2011 ANNUAL GROUNDWATER MONITORING REPORT

FORMER NEW MEXICO STATE "F" TANK BATTERY
CASE NO. 1R258
OGRID NO. 4323
NE/4, SE/4, SECTION 24, T-19-S, R-36-E
LATITUDE: N 32° 38′ 34.9″ LONGITUDE: W 103° 18′ 0.49″
LEA COUNTY, NEW MEXICO

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1.0 INTRODUCTION

This Annual Groundwater Monitoring Report presents groundwater data collected during the 2011 reporting period by Conestoga-Rovers & Associates (CRA) on behalf of Chevron Environmental Management Company (CEMC) at the former New Mexico State "F" Tank Battery (hereafter referred to as the "Site"). Groundwater gauging and sampling events were performed in March, June, September and December 2011.

The Site is located on Lea County Road 41 (Maddox Road), approximately 3.1 miles northwest of Monument, New Mexico and 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. Site Location and Site Details maps are illustrated on FIGURES 1 and 2, respectively. Historically, Texaco Exploration and Production, Inc. (Texaco) operated the Site as an oil field tank battery. An earthen emergency reserve pit was located approximately 175 feet north of the tank battery. The tank battery and reserve pit are visible in aerial photographs dated February 1949, July 1983, and June 1986. Sometime after 1986, the tank battery and associated equipment were removed from the Site. The former reserve pit was subsequently unearthed during construction of a production facility immediately south of the pit by the Amerada-Hess Corporation.

The former pit was excavated and approximately 7,400 cubic yards of soil and caliche rock were stockpiled adjacent to the excavated pit. In 1998, Highlander Environmental Corporation (Highlander) performed a subsurface assessment at the Site. The assessment activities included collection of soil samples from the sidewalls and bottom of the excavation and from the stockpiled soil generated during excavation activities. Chemical analyses of the soil samples confirmed that concentrations of all constituents of concern were below the New Mexico Oil Conservation Division (NMOCD) recommended remediation action levels for the Site. The soil sampling activities and laboratory analyses are documented in the *Subsurface Investigation Report, New Mexico "F" State Tank Battery, Lea County, New Mexico* (Highlander, September 1998). The *Annual Groundwater Monitoring Report, New Mexico "F" State Tank Battery, Lea County, New Mexico* (Larson and Associates, Inc., 2005) indicates that the pit was closed between September 1998 and November 2003 according to closure requirements stipulated by the NMOCD in correspondence dated January 20, 1999. The bottom of the excavated pit was lined with two feet of compacted clay, the stockpiled soil was returned to the excavation and the backfilled excavation was contoured to natural grade.

In addition to the soil assessment activities, nine monitor wells (MW-1 through MW-9) were installed at the Site between 1998 and 1999. Light non-aqueous phase liquid (LNAPL) was observed in wells MW-1 and MW-2. In November 1999, monitor wells (MW-1, MW-2 and MW-9) were plugged and abandoned and replaced with recovery

wells (RW-1, RW-2 and RW-3). On February 17, 2003, New Mexico Office of the State Engineer (NMOSE) approved applications (File No. L-11029, L-11030 and L-11031) submitted by Texaco to divert underground water for remediation of LNAPL. The remediation system was installed from October 2004 through February 2005 and was activated on February 14, 2005. Excluding brief periods for routine maintenance, the groundwater recovery/gradient control system operated from February 14, 2005 to November 20, 2006. In November 2006, LNAPL recovery methods were re-evaluated and the total fluids groundwater recovery/gradient control system was shut down. An LNAPL skimmer pump system was installed in RW-1 and absorbent socks were installed in RW-2 and RW-3 on November 28, 2006. This system is currently in operation at the Site. In addition, two Mobile Dual Phase Extraction (MDPE) events were conducted in 2011 using the newly installed RW-4. A skimmer pump was installed in RW-4 in October 2011. Semi-annual groundwater monitoring and weekly operation and maintenance (O&M) activities have been performed by CRA since 2005 along with annual reporting to the NMOCD for this Site.

