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REPORTS

DATE:

2005

**ANNUAL GROUNDWATER MONITORING REPORT
NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO**

Prepared for:

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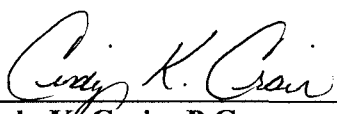

**Cindy K. Crain, P.G.
Project Manager**

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Annual Groundwater Monitoring Report
New Mexico "F" State Tank Battery
Lea County, New Mexico

1.0 INTRODUCTION

ChevronTexaco Exploration and Production Company (ChevronTexaco), as successor to Texaco Exploration and Production Inc. (Texaco) has retained Larson and Associates, Inc. (LA) to conduct groundwater remediation and monitoring activities at the former location of the New Mexico "F" State Tank Battery (Site). The Site is located approximately 2.6 miles northwest of Monument, New Mexico, and is situated in the northeast quarter (NE/4) of the southeast quarter (SE/4), Section 24, Township 19 South, Range 36 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map.

2.0 BACKGROUND

In July 1998, eight monitoring wells were installed, in order to investigate soil and groundwater contamination at the Site. Details of that investigation were submitted to the New Mexico Oil Conservation Division (NMOCD) in a Subsurface Investigation Report dated September 1998. In that report, Texaco made three proposals, as follows:

- Remove phase separated hydrocarbon (PSH) observed on the groundwater at well MW-1 and MW-2, by utilizing wells MW-1 and MW-2 as extraction wells.
- Place stockpiled soil from the excavation and monitoring well installations in the excavation, with a clay liner at the bottom of the pit.
- Conduct semi-annual groundwater monitoring at the Site.

The proposed activities were approved by the NMOCD in a letter dated January 20, 1999, with several conditions. The NMOCD agreed that the compacted clay should be placed over the filled excavation and compacted to 95% proctor density.

An Annual Groundwater Monitoring Report was submitted to the NMOCD on March 5, 2003, that included details of the installation of three recovery wells (RW-1, RW-2, and RW-3), excavation

closure activities, and results of groundwater monitoring activities for 2002. An Annual Groundwater Monitoring Report was submitted to the NMOCD on April 29, 2004, reporting results of groundwater monitoring activities for 2003.

3.0 GROUNDWATER MONITORING

3.1 Groundwater Assessment

LA completed monitoring at the Site for the period of January 2004 through December 2004. Depth to groundwater measurements were collected from all monitoring wells (MW-3 through MW-8) and recovery wells (RW-1 through RW-3) on July 1, 2004 and December 20, 2004. Depth to groundwater ranged from 53.19 feet (RW-3) to 67.43 feet (MW-6) below top of casing (TOC) on the July 1 event, and from 52.50 feet (RW-3) to 67.55 feet (MW-6) below TOC on the December 20 event. Phase separated hydrocarbons (PSH) were recorded in recovery wells RW-1, RW-2 and RW-3 during each monitoring event, with the greatest thickness found in well RW-1 during each event, with a thickness of 0.77 feet on July 1, 2004, and a thickness of 0.84 feet on December 20, 2004. The groundwater gradient was approximately 0.006 feet per foot during the July 1 monitoring event, and 0.045 feet per foot during the December 20 monitoring event. Groundwater flow at the Site was to the south and southwest during 2004, compared to the south / southeasterly flow direction reported in 2003. Table 1 provides a summary of depth to groundwater measurements. Figure 2 shows the location of monitoring and recovery wells. Figure 3 shows the groundwater gradient on July 1, 2004. Figure 4 shows the apparent PSH thickness recorded in recovery wells (RW-1, RW-2 and RW-3) on July 1, 2004. Figure 5 shows the groundwater gradient on December 20, 2004. Figure 6 shows the apparent PSH thickness recorded in recover wells (RW-1, RW-2 and RW-3) on December 20, 2004.

Groundwater samples were collected on July 2, 2004, from all monitoring wells (MW-3 through

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MW-8) and water wells WW-1 and WW-2. A duplicate sample was collected from monitoring well MW-3. The groundwater samples were submitted under chain-of-custody control to TraceAnalysis, Inc. (Trace), and analyzed for benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX) and chloride. Prior to sample collection, the wells were purged of a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 2 presents a summary of the BTEX analysis. Table 3 presents a summary of the chloride analysis. Appendix A presents the laboratory report.

Referring to Table 2, BTEX was not reported above test method detection limits in any groundwater sample. Referring to Table 3, the highest reported chloride concentration was 215 milligrams per liter (mg/L) in down-gradient monitoring well MW-7. Chloride was below the NMWQCC standard (250 mg/L) in groundwater from all wells.

On December 21, 2004, groundwater samples were collected from all monitoring wells (MW-3 through MW-8) and water wells WW-1 and WW-2. A duplicate sample was collected from well MW-5. The groundwater samples were submitted under chain-of-custody control to Trace, and analyzed for BTEX and chloride. Prior to sample collection, the wells were purged of a minimum of three (3) casing volumes of groundwater. The groundwater samples were collected using dedicated disposable PVC bailers. Table 2 presents a summary of the BTEX analysis. Table 3 presents a summary of the chloride analysis. Appendix A presents the laboratory report.

Referring to Table 2, BTEX was not reported above test method detection limits in any groundwater sample. Referring to Table 3, chloride concentrations were below the NMWQCC standard (250 mg/L) in groundwater from all wells, except down-gradient well MW-7 (274 mg/L).

3.2 Waste Management and Disposition

Purged groundwater from the sampling activities was disposed at an NMOCD permitted salt water disposal facility operated by Chapparel Services, Inc., located in Eunice, New Mexico. Approximately 50 gallons of purged groundwater was disposed following each sampling event, for a total of approximately 100 gallons.

3.3 Phase-Separated Hydrocarbons

Phase-separated hydrocarbons (PSH) were observed in three (3) recovery wells (RW-1, RW-2, and RW-3) on July 1, 2004. Wells RW-1, RW-2, and RW-3, installed in the vicinity of the pit, reported an apparent PSH thickness of 0.77, 0.39, and 0.21 feet, respectively. Figure 4 presents a drawing showing the apparent thickness of PSH on July 1, 2004. Table 1 presents a summary of PSH thicknesses.

PSH were observed in three (3) recovery wells (RW-1, RW-2 and RW-3) on December 20, 2004. Wells RW-1, RW-2 and RW-3 reported an apparent PSH thickness of 0.84 feet, 0.17 feet and 0.41 feet, respectively. The PSH appears to be restricted to the area in the immediate vicinity of the former tank battery and pit. Figure 6 presents a drawing showing the apparent thickness of PSH on December 20, 2004. Table 1 presents a summary of PSH thicknesses.

3.4 Remediation System Installation and Start-up

On February 17, 2003, the State of New Mexico, Office of the State Engineer (NMSE) approved an application submitted by Texaco for allocating water resources for remediation of the phase-separated hydrocarbons, subject to conditions. The remediation system was installed from October 2004 through February 2005, and was initially started on February 7, 2005.

4.0 CONCLUSIONS

1. Depth to groundwater ranged from 53.19 feet (RW-3) to 67.43 feet (MW-6) below top of casing (TOC) on the July 1 event, and from 52.50 feet (RW-3) to 67.55 feet (MW-6) below TOC on the December 20 event.
2. Phase separated hydrocarbons (PSH) were recorded in recovery wells RW-1, RW-2 and RW-3 during each monitoring event, with the greatest thickness found in well RW-1 during each event, with a thickness of 0.77 feet on July 1, 2004, and a thickness of 0.84 feet on December 20, 2004.
3. The groundwater gradient was approximately 0.006 feet per foot during the July 1 monitoring event, and 0.045 feet per foot during the December 20 monitoring event.
4. Groundwater flow at the Site was to the south and southwest during 2004, compared to the south / southeasterly flow direction reported in 2003.
5. From the July 2, 2004 sampling event, BTEX was not reported above test method detection limits in any groundwater sample. The highest reported chloride concentration was 215 mg/L in down-gradient monitoring well MW-7. Chloride was below the NMWQCC standard (250 mg/L) in groundwater from all wells.
6. From the December 21, 2004 sampling event, BTEX was not reported above the test method detection limits in any groundwater sample. Chloride concentrations were below the NMWQCC standard (250 mg/L) in groundwater from all wells, except down-gradient well MW-7 (274 mg/L).

5.0 RECOMMENDATIONS

ChevronTexaco proposes to continue the sampling schedule on a semi-annual basis, conduct quarterly gauging of all wells in order to effectively monitor the influence of the remediation system, and continue operation and maintenance of the remediation system.

