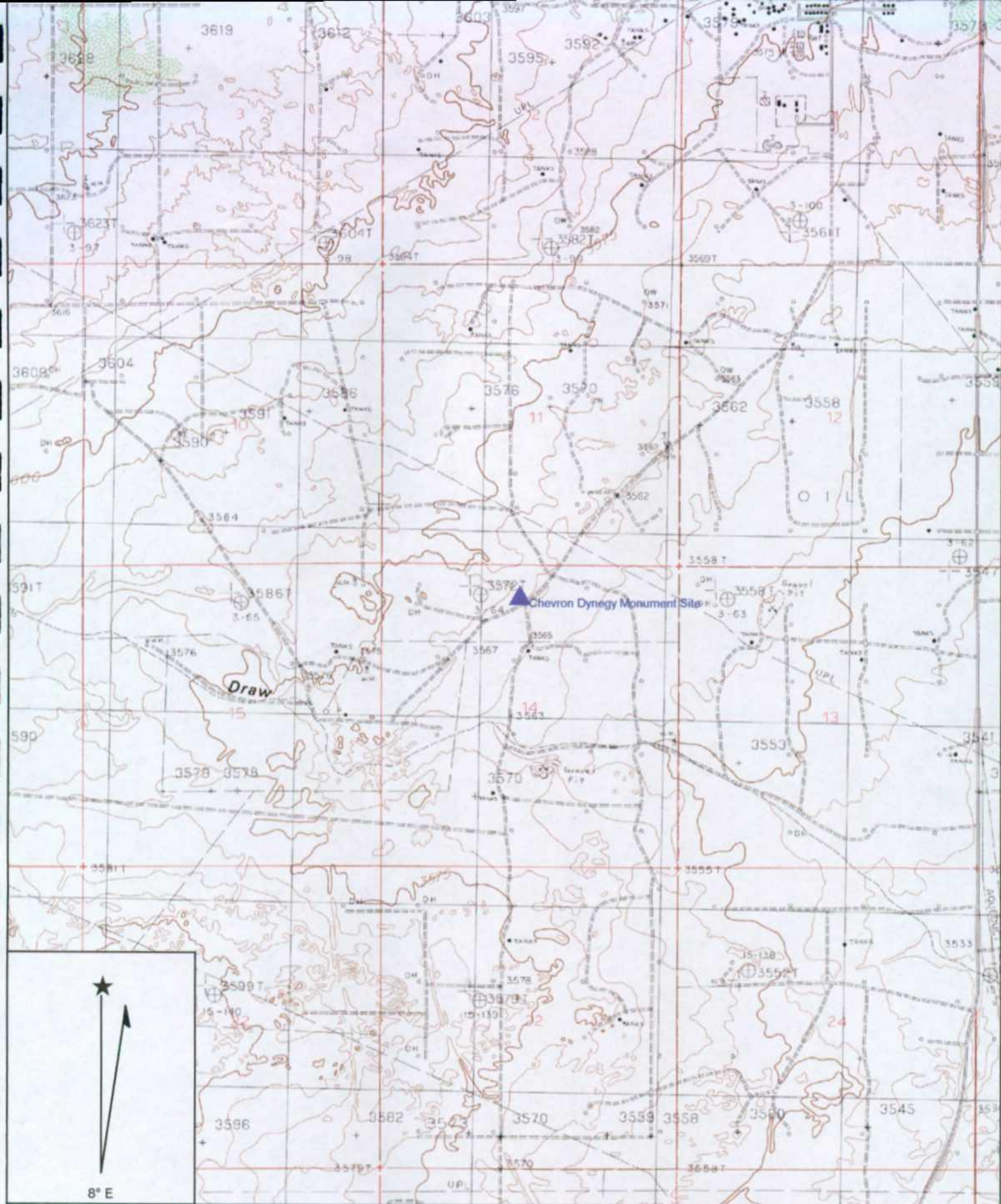
Figure 2. Potentiometric Map

Appendices:

Appendix A. Cumulative Well Water Quality Data

Appendix B. Analytical Results

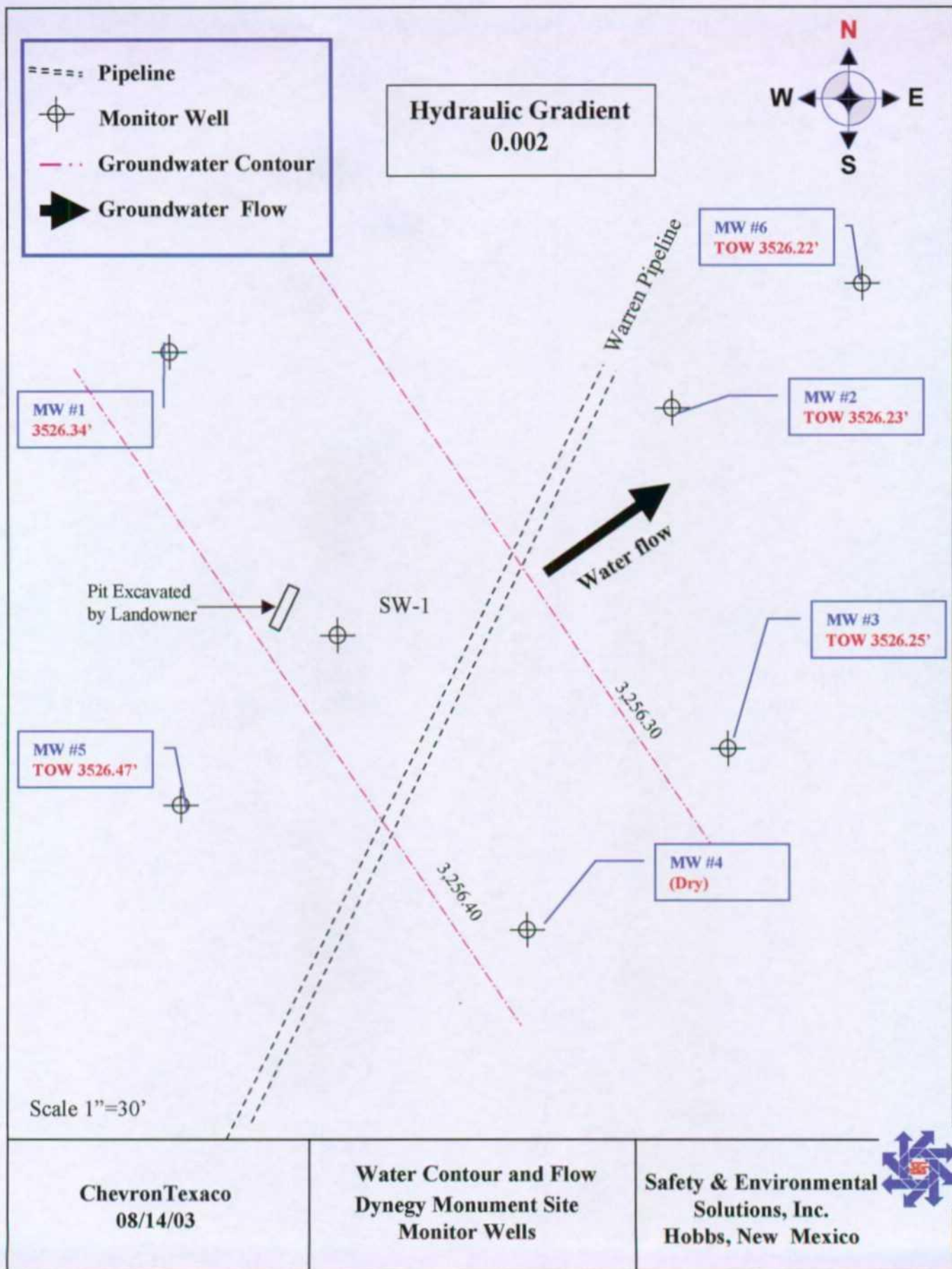
**Figure 1
Vicinity Map**



Name: MONUMENT SOUTH
 Date: 10/13/2003
 Scale: 1 inch equals 2222 feet

Location: 032° 34' 42.9" N 103° 19' 33.8" W
 Caption: ChevronTexaco
 Dynegy Monitor Wells
 S14, R36E, T20S
 Lea County, New Mexico