2.0 REGULATORY FRAMEWORK

The NMOCD guidelines require groundwater to be analyzed for potential contaminants as defined by the New Mexico Water Quality Control Commission (NMWQCC) regulations. In addition, the NMWQCC regulations provide the Human Health Standards for Groundwater. The constituent of concern in affected groundwater at the Site is LNAPL in the form of crude oil. In this report, groundwater analytical results for benzene, toluene, ethylbenzene, total xylenes (BTEX) and chloride are compared to the NMWQCC standards as shown in the following table:

Analyte	NMWQCC Standard for Groundwater (mg/L)
Benzene[1]	0.01
Toluene[1]	0.75
Ethylbenzene[1]	0.75
Total xylenes[1]	0.62
Chloride[2]	250

Notes:
1) [1]NMWQCC Human Health Standards per NMAC 20.6.2.3103A
2) [2]NMWQCC Other Standards for Domestic Water Supply per NMAC 20.6.2.3103B

3.0 GROUNDWATER INVESTIGATION ACTIVITIES

In May 2011, a recovery well, RW-4, was installed at the Site. The well was installed to maximize LNAPL recovery. Groundwater gauging results are in Table I. Groundwater analytical results are in Tables II and III. Soil sample results are located in Table IV. The respective well locations are presented in FIGURE 2.

3.1 FIELD METHODOLOGIES

Prior to mobilizing the drilling equipment to the Site, the boring location areas were marked and a utility notification made at least 48-hour prior to mobilization. Each location was cleared with a post hole digger prior to drilling operations.

An air-rotary rig, operated by a licensed State of New Mexico water well driller, Harrison Cooper of Lubbock, Texas, was utilized to advance the boring to a depth of 75-feet bgs to assess the nature and extent of BTEX and LNAPL groundwater impact at the site as well as soils conditions in the vadose zone.

The boring was converted into a four-inch recovery well (RW-4) utilizing 40 feet of screen straddling the soil/ water interface. PVC casing was installed to extend three feet above the ground surface. The recovery well, RW-4, were terminated 75 feet below the ground surface. General well specifications for the recovery well included: four-inch diameter PVC casing/screens with gravel-packed screened intervals, 0.020-inch slotted screen, bentonite seals above the gravel pack, and above ground surface completions with concrete pads. The wells were developed by pump and bailing. The purge water was containerized in drums and disposed of by Nabors Well Services LTD (Nabors).

3.2 GROUNDWATER ASSESSMENT RESULTS

Groundwater was encountered 60.44 feet below top of casing (TOC) in RW-4 on June 2, 2011 gauging event. The NMOSE Well Records and CRA Soil Boring Logs and Monitor Well Details are in APPENDIX B.

Historic depth to groundwater and related measurements and information pertaining to the monitoring wells are presented in TABLE I – Groundwater Gauging Summary. A Topographic Survey of Monitor Wells, utilized to calculate top of casing (TOC) elevations and depth to groundwater elevations, is presented in APPENDIX C. The new well is consistent in elevation and gradient with the historical data. The survey was performed by West Company of Midland, Inc. in October 2011; MW-4, MW-8, and RW-4 were surveyed.

Soil samples were collected and screened using a photoionization detector (PID). Selected samples from the recovery well were delivered to ALS Laboratories of Houston, Texas using EPA-approved chain-of-custody procedures. The soil samples were analyzed for BTEX and TPH by Environmental Protection Agency (EPA) Methods 300.0 and 2540C.

Soil COCs detected above the NMOCD Recommended Remediation Action Levels for RW-4 are highlighted in TABLE IV and are listed below:

- TPH GRO/DRO was detected at concentrations of 2,802 mg/kg at 35 feet to 40 feet bgs, 3,708.5 mg/kg at 55 feet to 60 feet bgs and 2,401.8 mg/kg at 70 feet to 75 feet bgs;

Copies of the certified analytical reports and chain-of-custody documentation are attached in APPENDIX A.

4.0 GROUNDWATER SAMPLING AND ANALYSIS

The Site is monitored with a network of six monitor wells (MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8), two offsite water wells (WW-1 and WW-2) and four recovery wells (RW-1, RW-2, RW-3 and RW-4). Two semi-annual monitoring and sampling events were performed during the 2011 calendar year. The first (June) and second (December) semi-annual 2011 events included the collection of static fluid levels and LNAPL thicknesses (if present) in the six monitor wells and the four recovery wells and the collection of groundwater samples from all six monitor wells and the two offsite water wells. Static fluid levels were not collected from the two offsite water wells (WW-1 and WW-2) during the 2011 calendar year. In addition, monitor well MW-6 was sampled in March and September 2011 to ensure the plume is not moving toward the offsite water wells (WW-1 and WW-2).