TABLES

Table 1: Summary of Depth-to-Groundwater Measurements from Monitoring and Recovery Wells
Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery
NE1/4, SE1/4, Section 24, Township 19 South, Range 36 East
Lea County, New Mexico

Date	*MW-1	**MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	***MW-9	RW-1	RW-2	RW-3	WW-1	WW-2
07/07/98	61.05	--	--	--	--	--	--	--	--	--	--	--	--	--
07/17/98	60.15 (4.78)	--	--	--	--	--	--	--	--	--	--	--	--	--
07/28/98	60.09 (4.96)	54.77 (1.71)	59.53	69.72	56.53	67.86	58.08	56.84	--	--	--	--	--	--
03/23/99	--	--	--	--	56.30	--	--	--	--	--	--	--	--	--
06/25/99	59.61 (4.44)	54.59 (3.06)	59.06	62.31	56.21	67.25	57.96	56.56	52.40	--	--	--	--	--
10/14/99	--	--	--	--	--	--	--	--	--	--	53.28	45.82	--	--
11/03/99	--	--	--	--	--	--	--	--	--	62.17	53.95	52.82	--	--
02/16/01	--	--	59.53	62.52	56.31	67.45	58.09	56.49	--	62.37 (0.04)	54.01	52.88	--	--
06/11/02	--	--	59.18	62.39	56.29	67.19	58.07	56.56	--	62.26 (0.40)	54.01 (0.03)	52.91	66.35	66.18
11/26/02	--	--	59.54	62.76	56.13	67.09	57.92	56.88	--	62.60 (0.53)	54.28 (0.21)	53.22 (0.07)	67.18****	66.18
06/05/03	--	--	59.45	62.71	56.53	67.57	58.29	56.89	--	63.00 (0.16)	53.24 (0.01)	54.56 (0.16)	68.25	68.54
12/03/03	--	--	59.47	62.67	56.57	67.61	58.33	56.91	--	63.26 (0.65)	54.51 (0.13)	53.23	--	--
07/01/04	--	--	59.24	62.43	54.34	67.43	58.11	56.70	--	63.10 (0.77)	54.51 (0.39)	53.19 (0.21)	--	--
12/20/04	--	--	58.83	62.02	55.86	67.55	57.62	56.23	--	61.80 (0.84)	53.69 (0.17)	52.50 (0.41)	--	--

Notes: All measurements in feet from top-of-casing

1. () : Depth-to-groundwater corrected for PSH Thickness - PSH thickness shown in parenthesis

2. * : Well replaced by recovery well RW-1

3. ** : Well replaced by recovery well RW-2

4. *** : Well replaced by recovery well RW-3

5. -- : No data available

6. **** : Questionable data

Table 2: Summary of BTEX Analysis of Groundwater Samples from Monitoring and Water Wells
Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery
NE/4, SE/4, Section 24, Township 19 South, Range 36 East
Lea County, New Mexico

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Well Number	Sample Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylene mg/L	Total BTEX mg/L
NMWQCC Standard		0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	
*MW-1	28-July-98	N/S	N/S	N/S	N/S	N/S
**MW-2	28-July-98	N/S	N/S	N/S	N/S	N/S
MW-3	28-July-98	0.003	<0.001	<0.001	0.002	0.005
	16-Feb-01	<0.005	<0.005	<0.005	<0.005	<0.020
	12-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	26-Nov-02	<0.001	<0.001	<0.001	<0.001	<0.005
	6-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	4-Dec-03	<0.001	<0.001	<0.001	0.0017	0.0017
	2-Jul-04	<0.005	<0.005	<0.005	<0.005	<0.020
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
MW-4	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	16-Feb-01	<0.005	<0.005	<0.005	0.008	0.008
	12-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	26-Nov-02	0.002	<0.001	<0.001	<0.005	<0.009
	6-Jun-03	<0.001	<0.001	<0.001	0.0026	<0.0056
	4-Dec-03	0.0015	<0.001	<0.001	<0.001	0.0015
	2-Jul-04	<0.001	<0.001	<0.001	<0.001	<0.004
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
MW-5	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	16-Feb-01	<0.005	<0.005	<0.005	<0.005	<0.020
	12-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	26-Nov-02	0.002	<0.001	0.003	<0.002	<0.008
	6-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	4-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	2-Jul-04	<0.005	<0.005	<0.005	<0.005	<0.020
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
MW-6	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	16-Feb-01	<0.005	<0.005	0.006	0.006	0.012
	12-June-02	<0.001	<0.001	<0.001	<0.001	<0.001
	26-Nov-02	<0.001	<0.001	<0.001	<0.002	<0.005
	06-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	4-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	2-Jul-04	<0.001	<0.001	<0.001	<0.001	<0.004
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
MW-7	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	16-Feb-01	<0.005	<0.005	<0.005	<0.005	<0.020
	12-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	26-Nov-02	<0.001	<0.001	<0.001	<0.002	<0.005
	06-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	04-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	02-Jul-04	<0.001	<0.001	<0.001	<0.001	<0.004
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020

Table 2:

Summary of BTEX Analysis of Groundwater Samples from Monitoring and Water Wells
 Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery
 NE/4, SE/4, Section 24, Township 19 South, Range 36 East
 Lea County, New Mexico

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Well Number	Sample Date	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Xylene mg/L	Total BTEX mg/L
NMWQCC Standard		0.01 mg/L	0.75 mg/L	0.75 mg/L	0.62 mg/L	
MW-8	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	16-Feb-01	<0.005	<0.005	<0.005	<0.005	<0.020
	11-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	26-Nov-02	<0.001	<0.001	<0.001	<0.002	<0.005
	06-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	04-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	02-Jul-04	<0.005	<0.005	<0.005	<0.005	<0.020
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
***MW-9	--	--	--	--	--	--
RW-3	11-June-02	<0.005	<0.005	<0.005	<0.005	<0.005
	4-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
WW-1	28-July-98	<0.001	<0.001	<0.001	<0.001	<0.001
	12-June-02	<0.001	<0.001	<0.001	<0.001	<0.001
	26-Nov-02	<0.001	<0.001	<0.001	<0.002	<0.005
	06-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	04-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	02-Jul-04	<0.001	<0.001	<0.001	<0.001	<0.004
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
WW-2	12-June-02	<0.001	<0.001	<0.001	<0.001	<0.001
	26-Nov-02	<0.001	<0.001	<0.001	<0.002	<0.005
	6-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
	04-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
	02-Jul-04	<0.001	<0.001	<0.001	<0.001	<0.004
	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020
Duplicate (MW-3)	28-July-98	0.003	<0.001	<0.001	0.002	0.005
Duplicate (MW-6)	16-Feb-01	<0.005	<0.005	<0.005	<0.005	<0.020
Duplicate (MW-4)	26-Nov-02	0.002	<0.001	<0.001	<0.004	<0.008
Duplicate (MW-6)	6-Jun-03	<0.001	<0.001	<0.001	<0.001	<0.004
Duplicate (MW-8)	4-Dec-03	<0.001	<0.001	<0.001	<0.001	<0.004
Duplicate (MW-3)	2-Jul-04	<0.005	<0.005	<0.005	<0.005	<0.020
Duplicate (MW-5)	21-Dec-04	<0.005	<0.005	<0.005	<0.005	<0.020

Notes: Analysis performed by Trace Analysis, Inc., Lubbock, Texas
 : Analysis of 11/26/02 performed by Environmental Lab of Texas I, Ltd., Odessa, Texas

1. mg/L: Milligrams per liter
2. N/S: Phase-separated hydrocarbons in well - no sample collected
3. <: Denotes analyte concentration below test method detection limit
4. --: No data available
5. * : Well replaced by recovery well RW-1
6. ** : Well replaced by recovery well RW-2
7. ***: Well replaced by recovery well RW-3

Table 3: Summary of General Chemistry Analysis of Groundwater Samples from Monitoring and Water Wells
Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery (Closed)
NE/4, SE/4, Section 24, Township 19 South, Range 36 East
Lea County, New Mexico

[illegible]

Table 3: Summary of General Chemistry Analysis of Groundwater Samples from Monitoring and Water Wells
Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery (Closed)
NE/4, SE/4, Section 24, Township 19 South, Range 36 East
Lea County, New Mexico

[illegible]

Table 3: Summary of General Chemistry Analysis of Groundwater Samples from Monitoring and Water Wells
 Texaco Exploration and Production Inc., State of New Mexico "F" Tank Battery (Closed)
 NE/4, SE/4, Section 24, Township 19 South, Range 36 East
 Lea County, New Mexico

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Well Number	Sample Date	pH s.u.	Carbonate Alkalinity mg/L	Bicarbonate Alkalinity mg/L	Total Alkalinity mg/L	Chloride mg/L	Fluoride mg/L	Nitrate mg/L	Sulfate mg/L	Calcium mg/L	Magnesium mg/L	Potassium mg/L	Sodium mg/L	Hardness mg/L	TDS mg/L
NMWQCC Standards						250.0	1.6	10							1000
Duplicate (MW-3)	28-July-98	8	<1.0	160	160	35.0	--	--	57	75	6.5	3.7	26	--	310
Duplicate (MW-6)	16-Feb-01	--	<1.0	168	168	51	1.6	4.3	120	118	12.5	<5.0	32.0	--	510
Duplicate (MW-4)	26-Nov-02	--	--	--	--	160.0	--	--	--	--	--	--	--	--	--
Duplicate (MW-6)	06-Jun-03	--	--	--	--	44.5	--	--	--	--	--	--	--	--	--
Duplicate (MW-8)	04-Dec-03	--	--	--	--	254.0	--	--	--	--	--	--	--	--	--
Duplicate (MW-3)	02-Jul-04	--	--	--	--	27.7	--	--	--	--	--	--	--	--	--
Duplicate (MW-5)	21-Dec-04	--	--	--	--	39.5	--	--	--	--	--	--	--	--	--

Notes:

1. mg/L: Milligrams per liter
2. S.U. Standard units
3. N/S: No sample collected
4. *: Well replaced by recovery well RW-1 on 10/14/99
5. **: Well replaced by recovery well RW-2 on 10/13/99
6. ***: Well installed for monitoring PSH, and replaced by recovery well RW-3 on 10/13/99
7. NMWQCC: New Mexico Water Quality Control Standards presented in mg/L

FIGURES

MONITORING WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

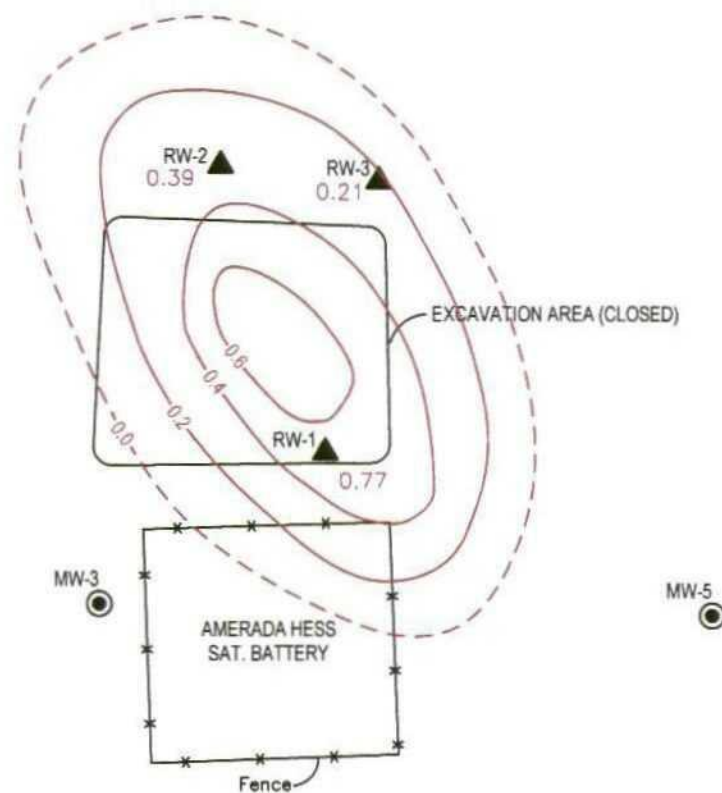
RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84

MW-8



LEGEND

- MW-6 MONITORING WELL LOCATION
- WW-1 WATER WELL LOCATION
- RW-3 RECOVERY WELL LOCATION AND APPARENT PSH THICKNESS, FEET AMSL, 7/01/04
- 0.2 CONTOUR OF APPARENT PSH THICKNESS, FEET AMSL, 7/01/04

WW-1

WW-2



FIGURE #4

LEA COUNTY, NEW MEXICO

CHEVRON TEXACO
EXPLORATION AND PRODUCTION COMPANY
STATE OF NEW MEXICO "F" TANK BATTERY
NE/4, SE/4, SEC. 24, T-19-S, R-36-E

APPARENT PSH THICKNESS MAP
JULY 1, 2004

DATE
04-19-05
NAME: SJA
FILE: 0-0114

Larson & Associates, Inc.
Environmental Consultants

MONITORING WELL DATA

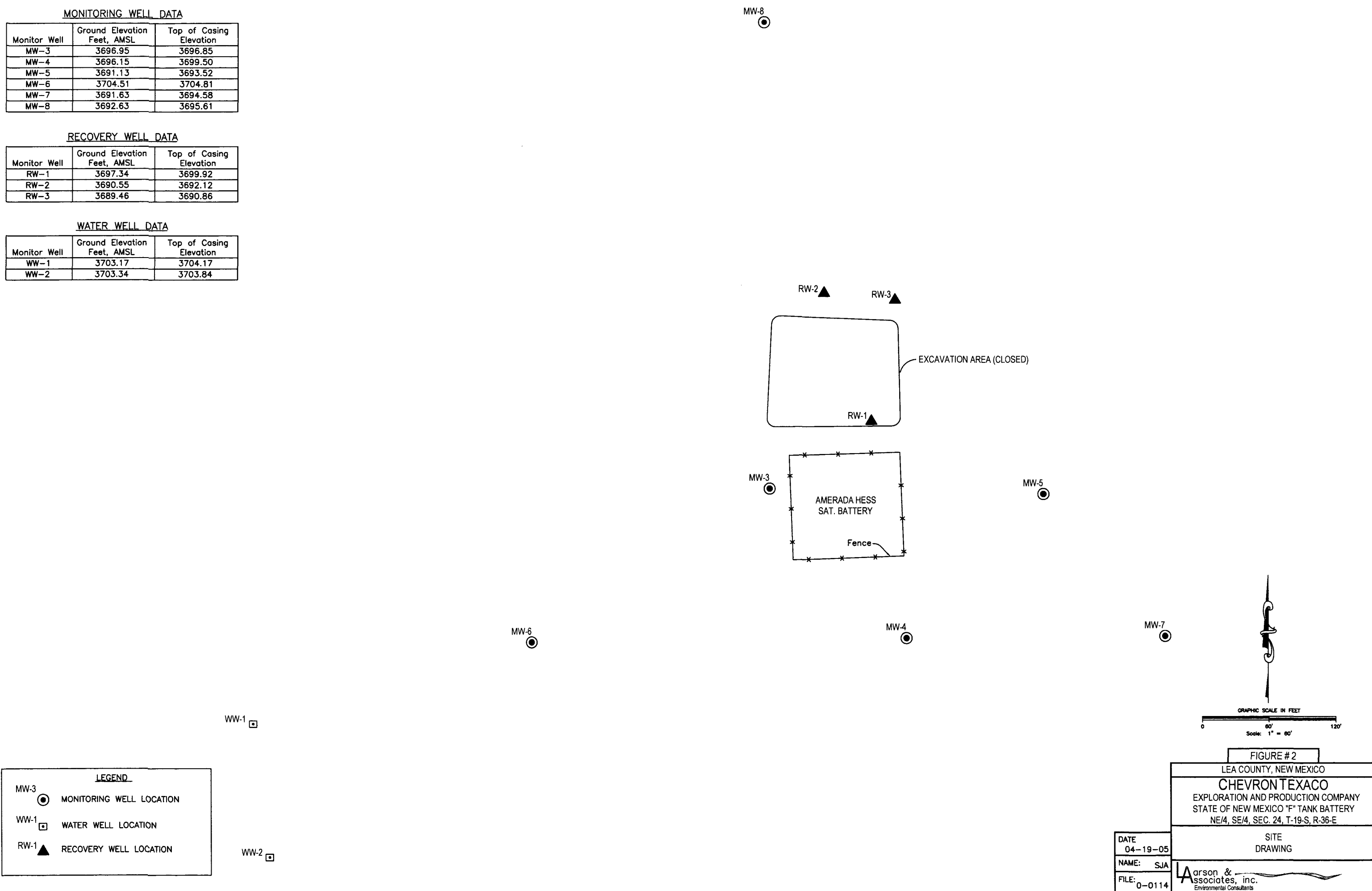
Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84