Figure 2
Potentiometric Map



**Appendix A
Cumulative Well Water Quality Data**

Monitor Well 1

Monitor Well 1								
Contaminant		Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:	Serial Date							
4/8/99	36258	2,291	6,910	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	1,839	7,740	<0.002	<0.002	<0.002	<0.006	<1.0
12/9/99	36503	3,130	8,130	<0.002	<0.002	<0.002	<0.006	1.58
3/25/00	36610	2,433	9,212	<0.002	<0.002	<0.002	<0.006	<1.0
6/14/00	36691	2,405	8,876	<0.002	<0.002	<0.002	<0.006	1.39
9/28/00	36797	2,765	8,854	<0.002	<0.002	<0.002	<0.006	<1.0
12/29/00	36889	2,691	7,350	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	2,199	8,470	<0.002	<0.002	<0.002	<0.006	4.44
12/9/02	37599	3,199	8,000	<0.002	<0.002	<0.002	<0.006	43.6
8/14/03	37847	3,500	N/a	<0.002	<0.002	<0.002	<0.006	N/a
WQCC Standard								
		250	1,000	0.01	0.75	0.75	0.62	N/a

Monitor Well 2

Monitor Well 2								
Contaminant	Serial Date	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:								
4/8/99	36258	1,395	4,060	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	934	7,740	<0.002	<0.002	<0.002	<0.006	10.3
12/9/99	36503	1,520	3,540	<0.002	<0.002	<0.002	<0.006	5.17
3/25/00	36610	1,216	3,898	<0.002	<0.002	<0.002	<0.006	2.36
6/14/00	36691	1,296	3,988	<0.002	<0.002	<0.002	<0.006	<1.0
9/28/00	36797	1,240	3,822	<0.002	<0.002	<0.002	<0.006	1.72
12/29/00	36889	1,346	3,968	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	1,060	3,756	<0.002	<0.002	<0.002	<0.006	<1.0
12/9/02	37599	840	2,810	<0.002	<0.002	<0.002	<0.006	1.04
8/14/03	37847	1,360	N/a	<0.002	<0.002	<0.002	<0.006	N/a
WQCC Standard								
		250	1,000	0.01	0.75	0.75	0.62	N/a

Monitor Well 3

Monitor Well 3								
Contaminant	Serial Date	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:								
4/8/99	36258	948	3,700	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	1,095	3,930	<0.002	<0.002	<0.002	<0.006	2.52
12/9/99	36503	1,414	3,610	<0.002	<0.002	<0.002	<0.006	<1.0
3/25/00	36610	1,086	4,058	<0.002	<0.002	<0.002	<0.006	1.47
6/14/00	36691	1,033	3,848	<0.002	<0.002	<0.002	<0.006	<1.0
9/28/00	36797	1,144	3,764	<0.002	<0.002	<0.002	<0.006	<1.0
12/29/00	36889	1,346	4,078	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	840	3,620	<0.002	<0.002	<0.002	<0.006	<1.0
12/9/02	37599	820	3,450	<0.002	<0.002	<0.002	<0.006	39.7
8/14/03	37847	1,120	N/a	<0.002	<0.002	<0.002	<0.006	N/a
WQCC Standard		250	1,000	0.01	0.75	0.75	0.62	N/a

Monitor Well 4

Monitor Well 4								
Contaminant	Serial Date	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:								
4/8/99	36258	1,893	6,200	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	1,612	5,190	<0.002	<0.002	<0.002	<0.006	2.76
12/9/99	36503	2,220	4,770	<0.002	<0.002	<0.002	<0.006	<1.0
3/25/00	36610	1,554	4,730	<0.002	<0.002	<0.002	<0.006	1.11
6/14/00	36691	1,691	5,144	<0.002	<0.002	<0.002	<0.006	<1.0
9/28/00	36797	1,716	4,818	<0.002	<0.002	<0.002	<0.006	3.31
12/29/00	36889	1,760	4,758	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	N/a	N/a	N/a	N/a	N/a	N/a	N/a
8/14/03	37847	N/a	N/a	N/a	N/a	N/a	N/a	N/a
WQCC Standard		250	1,000	0.01	0.75	0.75	0.62	N/a