The first and second semi-annual monitoring and sampling activities were performed on June 2, 2011 and December 1, 2011. Monitor well MW-6 was also sampled on March 3, 2011 and September 27, 2011. Prior to purging, static fluid levels and LNAPL thicknesses were measured from top of casing (TOC) with an electric interface probe to the nearest hundredth of a foot and recorded. Purging was considered complete when three well volumes had been removed or the wells were purged dry. Geochemical field parameters including pH, temperature and conductivity were collected during the purging/sampling process. All non-disposable groundwater sampling equipment was decontaminated with a soap (Liquinox®) and potable water wash, a potable water rinse and a final deionized water rinse to minimize potential cross-contamination between each monitor well. Subsequent to the purging process, groundwater samples were collected using clean, disposable PVC bailers. Laboratory-supplied sample containers were then filled directly from the disposable PVC bailers.

Wells that contained measurable (>0.01 foot) LNAPL were not purged or sampled during the sampling events. The groundwater samples were placed on ice in an insulated cooler and chilled to a temperature of approximately 4˚C (40˚F). The coolers were sealed for shipment and proper chain-of-custody documentation accompanied the samples to the laboratory (ALS Laboratory Group located in Houston, Texas) for analyses of BTEX by EPA Method 8021B and chlorides by EPA-approved methods. The fluids recovered and generated during the sampling events were containerized onsite in labeled drums and subsequently managed at an NMOCD-permitted salt water disposal (SWD) facility by Nabors Well Services LTD. (Nabors).

4.1 POTENTIOMETRIC SURFACE ELEVATION AND GRADIENT

Groundwater elevation data are presented in TABLE I. Groundwater gradient maps for each semi-annual event (June and December 2011) are presented on FIGURES 3 and 4 respectively. Depth to groundwater ranged from 55.02 feet to 65.28 feet below TOC on June 2, 2011 and from 55.49 feet to 66.55 feet below TOC on December 1, 2011. Groundwater elevations at the Site appear to be consistent with historical levels with groundwater flow to the southeast. The maximum gradient observed during the 2011 calendar year was 0.007 feet/foot.

LNAPL was not detected in the monitor wells during the 2011 monitoring period. Historically, three onsite recovery wells have contained measurable amounts of LNAPL. LNAPL was present in recovery well RW-1 with a thickness of 2.87 feet in June 2011, 3.01 feet in September 2011 and 3.29 feet in December 2011. Recovery wells RW-2 and RW-3 had trace amounts of LNAPL present during the June and December events. LNAPL was present in recovery well RW-4 with a thickness of 1.04 feet in June 2011, 5.71 feet in September 2011 and 3.72 feet in December 2011. LNAPL thickness maps for June, September and November 2011 are presented as FIGURES 5, 6, and 7, respectively.

4.2 ANALYTICAL RESULTS

Analytical results are summarized in TABLE II. Groundwater BTEX and chloride concentration maps for March, July, September and November 2011 are presented as FIGURES 8, 9, 10 and 11 respectively. BTEX and chloride concentrations were below the NMWQCC standards in all samples collected from the monitor wells and offsite water wells (WW-1 and WW-2) during the 2011 monitoring event. This data indicates any dissolved phase hydrocarbon plume at the site is small and stable in nature.

Overall precision for both the sample collection and laboratory procedures were monitored using the results of the field duplicate samples. The relative percent differences (RPDs) between the results for the duplicate samples must be less than 30 percent for. One duplicate sample was collected during the July and November events, and the results are summarized on TABLE III. All duplicate RPDs were within the 30 percent criterion. Copies of the certified analytical reports and chain-of-custody documentation are attached in APPENDIX A.

5.0 CORRECTIVE ACTION

Excluding brief periods for routine maintenance, the Xitech® LNAPL skimmer pump system installed in RW-1 operated continuously from January to December 2011. A Xitech® LNAPL skimmer pump was installed in RW-4 in October 2011 and, excluding brief periods for routine maintenance, operated continuously from October to December 2011. The best course of action for the two other recovery wells (RW-2 and RW-3) was determined to be absorbent socks based on trace amounts of LNAPL observed in both wells.

Operation and maintenance (O&M) activities were performed on a weekly basis. Approximately 353 gallons of LNAPL were recovered in 2011 from RW-1 and RW-4. Additionally, approximately 1485 gallons of LNAPL have been recovered since November 28, 2006 when the skimmer system was installed in recovery well RW-1.

Mobile Dual Phase Extraction (MDPE) events were conducted by AcuVac Remediation Inc. (AcuVac) on June 9 and July 20, 2011 to assist in reduction of LNAPL. The events were conducted on RW-4. Groundwater and LNAPL samples were frequently taken in 2,000 ml beakers to determine average LNAPL percentage of total volume.