LEGEND

- MW-3  MONITORING WELL LOCATION
- WW-1  WATER WELL LOCATION
- RW-1  RECOVERY WELL LOCATION

FIGURE #2

LEA COUNTY, NEW MEXICO

CHEVRON TEXACO

EXPLORATION AND PRODUCTION COMPANY

STATE OF NEW MEXICO "F" TANK BATTERY

NE/4, SE/4, SEC. 24, T-19-S, R-36-E

SITE

DRAWING

DATE
04-19-05

NAME: SJA

FILE: 0-0114

Larson &
Associates, Inc.
Environmental Consultants

MONITORING WELL DATA

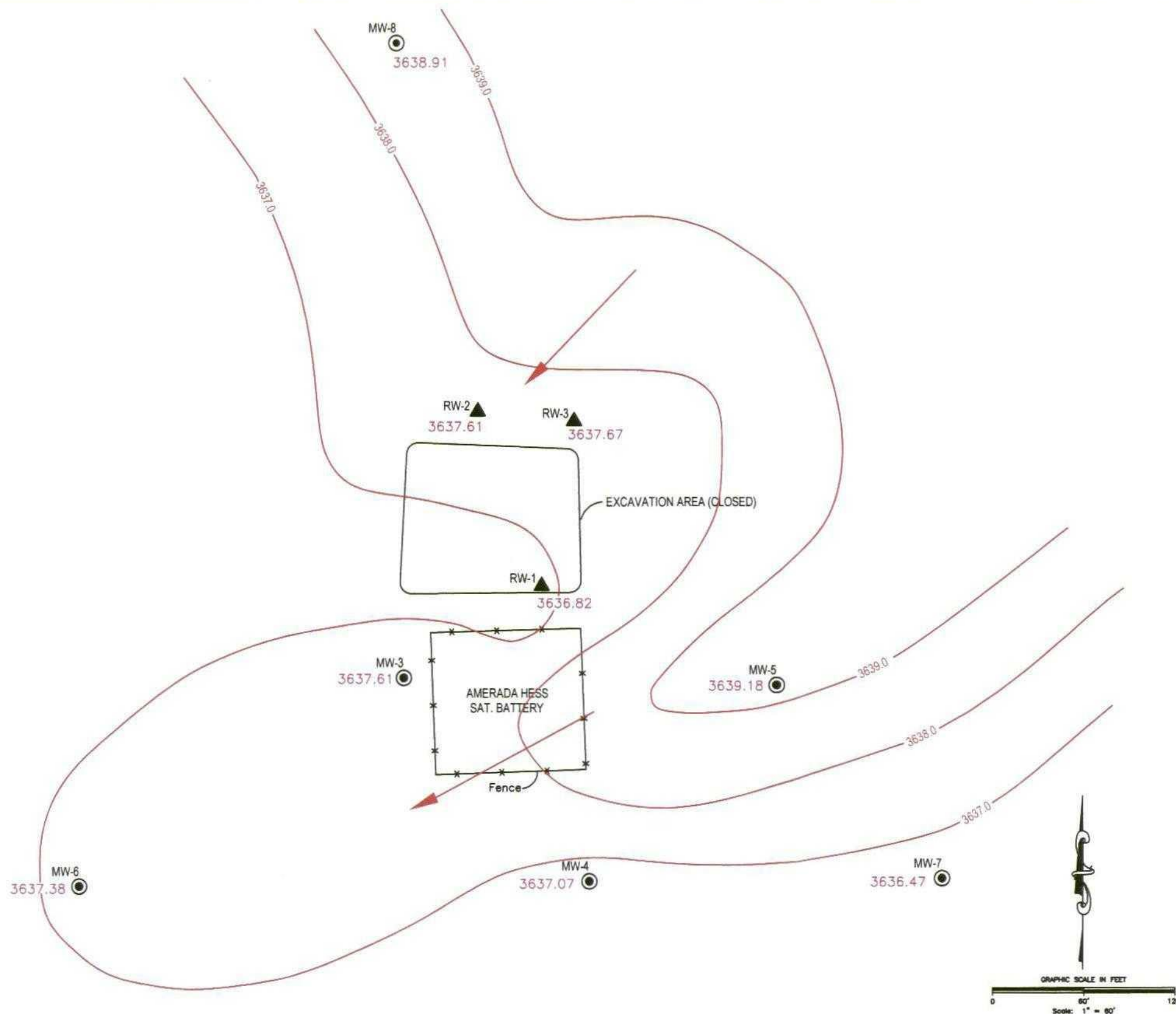
Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84



LEGEND

- MW-6
3637.38
MONITORING WELL LOCATION AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 7/01/04
- WW-1
WATER WELL LOCATION
- RW-3
3637.67
RECOVERY WELL LOCATION AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 7/01/04
- 3637.0
CONTOUR OF GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 7/01/04
- GROUNDWATER FLOW DIRECTION

WW-1

WW-2

FIGURE #3

LEA COUNTY, NEW MEXICO

CHEVRON TEXACO

EXPLORATION AND PRODUCTION COMPANY
STATE OF NEW MEXICO "F" TANK BATTERY
NE/4, SE/4, SEC. 24, T-19-S, R-36-E

GROUNDWATER POTENTIOMETRIC SURFACE MAP
JULY 1, 2004

DATE
04-19-05
NAME: SJA
FILE: 0-0114

Larson & Associates, Inc.
Environmental Consultants

MONITORING WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

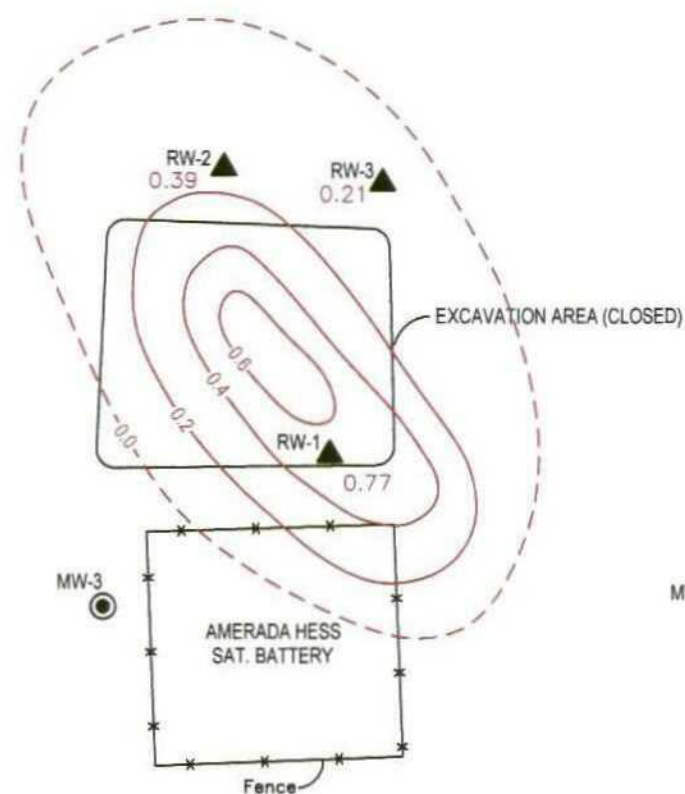
RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84

MW-8



MW-5

MW-4

MW-6

MW-7

WW-1

WW-2

LEGEND

- MW-6 MONITORING WELL LOCATION
- WW-1 WATER WELL LOCATION
- RW-3 RECOVERY WELL LOCATION AND APPARENT PSH THICKNESS, FEET AMSL, 7/01/04
- 0.2 CONTOUR OF APPARENT PSH THICKNESS, FEET AMSL, 7/01/04

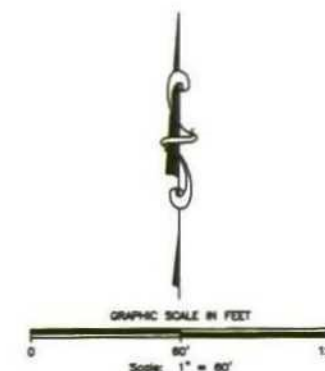


FIGURE #4

LEA COUNTY, NEW MEXICO

CHEVRON TEXACO
EXPLORATION AND PRODUCTION COMPANY
STATE OF NEW MEXICO "F" TANK BATTERY
NE/4, SE/4, SEC. 24, T-19-S, R-36-E

APPARENT PSH THICKNESS MAP
JULY 1, 2004

DATE
04-19-05
NAME: SJA
FILE: 0-0114

Larson & Associates, Inc.
Environmental Consultants

MONITORING WELL DATA

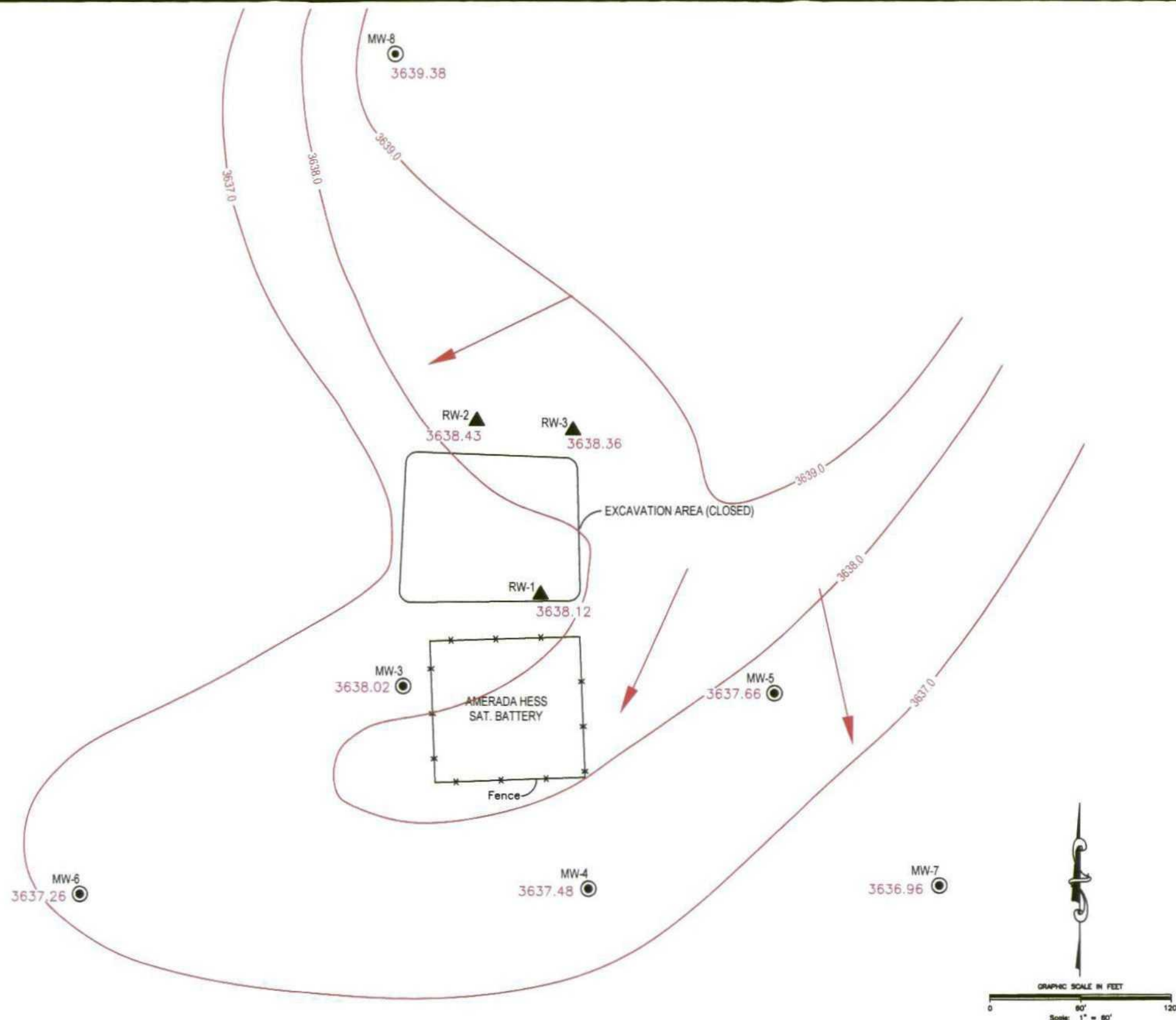
Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84