Monitor Well 5

Monitor Well 5								
Contaminant	Serial Date	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:								
4/8/99	36258	2,092	7,260	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	2,139	8,230	<0.002	<0.002	<0.002	<0.006	2.9
12/9/99	36503	2,320	7,000	<0.002	<0.002	<0.002	<0.006	<1.0
3/25/00	36610	2,059	8,054	<0.002	<0.002	<0.002	<0.006	2.38
6/14/00	36691	2,104	7,744	<0.002	<0.002	<0.002	<0.006	<1.0
9/28/00	36797	2,193	7,926	<0.002	<0.002	<0.002	<0.006	1.17
12/29/00	36889	2,691	7,628	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	1,919	8,462	<0.002	<0.002	<0.002	<0.006	<1.0
12/9/02	37599	2,079	7,520	<0.002	<0.002	<0.002	<0.006	46.7
8/14/03	37847	2,800	N/a	<0.002	<0.002	<0.002	<0.006	N/a
WQCC Standard		250	1,000	0.01	0.75	0.75	0.62	N/a

Monitor Well 6

Monitor Well 6								
Contaminant	Serial Date	Chloride (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	TPH (mg/L)
Date:								
4/8/99	36258	785	2,800	<0.002	<0.002	<0.002	<0.006	N/a
9/23/99	36426	933	2,640	<0.002	<0.002	<0.002	<0.006	2.66
12/9/99	36503	1,310	2,090	<0.002	<0.002	<0.002	<0.006	<1.0
3/25/00	36610	1,104	3,096	<0.002	<0.002	<0.002	<0.006	<1.0
6/14/00	36691	1,090	3,244	<0.002	<0.002	<0.002	<0.006	<1.0
9/28/00	36797	1,526	3,332	<0.002	<0.002	<0.002	<0.006	<1.0
12/29/00	36889	1,449	3,512	<0.002	<0.002	<0.002	<0.006	<1.0
3/9/01	36959	990	3,348	<0.002	<0.002	<0.002	<0.006	<1.0
12/9/02	37599	880	2,430	<0.002	<0.002	<0.002	<0.006	2.97
8/14/03	37847	1,140	N/a	<0.002	<0.002	<0.002	<0.006	N/a
WQCC Standard		250	1,000	0.01	0.75	0.75	0.62	N/a

Appendix B Analytical Results



PHONE (325) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

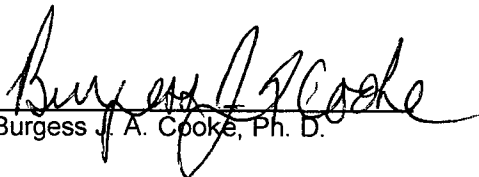
ANALYTICAL RESULTS FOR
SAFETY & ENVIRONMENTAL SOLUTIONS, INC.
ATTN: BOB ALLEN
703 E. CLINTON, #103
HOBBS, NM 88240
FAX TO: (505) 393-4388

Receiving Date: 08/14/03
Reporting Date: 08/15/03
Project Owner: CHEVRON
Project Name: DYNEGY
Project Location: MONUMENT, NM

Sampling Date: 08/14/03
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/BC

LAB NO.	SAMPLE ID	Cl ⁻ (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE:		08/15/03	08/14/03	08/14/03	08/14/03	08/14/03
H7915-1	MW #1	3500	<0.002	<0.002	<0.002	<0.006
H7915-2	MW #2	1360	<0.002	<0.002	<0.002	<0.006
H7915-3	MW #3	1120	<0.002	<0.002	0.003	<0.006
H7915-4	MW #5	2800	<0.002	<0.002	<0.002	<0.006
H7915-5	MW #6	1140	<0.002	<0.002	<0.002	<0.006
Quality Control		1000	0.100	0.097	0.097	0.288
True Value QC		1000	0.100	0.100	0.100	0.300
% Recovery		100	100	96.8	96.6	96.0
Relative Percent Difference		3.0	1.6	2.1	1.2	1.8

METHODS: Cl⁻ - Std. Methods 4500-Cl⁻B; BTEX - EPA SW-846 8260


Burgess J. A. Cooke, Ph. D.

8/15/03
Date

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