The first event was conducted on June 9, 2011. The event lasted six and a half hours and was stopped early due to an oncoming grass fire. A total of 1,580 gallons was recovered including 59.4 gallons of liquid LNAPL. A total of 0.72 gallons of LNAPL vapors were recovered and burned as internal combustion engine fuel. This resulted in a total LNAPL recovery of 60.12 gallons of LNAPL. The average groundwater depression was estimated at 2.0 feet below static level. The initial thickness of the LNAPL was 3.45 feet and the final thickness of the product was 0.07 feet.

The second event was conducted on July 20, 2011. The event lasted eight hours. A total of 2,085 gallons was recovered including 51.0 gallons of liquid LNAPL. A total of 5.630 gallons of LNAPL vapors were recovered and burned as internal combustion engine fuel. This resulted in a total LNAPL recovery of 56.6 gallons of LNAPL. The average groundwater depression was estimated at 2.0 feet below static level. The initial thickness of the LNAPL was 5.57 feet and the final thickness of the product was 0.02 feet.

The increased LNAPL thickness observed in RW-1 and RW-4 subsequent to the June and July 2011 MDPE events indicates that mobile LNAPL is present at these locations and MDPE events are an effective remedial strategy for product recovery at F State.

AcuVac reports for each event are located in APPENDIX D.

6.0 PLANNED ACTIVITIES

The Xitech® skimmer pump system will continue to be utilized for LNAPL recovery at the Site in 2012. The recovered product will be pumped into the 225-gallon tank which is situated inside a secondary containment structure.

Semi-annual groundwater sampling events are scheduled to be performed during June and December 2012. Groundwater samples will be collected from all wells that do not contain measurable LNAPL and from the two offsite water wells (WW-1 and WW-2) during the semi-annual groundwater sampling events. In addition, quarterly gauging and monitor well (MW-6) sampling activities will be performed to monitor the groundwater gradient and the potential for offsite plume migration. Weekly O&M activities will also be performed to monitor the performance of the LNAPL recovery system and to periodically replace the absorbent socks in the other two recovery wells (RW-2 and RW-3) as necessary. An eight hour MDPE event is scheduled for each quarter of 2012 to increase LNAPL recovery and move mobile LNAPL toward the recovery well system.

7.0 SUMMARY OF FINDINGS

Based on groundwater monitoring activities performed at the Site, CRA presents the following summary:

- The Site is monitored quarterly with a network of six monitor wells (MW-3, MW-4, MW-5, MW-6, MW-7 and MW-8), four recovery wells (RW-1, RW-2, RW-3 and RW-4) and two offsite water wells (WW-1 and WW-2). Depth to groundwater ranged from 55.02 feet to 65.28 feet below TOC on June 2, 2011 and from 55.49 feet to 66.55 feet below TOC on December 1, 2011. Groundwater elevations at the Site appear to be consistent with historical levels with groundwater flow to the southeast. The maximum gradient observed during the 2011 calendar year was 0.007 feet/foot.

- LNAPL was not detected in the monitor wells during the 2011 monitoring period. Historically, three onsite recovery wells have contained measurable amounts of LNAPL. LNAPL was present in recovery well RW-1 with a thickness of 2.87 feet in June 2011, 3.01 feet in September 2011 and 3.29 feet in December 2011. Recovery wells RW-2 and RW-3 had trace amounts of LNAPL present during the June and December events. LNAPL was present in recovery well RW-4 with a thickness of 1.04 feet in June 2011, 5.71 feet in September 2011 and 3.72 feet in December 2011. LNAPL thickness maps for June, September and November 2011 are presented as FIGURES 5, 6, and 7, respectively.

- BTEX and chloride concentrations were below the NMWQCC standards in all samples collected from the monitor wells and offsite water wells (WW-1 and WW-2) during the 2011 monitoring period.

- Excluding brief periods for routine maintenance, the Xitech® LNAPL skimmer pump system installed in RW-1 operated continuously from January to December 2011. A Xitech® LNAPL skimmer pump was installed in RW-4 in October 2011 and, excluding brief periods for routine maintenance, operated continuously from October to December 2011. Approximately 353 gallons of LNAPL were recovered in 2011 from RW-1 and RW-4. Additionally, approximately 1485 gallons of LNAPL have been recovered since November 28, 2006 when the skimmer system was installed in recovery well RW-1.