LEGEND

- MW-6
3637.26
MONITORING WELL LOCATION AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 12/20/04
- WW-1
WATER WELL LOCATION
- RW-3
3638.36
RECOVERY WELL LOCATION AND GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 12/20/04
- 3638.0
CONTOUR OF GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION, FEET AMSL, 12/20/04
- GROUNDWATER FLOW DIRECTION

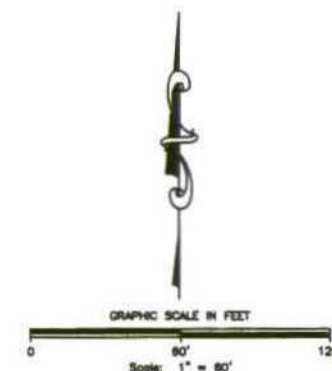


FIGURE #5

LEA COUNTY, NEW MEXICO

CHEVRON TEXACO

EXPLORATION AND PRODUCTION COMPANY
STATE OF NEW MEXICO "F" TANK BATTERY
NE/4, SE/4, SEC. 24, T-19-S, R-36-E

GROUNDWATER POTENTIOMETRIC SURFACE MAP
DECEMBER 20, 2004

DATE
04-19-05
NAME:
SJA
FILE:
0-0114

Larson & Associates, Inc.
Environmental Consultants

MONITORING WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
MW-3	3696.95	3696.85
MW-4	3696.15	3699.50
MW-5	3691.13	3693.52
MW-6	3704.51	3704.81
MW-7	3691.63	3694.58
MW-8	3692.63	3695.61

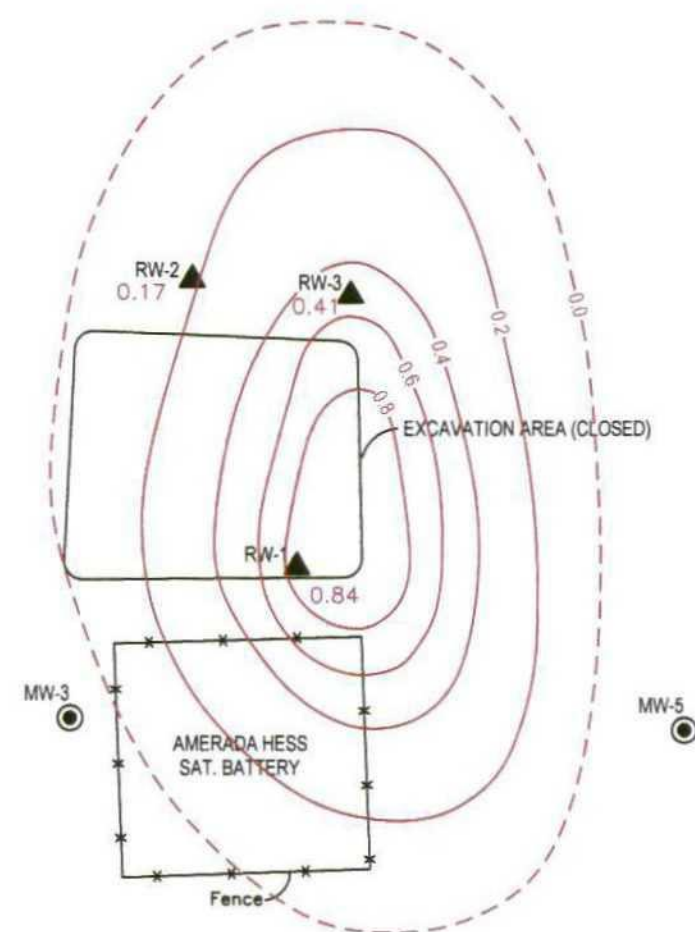
RECOVERY WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
RW-1	3697.34	3699.92
RW-2	3690.55	3692.12
RW-3	3689.46	3690.86

WATER WELL DATA

Monitor Well	Ground Elevation Feet, AMSL	Top of Casing Elevation
WW-1	3703.17	3704.17
WW-2	3703.34	3703.84

MW-8



LEGEND

- MW-6 MONITORING WELL LOCATION
- WW-1 WATER WELL LOCATION
- RW-3 RECOVERY WELL LOCATION AND APPARENT PSH THICKNESS, FEET AMSL, 12/20/04
- 0.2 CONTOUR OF APPARENT PSH THICKNESS, FEET AMSL, 12/20/04



FIGURE # 6

LEA COUNTY, NEW MEXICO

CHEVRONTXACO
EXPLORATION AND PRODUCTION COMPANY
STATE OF NEW MEXICO "F" TANK BATTERY
NE/4, SE/4, SEC. 24, T-19-S, R-36-E

APPARENT PSH THICKNESS MAP
DECEMBER 20, 2004

DATE
04-19-05

NAME: SJA

FILE: 0-0114

Larson & Associates, Inc.
Environmental Consultants

APPENDIX A

Laboratory Analyses and Chain of Custody Documentation

Summary Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: July 8, 2004

Work Order: 4070613

Project Name: New Mexico
Project Number: 0-0114

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
38059	S-WW	water	2004-07-02	08:11	2004-07-03
38060	N-WW	water	2004-07-02	08:22	2004-07-03
38061	MW-6	water	2004-07-02	08:57	2004-07-03
38062	MW-3	water	2004-07-02	09:25	2004-07-03
38063	MW-8	water	2004-07-02	09:59	2004-07-03
38064	MW-5	water	2004-07-02	10:28	2004-07-03
38065	MW-7	water	2004-07-02	10:48	2004-07-03
38066	MW-4	water	2004-07-02	11:25	2004-07-03
38074	Dup-1	water	2004-07-02	00:00	2004-07-03

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
38059 - S-WW	<0.00100	<0.00100	<0.00100	<0.00100
38060 - N-WW	<0.00100	<0.00100	<0.00100	<0.00100
38061 - MW-6	<0.00100	<0.00100	<0.00100	<0.00100
38062 - MW-3	<0.00500	<0.00500	<0.00500	<0.00500
38063 - MW-8	<0.00500	<0.00500	<0.00500	<0.00500
38064 - MW-5	<0.00500	<0.00500	<0.00500	<0.00500
38065 - MW-7	<0.00100	<0.00100	<0.00100	<0.00100
38066 - MW-4	<0.00100	<0.00100	<0.00100	<0.00100
38074 - Dup-1	<0.00500	<0.00500	<0.00500	<0.00500

Sample: 38059 - S-WW

Param	Flag	Result	Units	RL
Chloride		51.0	mg/L	0.500

Sample: 38060 - N-WW

Param	Flag	Result	Units	RL
Chloride		66.5	mg/L	0.500

Report Date: July 8, 2004
0-0114

Work Order: 4070613
New Mexico

Page Number: 2 of 2

Sample: 38061 - MW-6

Param	Flag	Result	Units	RL
Chloride		57.5	mg/L	0.500

Sample: 38062 - MW-3

Param	Flag	Result	Units	RL
Chloride		28.0	mg/L	0.500

Sample: 38063 - MW-8

Param	Flag	Result	Units	RL
Chloride		206	mg/L	0.500

Sample: 38064 - MW-5

Param	Flag	Result	Units	RL
Chloride		32.9	mg/L	0.500

Sample: 38065 - MW-7

Param	Flag	Result	Units	RL
Chloride		215	mg/L	0.500

Sample: 38066 - MW-4

Param	Flag	Result	Units	RL
Chloride		72.4	mg/L	0.500

Sample: 38074 - Dup-1

Param	Flag	Result	Units	RL
Chloride		27.7	mg/L	0.500

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9
155 McCutcheon, Suite H

Lubbock, Texas 79424
El Paso, Texas 79932

800•378•1296
888•588•3443
E-Mail: lab@traceanalysis.com

806•794•1296
915•585•3443

FAX 806•794•1298
FAX 915•585•4944

Analytical and Quality Control Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: July 8, 2004

Work Order: 4070613

Project Name: New Mexico
Project Number: 0-0114

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
38059	S-WW	water	2004-07-02	08:11	2004-07-03
38060	N-WW	water	2004-07-02	08:22	2004-07-03
38061	MW-6	water	2004-07-02	08:57	2004-07-03
38062	MW-3	water	2004-07-02	09:25	2004-07-03
38063	MW-8	water	2004-07-02	09:59	2004-07-03
38064	MW-5	water	2004-07-02	10:28	2004-07-03
38065	MW-7	water	2004-07-02	10:48	2004-07-03
38066	MW-4	water	2004-07-02	11:25	2004-07-03
38074	Dup-1	water	2004-07-02	00:00	2004-07-03

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.