- Semi-annual groundwater sampling events are scheduled to be performed during June and December 2012. Groundwater samples will be collected from all wells that do not contain measurable LNAPL and from the two offsite water wells (WW-1 and WW-2) during the semi-annual groundwater sampling events. In addition, quarterly gauging and monitor well (MW-6) sampling activities will be performed to

monitor the groundwater gradient and the potential for offsite plume migration. Weekly O&M activities will also be performed to monitor the performance of the LNAPL recovery system and to periodically replace the absorbent socks in the other two recovery wells (RW-2 and RW-3) as necessary. An eight hour MDPE event is scheduled for each quarter of 2012.

- The extent of hydrocarbon-impacted groundwater at this location is defined and the plume is stable based on numerous quarterly groundwater sampling events. A more aggressive approach, with the use of two skimmer pumps and quarterly MDPE events, is planned for 2012.

All of Which is Respectfully Submitted,
Conestoga – Rovers & Associates

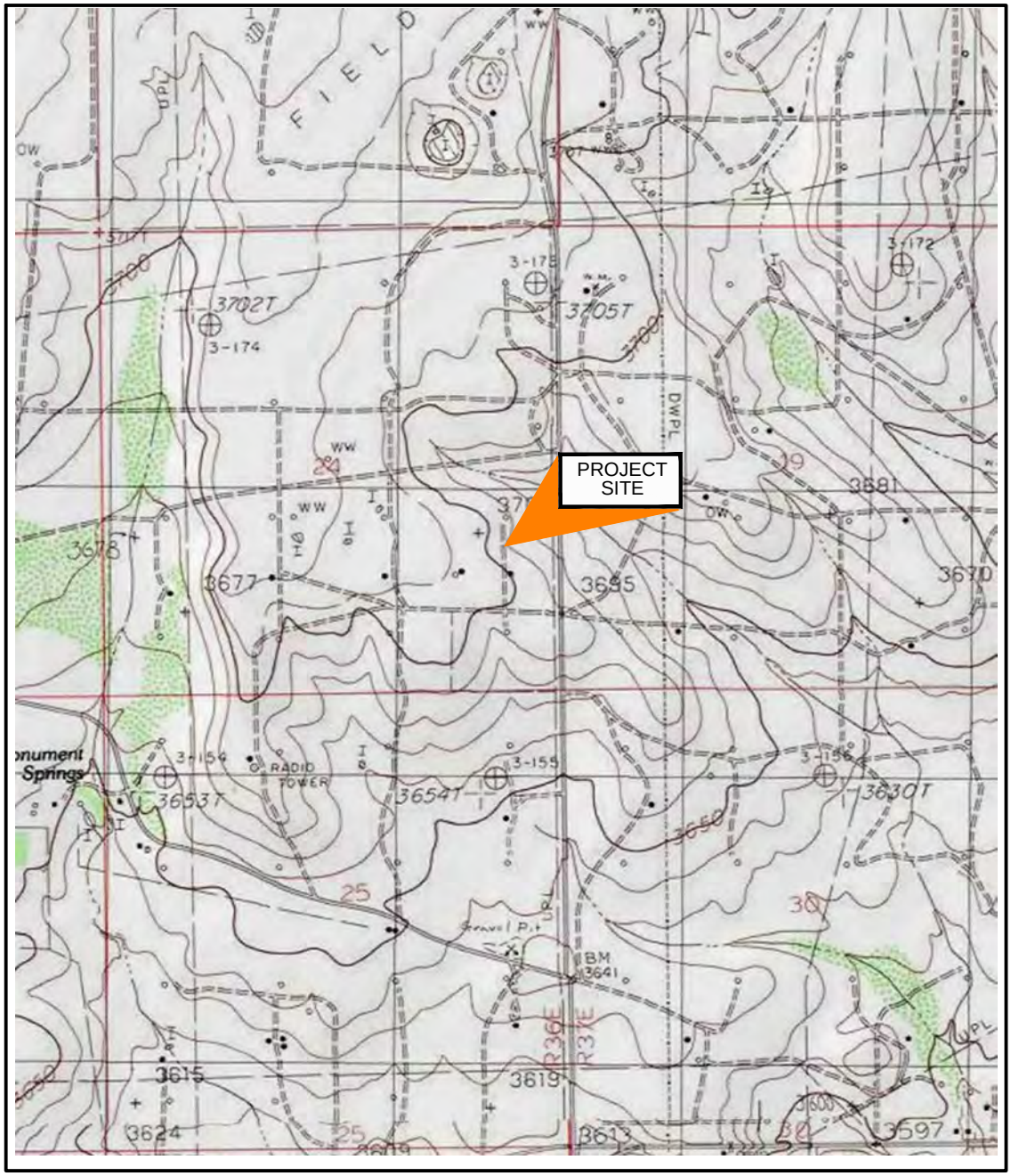
Desireé Crenshaw
Project Manager

Thomas C. Larson
Operations Manager

FIGURES

MONUMENT NORTH QUADRANGLE
NEW MEXICO

LAT= 32Á38' 34.59" N
LONG= 103Á18' 4.74" W
PHOTOREVISED 1985



USGS MAP SERIES 1:24,000

0 1/2 1 2
(Miles)

0 2000 4000 6000 8000
(Feet)

CONTOUR INTERVAL 10 FEET

NORTH

figure 1

SITE LOCATION MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT
LEA COUNTY, NEW MEXICO
Chevron Environmental Management Company

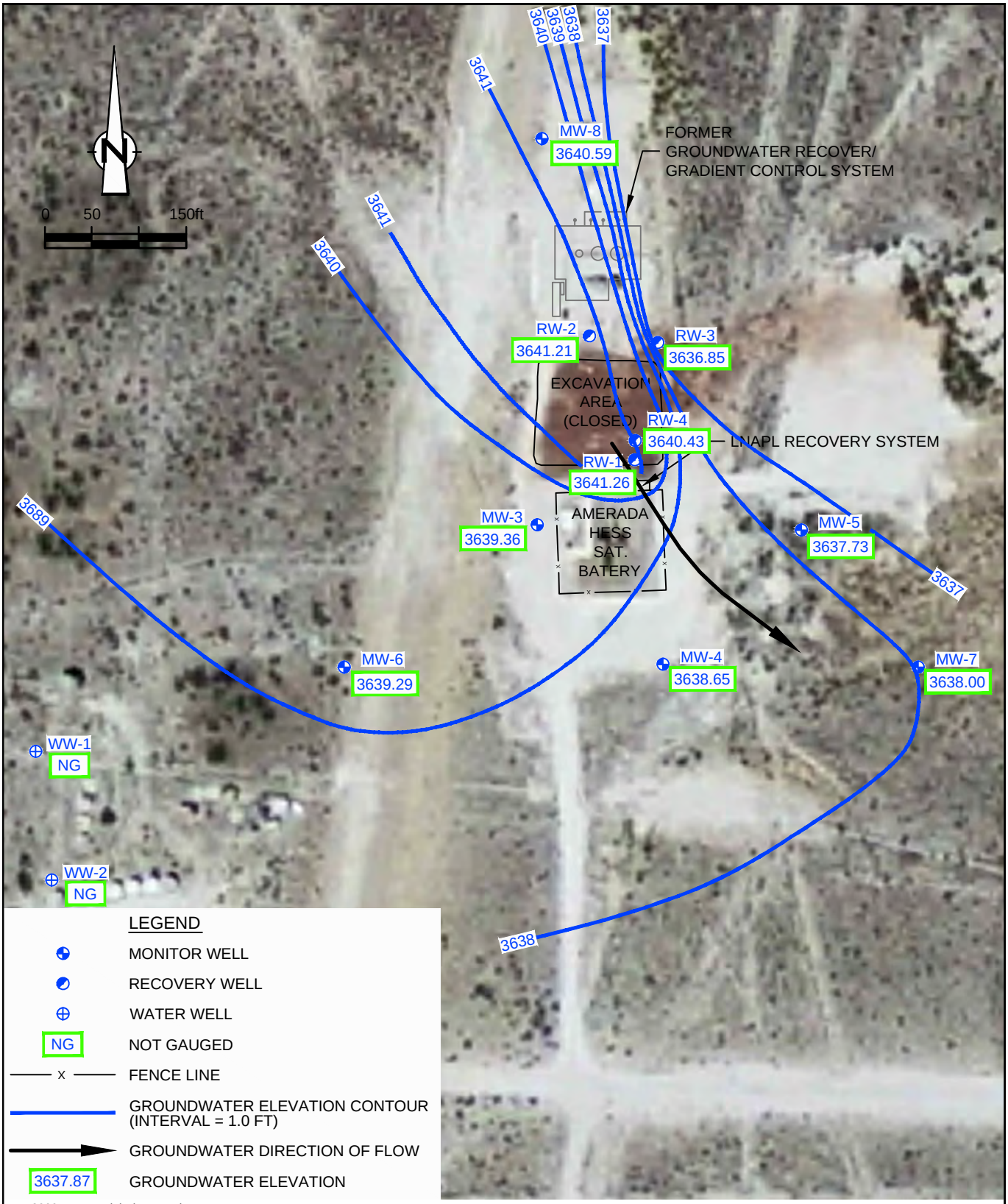
039122-10(007)GN-BR001 June 13/2011

RE: 2009 NAIP Aerial Photograph

figure 2

SITE DETAILS MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT
Chevron Environmental Management Company