Dr. Blair Leftwich, Director

Analytical Report

Sample: 38059 - S-WW

Analysis: BTEX
QC Batch: 10875
Prep Batch: 9623

Analytical Method: S 8021B
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: S 5030B
Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0958	mg/L	1	0.100	96	71.2 - 115
4-Bromofluorobenzene (4-BFB)	¹	0.0675	mg/L	1	0.100	68	76.5 - 116

Sample: 38059 - S-WW

Analysis: Chloride (IC)
QC Batch: 10896
Prep Batch: 9635

Analytical Method: E 300.0
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: N/A
Analyzed By: JT
Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		51.0	mg/L	5	0.500

Sample: 38060 - N-WW

Analysis: BTEX
QC Batch: 10875
Prep Batch: 9623

Analytical Method: S 8021B
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: S 5030B
Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0939	mg/L	1	0.100	94	71.2 - 115
4-Bromofluorobenzene (4-BFB)	²	0.0618	mg/L	1	0.100	62	76.5 - 116

Sample: 38060 - N-WW

¹Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

²Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Analysis: Chloride (IC)
QC Batch: 10896
Prep Batch: 9635

Analytical Method: E 300.0
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: N/A
Analyzed By: JT
Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		66.5	mg/L	5	0.500

Sample: 38061 - MW-6

Analysis: BTEX
QC Batch: 10875
Prep Batch: 9623

Analytical Method: S 8021B
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: S 5030B
Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0867	mg/L	1	0.100	87	71.2 - 115
4-Bromofluorobenzene (4-BFB)	³	0.0563	mg/L	1	0.100	56	76.5 - 116

Sample: 38061 - MW-6

Analysis: Chloride (IC)
QC Batch: 10896
Prep Batch: 9635

Analytical Method: E 300.0
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: N/A
Analyzed By: JT
Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		57.5	mg/L	5	0.500

Sample: 38062 - MW-3

Analysis: BTEX
QC Batch: 10875
Prep Batch: 9623

Analytical Method: S 8021B
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: S 5030B
Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

³Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.479	mg/L	5	0.100	96	71.2 - 115
4-Bromofluorobenzene (4-BFB)	4	0.313	mg/L	5	0.100	63	76.5 - 116

Sample: 38062 - MW-3

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 10896 Date Analyzed: 2004-07-06 Analyzed By: JT
Prep Batch: 9635 Date Prepared: 2004-07-06 Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		28.0	mg/L	5	0.500

Sample: 38063 - MW-8

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 10875 Date Analyzed: 2004-07-06 Analyzed By: MS
Prep Batch: 9623 Date Prepared: 2004-07-06 Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	5	0.949	mg/L	5	0.200	95	71.2 - 115
4-Bromofluorobenzene (4-BFB)	6	0.728	mg/L	5	0.200	73	76.5 - 116

Sample: 38063 - MW-8

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 10914 Date Analyzed: 2004-07-06 Analyzed By: JT
Prep Batch: 9648 Date Prepared: 2004-07-06 Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		206	mg/L	5	0.500

Sample: 38064 - MW-5

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B

⁴Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

⁵Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used.

⁶Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used/Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

QC Batch: 10875
Prep Batch: 9623

Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	7	0.973	mg/L	5	0.200	97	71.2 - 115
4-Bromofluorobenzene (4-BFB)	8	0.740	mg/L	5	0.200	74	76.5 - 116

Sample: 38064 - MW-5

Analysis: Chloride (IC)
QC Batch: 10914
Prep Batch: 9648

Analytical Method: E 300.0
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: N/A
Analyzed By: JT
Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		32.9	mg/L	5	0.500

Sample: 38065 - MW-7

Analysis: BTEX
QC Batch: 10875
Prep Batch: 9623

Analytical Method: S 8021B
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: S 5030B
Analyzed By: MS
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0877	mg/L	1	0.100	88	71.2 - 115
4-Bromofluorobenzene (4-BFB)	9	0.0574	mg/L	1	0.100	57	76.5 - 116

Sample: 38065 - MW-7

Analysis: Chloride (IC)
QC Batch: 10914

Analytical Method: E 300.0
Date Analyzed: 2004-07-06

Prep Method: N/A
Analyzed By: JT

⁷Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used.

⁸Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used/Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

⁹Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Prep Batch: 9648 Date Prepared: 2004-07-06 Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		215	mg/L	5	0.500

Sample: 38066 - MW-4

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 10875 Date Analyzed: 2004-07-06 Analyzed By: MS
Prep Batch: 9623 Date Prepared: 2004-07-06 Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0959	mg/L	1	0.100	96	71.2 - 115
4-Bromofluorobenzene (4-BFB)	¹⁰	0.0637	mg/L	1	0.100	64	76.5 - 116

Sample: 38066 - MW-4

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 10914 Date Analyzed: 2004-07-06 Analyzed By: JT
Prep Batch: 9648 Date Prepared: 2004-07-06 Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		72.4	mg/L	5	0.500

Sample: 38074 - Dup-1

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 10875 Date Analyzed: 2004-07-06 Analyzed By: MS
Prep Batch: 9623 Date Prepared: 2004-07-06 Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

¹⁰Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	¹¹	0.927	mg/L	5	0.200	93	71.2 - 115
4-Bromofluorobenzene (4-BFB)	¹²	0.682	mg/L	5	0.200	68	76.5 - 116

Sample: 38074 - Dup-1

Analysis: Chloride (IC)
QC Batch: 10916
Prep Batch: 9650

Analytical Method: E 300.0
Date Analyzed: 2004-07-06
Date Prepared: 2004-07-06

Prep Method: N/A
Analyzed By: JT
Prepared By: JT

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		27.7	mg/L	5	0.500

Method Blank (1) QC Batch: 10875

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0940	mg/L	1	0.100	94	70 - 130
4-Bromofluorobenzene (4-BFB)	¹³	0.0607	mg/L	1	0.100	61	70 - 130

Method Blank (1) QC Batch: 10896

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 10914

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 10916

¹¹Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used.
¹²Changed spike amount from 0.1 to 0.2 due to prep. 2x normal amount of surrogate was used/Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.
¹³Low BFB surrogate recovery due to prep. TFT surrogate recovery shows the method to be in control.

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Laboratory Control Spike (LCS-1) QC Batch: 10875

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0993	0.0988	mg/L	1	0.100	<0.000255	99	0	70 - 130	20
Toluene	0.0999	0.0988	mg/L	1	0.100	<0.000153	100	1	70 - 130	20
Ethylbenzene	0.0998	0.0991	mg/L	1	0.100	<0.000226	100	1	70 - 130	20
Xylene	0.301	0.299	mg/L	1	0.300	<0.000531	100	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0918	0.0935	mg/L	1	0.100	92	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0857	0.0863	mg/L	1	0.100	86	86	70 - 130

Matrix Spike (MS-1) QC Batch: 10896

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	71.5	71.4	mg/L	5	12.5	12.4	94	0	74.3 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 10914

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	147	147	mg/L	5	12.5	91.8	88	0	74.3 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 10916

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	85.0	85.7	mg/L	5	12.5	27.7	92	1	74.3 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1) QC Batch: 10875

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0993	99	85 - 115	2004-07-06
Toluene		mg/L	0.100	0.0999	100	85 - 115	2004-07-06

continued ...

standard continued...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		mg/L	0.100	0.0997	100	85 - 115	2004-07-06
Xylene		mg/L	0.300	0.301	100	85 - 115	2004-07-06

Standard (CCV-1) QC Batch: 10875

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0985	98	85 - 115	2004-07-06
Toluene		mg/L	0.100	0.0988	99	85 - 115	2004-07-06
Ethylbenzene		mg/L	0.100	0.0987	99	85 - 115	2004-07-06
Xylene		mg/L	0.300	0.298	99	85 - 115	2004-07-06

Standard (CCV-2) QC Batch: 10875

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0957	96	85 - 115	2004-07-06
Toluene		mg/L	0.100	0.0954	95	85 - 115	2004-07-06
Ethylbenzene		mg/L	0.100	0.0953	95	85 - 115	2004-07-06
Xylene		mg/L	0.300	0.288	96	85 - 115	2004-07-06

Standard (ICV-1) QC Batch: 10896

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.9	95	90 - 110	2004-07-06

Standard (CCV-1) QC Batch: 10896

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.9	95	90 - 110	2004-07-06

Standard (CCV-1) QC Batch: 10914

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.9	95	90 - 110	2004-07-06

Standard (CCV-2) QC Batch: 10914

Report Date: July 8, 2004
0-0114

Work Order: 4070613
New Mexico

Page Number: 10 of 11

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.4	91	90 - 110	2004-07-06

Standard (CCV-1) QC Batch: 10916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-07-06

Standard (CCV-2) QC Batch: 10916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-07-06