039122-10(008)GN-BR001 Mar 15/2012



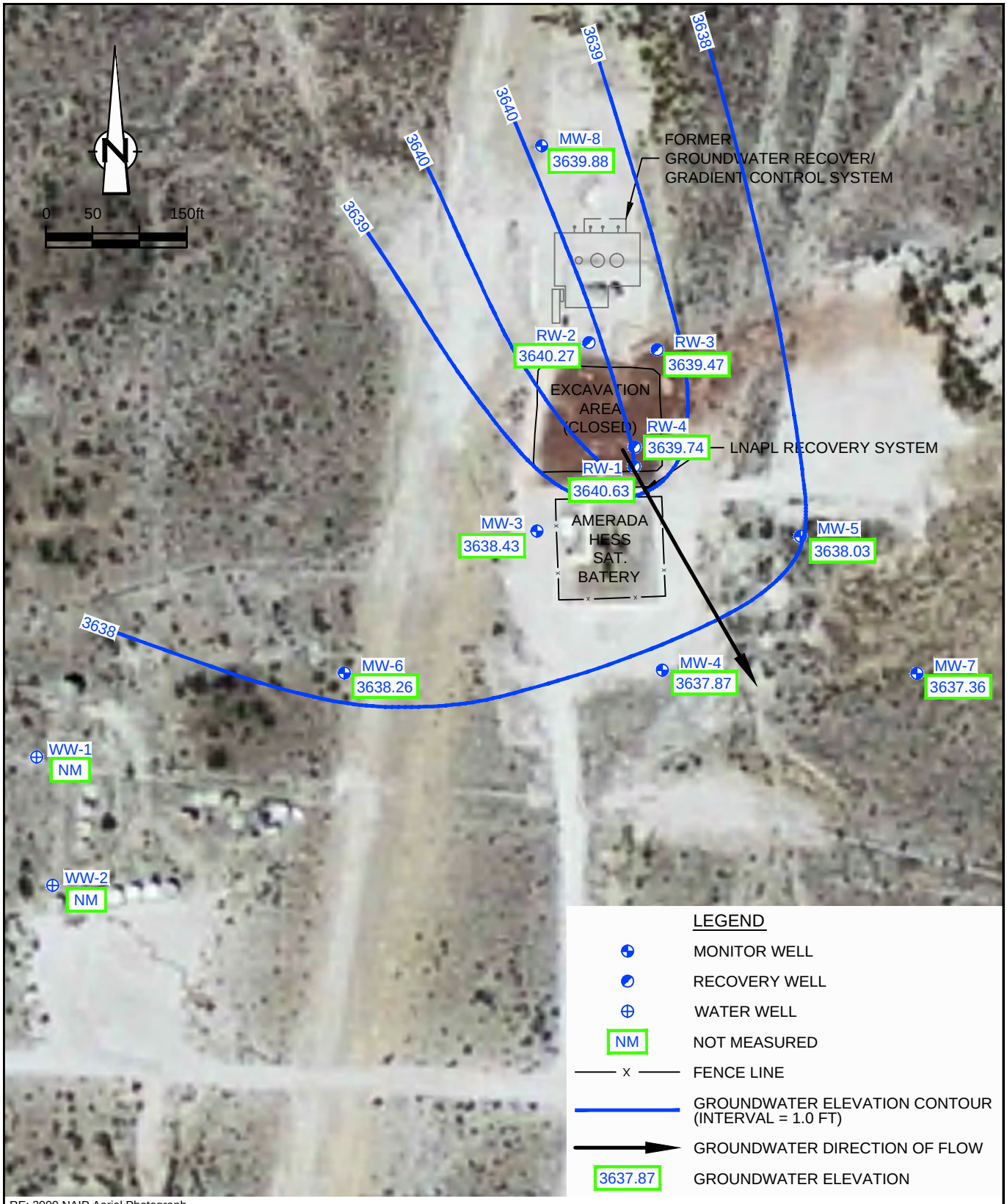
RE: 2009 NAIP Aerial Photograph

figure 3

JUNE 2011 GROUNDWATER GRADIENT MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron Environmental Management Company