4070613

CLIENT NAME: Chex		SITE MANAGER: Cindy Rain		PROJECT NO.: D-0114		LAB. PO #		PAGE 1 OF 1		CHAIN—OF—CUSTODY RECORD	
PROJECT NO.: D-0114		PROJECT NAME: New Mexico State		LAB. PO #		NUMBER OF CONTAINERS		PARAMETERS/METHOD NUMBER		LA Associates, Inc. Environmental Consultants 507 N. Marrenfeld, Ste. 202 • Midland, TX 79701 Fax: 432-687-0456 432-687-0901	
DATE	TIME	WATER	SOIL	OTHER	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	PARAMETERS/METHOD NUMBER	LAB. I.D. NUMBER (LAB USE ONLY)	REMARKS I.E., FILTERED, UNFILTERED, PRESERVED, UNPRESERVED, GRAB COMPOSITE		
7/2	0811	✓			5-WW	3					
	0820	✓			W-WW	6.0					
	0957	✓			MW-L	6.1					
	0925	✓			MW-3	6.2					
	0959	✓			MW-8	6.3					
	1028	✓			MW-5	6.4					
	1028	✓			MW-7	6.5					
	1125	✓			MW-4	6.6					
	0100	✓			Dup	38074					
SAMPLED BY: (Signature) Wendy Johnston DATE: 7/2/04 TIME: 11:30 RECEIVED BY: (Signature) Wendy Johnston DATE: 7/2/04 TIME: 11:30 RELINQUISHED BY: (Signature) Wendy Johnston DATE: 7/2/04 TIME: 11:30 RECEIVED BY: (Signature) Wendy Johnston DATE: 7/2/04 TIME: 11:30 COMMENTS: TURNAROUND TIME NEEDED: 2 days RECEIVING LABORATORY: Shane Ambly RECEIVED BY: (Signature) Richard Schulte ADDRESS: TX ZIP: 74401 DATE: 7-3-04 TIME: 11:00 CITY: Midland STATE: TX PHONE: 432-687-0456 LA CONTACT PERSON: Cindy Rain SAMPLE CONDITION WHEN RECEIVED: Bus 166 130 5371 SAMPLE TYPE: Bus 166 130 5371											

Wt 24 samples - 14-S 40C

mt 24 samples - 175

Summary Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: December 29, 2004

Work Order: 4122212

Project Name: New Mexico
Project Number: 0-0114

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
51409	MW-8	water	2004-12-21	10:34	2004-12-22
51410	MW-5	water	2004-12-21	11:10	2004-12-22
51411	MW-7	water	2004-12-21	11:38	2004-12-22
51412	MW-4	water	2004-12-21	12:04	2004-12-22
51413	MW-3	water	2004-12-21	12:36	2004-12-22
51414	MW-6	water	2004-12-21	13:17	2004-12-22
51415	WW-1	water	2004-12-21	13:35	2004-12-22
51416	WW-2	water	2004-12-21	13:25	2004-12-22
51457	Dup-1	water	2004-12-22	00:00	2004-12-22

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
51409 - MW-8	<0.00500	<0.00500	<0.00500	<0.00500
51410 - MW-5	<0.00500	<0.00500	<0.00500	<0.00500
51411 - MW-7	<0.00500	<0.00500	<0.00500	<0.00500
51412 - MW-4	<0.00500	<0.00500	<0.00500	<0.00500
51413 - MW-3	<0.00500	<0.00500	<0.00500	<0.00500
51414 - MW-6	<0.00500	<0.00500	<0.00500	<0.00500
51415 - WW-1	<0.00500	<0.00500	<0.00500	<0.00500
51416 - WW-2	<0.00500	<0.00500	<0.00500	<0.00500
51457 - Dup-1	<0.00500	<0.00500	<0.00500	<0.00500

Sample: 51409 - MW-8

Param	Flag	Result	Units	RL
Chloride		244	mg/L	0.500

Sample: 51410 - MW-5

Param	Flag	Result	Units	RL
Chloride		39.8	mg/L	0.500

Sample: 51411 - MW-7

Param	Flag	Result	Units	RL
Chloride		274	mg/L	0.500

Sample: 51412 - MW-4

Param	Flag	Result	Units	RL
Chloride		59.7	mg/L	0.500

Sample: 51413 - MW-3

Param	Flag	Result	Units	RL
Chloride		32.3	mg/L	0.500

Sample: 51414 - MW-6

Param	Flag	Result	Units	RL
Chloride		61.3	mg/L	0.500

Sample: 51415 - WW-1

Param	Flag	Result	Units	RL
Chloride		74.3	mg/L	0.500

Sample: 51416 - WW-2

Param	Flag	Result	Units	RL
Chloride		55.6	mg/L	0.500

Sample: 51457 - Dup-1

Param	Flag	Result	Units	RL
Chloride		39.5	mg/L	0.500

TRACE ANALYSIS, INC.

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Analytical and Quality Control Report

Cindy Crain
Larson and Associates, Inc.
P. O. Box 50685
Midland, Tx 79710

Report Date: December 29, 2004

Work Order: 4122212

Project Name: New Mexico
Project Number: 0-0114

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
51409	MW-8	water	2004-12-21	10:34	2004-12-22
51410	MW-5	water	2004-12-21	11:10	2004-12-22
51411	MW-7	water	2004-12-21	11:38	2004-12-22
51412	MW-4	water	2004-12-21	12:04	2004-12-22
51413	MW-3	water	2004-12-21	12:36	2004-12-22
51414	MW-6	water	2004-12-21	13:17	2004-12-22
51415	WW-1	water	2004-12-21	13:35	2004-12-22
51416	WW-2	water	2004-12-21	13:25	2004-12-22
51457	Dup-1	water	2004-12-22	00:00	2004-12-22

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

Analytical Report

Sample: 51409 - MW-8

Analysis: BTEX
QC Batch: 14916
Prep Batch: 13165

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	1	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.446	mg/L	5	0.100	89	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.385	mg/L	5	0.100	77	17.1 - 138

Sample: 51409 - MW-8

Analysis: Chloride (IC)
QC Batch: 14906
Prep Batch: 13159

Analytical Method: E 300.0
Date Analyzed: 2004-12-23
Date Prepared: 2004-12-23

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		244	mg/L	10	0.500

Sample: 51410 - MW-5

Analysis: BTEX
QC Batch: 14916
Prep Batch: 13165

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	2	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.467	mg/L	5	0.100	93	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.432	mg/L	5	0.100	86	17.1 - 138

Sample: 51410 - MW-5

¹RR due to unsatisfactory surrogate recovery.

²RR due to unsatisfactory surrogate recovery.

Analysis: Chloride (IC)
QC Batch: 14906
Prep Batch: 13159

Analytical Method: E 300.0
Date Analyzed: 2004-12-23
Date Prepared: 2004-12-23

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		39.8	mg/L	5	0.500

Sample: 51411 - MW-7

Analysis: BTEX
QC Batch: 14916
Prep Batch: 13165

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	3	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.472	mg/L	5	0.100	94	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.450	mg/L	5	0.100	90	17.1 - 138

Sample: 51411 - MW-7

Analysis: Chloride (IC)
QC Batch: 14906
Prep Batch: 13159

Analytical Method: E 300.0
Date Analyzed: 2004-12-23
Date Prepared: 2004-12-23

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		274	mg/L	10	0.500

Sample: 51412 - MW-4

Analysis: BTEX
QC Batch: 14916
Prep Batch: 13165

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene	4	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

³RR due to unsatisfactory surrogate recovery.

⁴RR due to unsatisfactory surrogate recovery.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.486	mg/L	5	0.100	97	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.425	mg/L	5	0.100	85	17.1 - 138

Sample: 51412 - MW-4

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 14906 Date Analyzed: 2004-12-23 Analyzed By: WB
Prep Batch: 13159 Date Prepared: 2004-12-23 Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		59.7	mg/L	5	0.500

Sample: 51413 - MW-3

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 14916 Date Analyzed: 2004-12-26 Analyzed By: MT
Prep Batch: 13165 Date Prepared: 2004-12-26 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.452	mg/L	5	0.100	90	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.425	mg/L	5	0.100	85	17.1 - 138

Sample: 51413 - MW-3

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 14935 Date Analyzed: 2004-12-23 Analyzed By: WB
Prep Batch: 13160 Date Prepared: 2004-12-23 Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		32.3	mg/L	5	0.500

Sample: 51414 - MW-6

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5030B
QC Batch: 14919 Date Analyzed: 2004-12-26 Analyzed By: MT
Prep Batch: 13169 Date Prepared: 2004-12-26 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.497	mg/L	5	0.100	99	73.8 - 121
4-Bromofluorobenzene (4-BFB)		0.366	mg/L	5	0.100	73	52.4 - 119

Sample: 51414 - MW-6

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 14935	Date Analyzed: 2004-12-23	Analyzed By: WB
Prep Batch: 13160	Date Prepared: 2004-12-23	Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		61.3	mg/L	5	0.500

Sample: 51415 - WW-1

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 14919	Date Analyzed: 2004-12-26	Analyzed By: MT
Prep Batch: 13160	Date Prepared: 2004-12-26	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.494	mg/L	5	0.100	99	73.8 - 121
4-Bromofluorobenzene (4-BFB)		0.355	mg/L	5	0.100	71	52.4 - 119

Sample: 51415 - WW-1

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 14935	Date Analyzed: 2004-12-23	Analyzed By: WB
Prep Batch: 13160	Date Prepared: 2004-12-23	Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		74.3	mg/L	5	0.500

Sample: 51416 - WW-2

Analysis: BTEX
QC Batch: 14919
Prep Batch: 13169

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.492	mg/L	5	0.100	98	73.8 - 121
4-Bromofluorobenzene (4-BFB)		0.354	mg/L	5	0.100	71	52.4 - 119

Sample: 51416 - WW-2

Analysis: Chloride (IC)
QC Batch: 14935
Prep Batch: 13160

Analytical Method: E 300.0
Date Analyzed: 2004-12-23
Date Prepared: 2004-12-23

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		55.6	mg/L	5	0.500

Sample: 51457 - Dup-1

Analysis: BTEX
QC Batch: 14919
Prep Batch: 13169

Analytical Method: S 8021B
Date Analyzed: 2004-12-26
Date Prepared: 2004-12-26

Prep Method: S 5030B
Analyzed By: MT
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.494	mg/L	5	0.100	99	73.8 - 121
4-Bromofluorobenzene (4-BFB)		0.358	mg/L	5	0.100	72	52.4 - 119

Sample: 51457 - Dup-1

Analysis: Chloride (IC)
QC Batch: 14935
Prep Batch: 13160

Analytical Method: E 300.0
Date Analyzed: 2004-12-23
Date Prepared: 2004-12-23

Prep Method: N/A
Analyzed By: WB
Prepared By: WB

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		39.5	mg/L	5	0.500

Method Blank (1) QC Batch: 14906

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Method Blank (1) QC Batch: 14916

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0932	mg/L	1	0.100	93	48.4 - 119
4-Bromofluorobenzene (4-BFB)		0.0794	mg/L	1	0.100	79	17.1 - 138

Method Blank (1) QC Batch: 14919

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0978	mg/L	1	0.100	98	73.8 - 121
4-Bromofluorobenzene (4-BFB)		0.0720	mg/L	1	0.100	72	52.4 - 113

Method Blank (1) QC Batch: 14935

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5

Laboratory Control Spike (LCS-1) QC Batch: 14906

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.2	12.1	mg/L	1	12.5	<0.337	98	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1) QC Batch: 14916

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0966	0.0950	mg/L	1	0.100	<0.000650	97	2	81.9 - 114	20
Toluene	0.0944	0.0926	mg/L	1	0.100	<0.00101	94	2	82.8 - 112	20
Ethylbenzene	0.0985	0.0911	mg/L	1	0.100	<0.000840	98	8	82.2 - 111	20
Xylene	0.297	0.277	mg/L	1	0.300	<0.000737	99	7	83.5 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0854	0.0883	mg/L	1	0.100	85	88	48.4 - 119
4-Bromofluorobenzene (4-BFB)	0.0987	0.0950	mg/L	1	0.100	99	95	17.1 - 138

Laboratory Control Spike (LCS-1) QC Batch: 14919

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0889	0.0886	mg/L	1	0.100	<0.000136	89	0	72.8 - 113	20
Toluene	0.0908	0.0922	mg/L	1	0.100	<0.000247	91	2	75.2 - 112	20
Ethylbenzene	0.0961	0.0972	mg/L	1	0.100	<0.000550	96	1	81 - 112	20
Xylene	0.310	0.314	mg/L	1	0.300	<0.00156	103	1	82.9 - 119	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0981	0.0969	mg/L	1	0.100	98	97	72.9 - 121
4-Bromofluorobenzene (4-BFB)	0.113	0.112	mg/L	1	0.100	113	112	77.8 - 119

Laboratory Control Spike (LCS-1) QC Batch: 14935

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.1	12.2	mg/L	1	12.5	<0.337	97	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 14906 Spiked Sample: 51412

continued ...

matrix spikes continued ...

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride ⁵⁶	124	124	mg/L	5	12.5	59.7	103	0	84.7 - 100.6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 14935 Spiked Sample: 51457

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride ⁷	103	102	mg/L	5	12.5	39.5	102	1	84.7 - 100.6	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1) QC Batch: 14906

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.1	97	90 - 110	2004-12-23

Standard (CCV-1) QC Batch: 14906

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.3	98	90 - 110	2004-12-23

Standard (CCV-1) QC Batch: 14916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0992	99	85 - 115	2004-12-26
Toluene		mg/L	0.100	0.103	103	85 - 115	2004-12-26
Ethylbenzene		mg/L	0.100	0.0945	94	85 - 115	2004-12-26
Xylene		mg/L	0.300	0.304	101	85 - 115	2004-12-26

Standard (CCV-2) QC Batch: 14916

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0894	89	85 - 115	2004-12-26
Toluene		mg/L	0.100	0.0884	88	85 - 115	2004-12-26

continued ...

⁵Matrix spike difficulties.

⁶Matrix spike difficulties.

⁷Matrix spike difficulties.

standard continued...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		mg/L	0.100	0.0869	87	85 - 115	2004-12-26
Xylene		mg/L	0.300	0.274	91	85 - 115	2004-12-26

Standard (ICV-1) QC Batch: 14919

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0908	91	85 - 115	2004-12-26
Toluene		mg/L	0.100	0.0922	92	85 - 115	2004-12-26
Ethylbenzene		mg/L	0.100	0.0973	97	85 - 115	2004-12-26
Xylene		mg/L	0.300	0.314	105	85 - 115	2004-12-26

Standard (CCV-1) QC Batch: 14919

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0902	90	85 - 115	2004-12-26
Toluene		mg/L	0.100	0.0926	93	85 - 115	2004-12-26
Ethylbenzene		mg/L	0.100	0.0993	99	85 - 115	2004-12-26
Xylene		mg/L	0.300	0.320	107	85 - 115	2004-12-26

Standard (ICV-1) QC Batch: 14935

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.4	99	90 - 110	2004-12-23

Standard (CCV-1) QC Batch: 14935

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.7	102	90 - 110	2004-12-23

Page 1 of 1

TraceAnalysis, Inc. 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 794-1296 Fax (806) 794-1298 1 (800) 378-1296		155 McCutcheon, Suite H El Paso, Texas 79902 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443					
Company Name: <u>TraceAnalysis, Inc.</u> Address: <u>587 W. Main Street, Midland, TX 79701</u> Contact Person: <u>Curly Cray</u> Invoice to: <u>(If different from above)</u> Project #: <u>0-0114</u> Project Location: <u>Highway 1710</u>		Phone #: <u>432-687-0901</u> Fax #: <u>432-687-0756</u> Project Name: <u>New Mexico</u> Sampler Signature: <u>[Signature]</u>					
LAB #	FIELD CODE	# CONTAINERS	VOLUME/AMOUNT	MATRIX	PRESERVATIVE METHOD	SAMPLING DATE	TIME
51409	MW-8	3	✓	WATER	H ₂ O ₂	12/21/04	1034
10	MW-5			AIR	None		1110
11	MW-7			SLUDGE	None		1138
12	MW-4						1204
13	MW-3						1230
14	MW-6						1317
15	WW-1						1338
16	WW-2						1325
Requisitioned by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1710</u> Relinquished by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1745</u> Requisitioned by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1745</u> Relinquished by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1745</u>		Received by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1710</u> Received by: <u>[Signature]</u> Date: <u>12/21/04</u> Time: <u>1710</u> Received at Laboratory by: <u>[Signature]</u> Date: <u>12/22/04</u> Time: <u>11:35</u>					
Turn Around Time if different from standard: <u>24 hours</u>							
ANALYSIS REQUEST (Circle or Specify Method No.) Total Metals Ag As Ba Cd Cr Pb Se Hg 50108/2007 <u>✓</u> TCLP Metals Ag As Ba Cd Cr Pb Se Hg <u>✓</u> TCLP Volatiles <u>✓</u> TCLP Semi Volatiles <u>✓</u> TCLP Pesticides <u>✓</u> RCI <u>✓</u> GC/MS Vol 8260B/624 <u>✓</u> GC/MS Semi Vol 8270C/625 <u>✓</u> PCB's 8082/608 <u>✓</u> Pesticides 8081A/608 <u>✓</u> BOD TSS pH <u>✓</u> Hold <u>✓</u>							
REMARKS: LAB USE ONLY Intact <u>Y</u> N <u>N</u> Headspace <u>Y</u> N <u>N</u> Temp <u>4°C</u> Log-in Review <u>[Signature]</u> Check if Special Reporting Limits Are Needed <u>✓</u> Carrier # <u>Done at lowest 120 3881</u>							

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. 29 samples - HS
ORIGINAL COPY

6701 Aberdeen Avenue, Ste. 9
Lubbock, Texas 79424
Tel (806) 794-1296
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TraceAnalysis, Inc.

155 McCutcheon, Suite H
El Paso, Texas 79932
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1 (888) 588-3443

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 4122212

Company Name:

LAB 2000 + Assoc.

Phone #:

432-687-0901

Address:

587 W. Main Street, Midland, TX 79701

Fax #:

432-687-0456

Contact Person:

Curtis Crum

Invoice to:

(If different from above)

Project #:

0-0114

Project Location:

Magnum W.M.

Project Name:

New Mexico "F" State

Sampler Signature:

[Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO ₃	H ₂ SO ₄	NaOH	ICE	DATE	TIME
51409	MW-8	3		✓				2				3	1/21	1034
10	MW-5													1110
11	MW-7													1138
12	MW-4													1204
13	MW-3													1236
14	MW-6													1317
15	WW-1													1335
16	WW-2													1325

Relinquished by:

Date: 12/21/04

Time: 1710

Received by:

Date: 12/21/04

Time: 1710

Relinquished by:

Date: 12/21/04

Time: 1745

Received by:

Date: 12/21/04

Time: 1135

Relinquished by:

Date: 12/21/04

Time: 1745

Received by:

Date: 12/21/04

Time: 1135

LAB USE ONLY

Intact

Y N

Headspace

Y N

Temp

4°C

Log-in Review

Y N

REMARKS:

Check If Special Reporting Limits Are Needed

12/21/04

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Carrier # Lane Starline 120 3881