039122-10(008)GN-BR002 Mar 15/2012



RE: 2009 NAIP Aerial Photograph

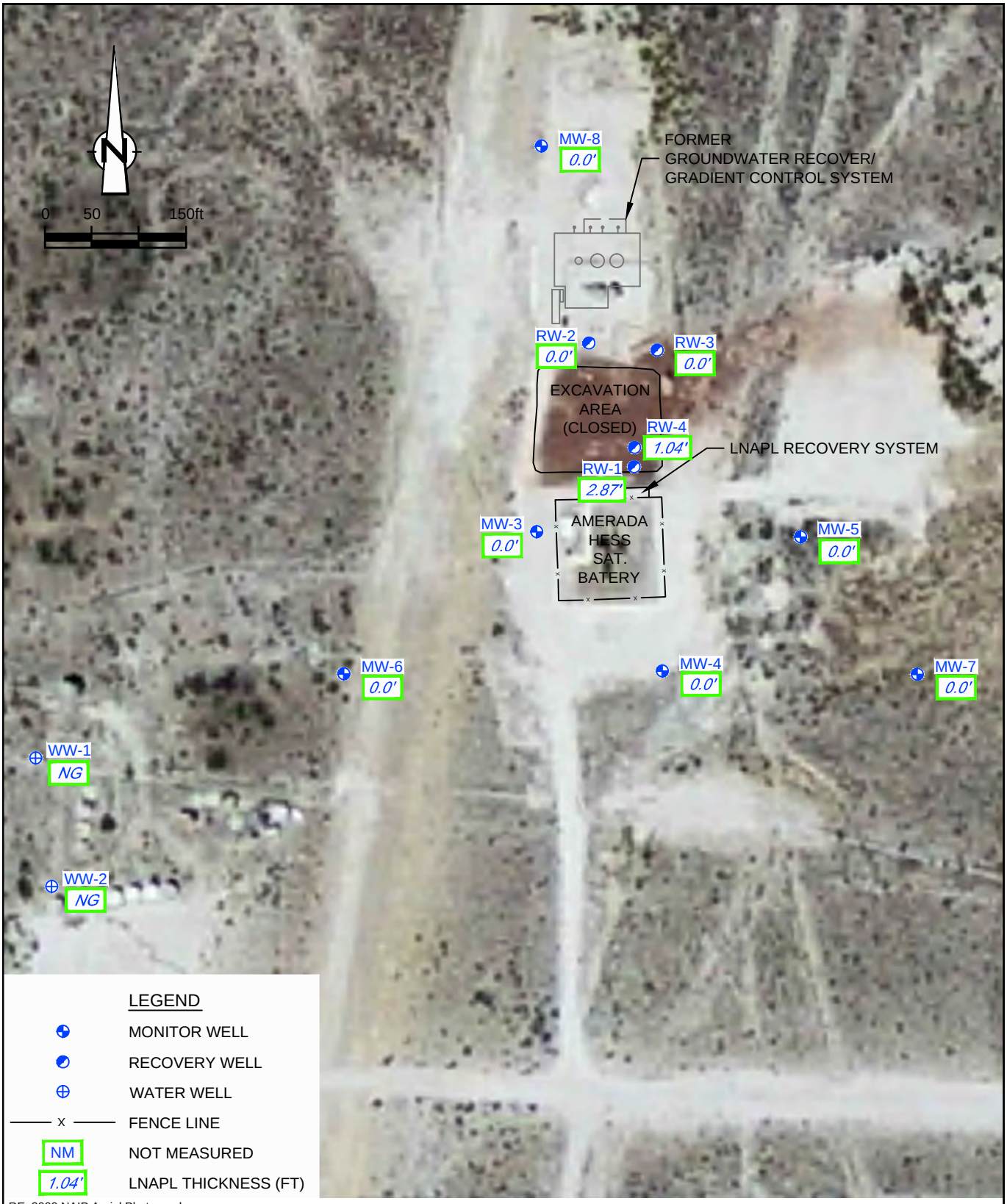
figure 4

DECEMBER 2011 GROUNDWATER GRADIENT MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron Environmental Management Company

GPA

039122-10(008)GN-BR003 Mar 15/2012



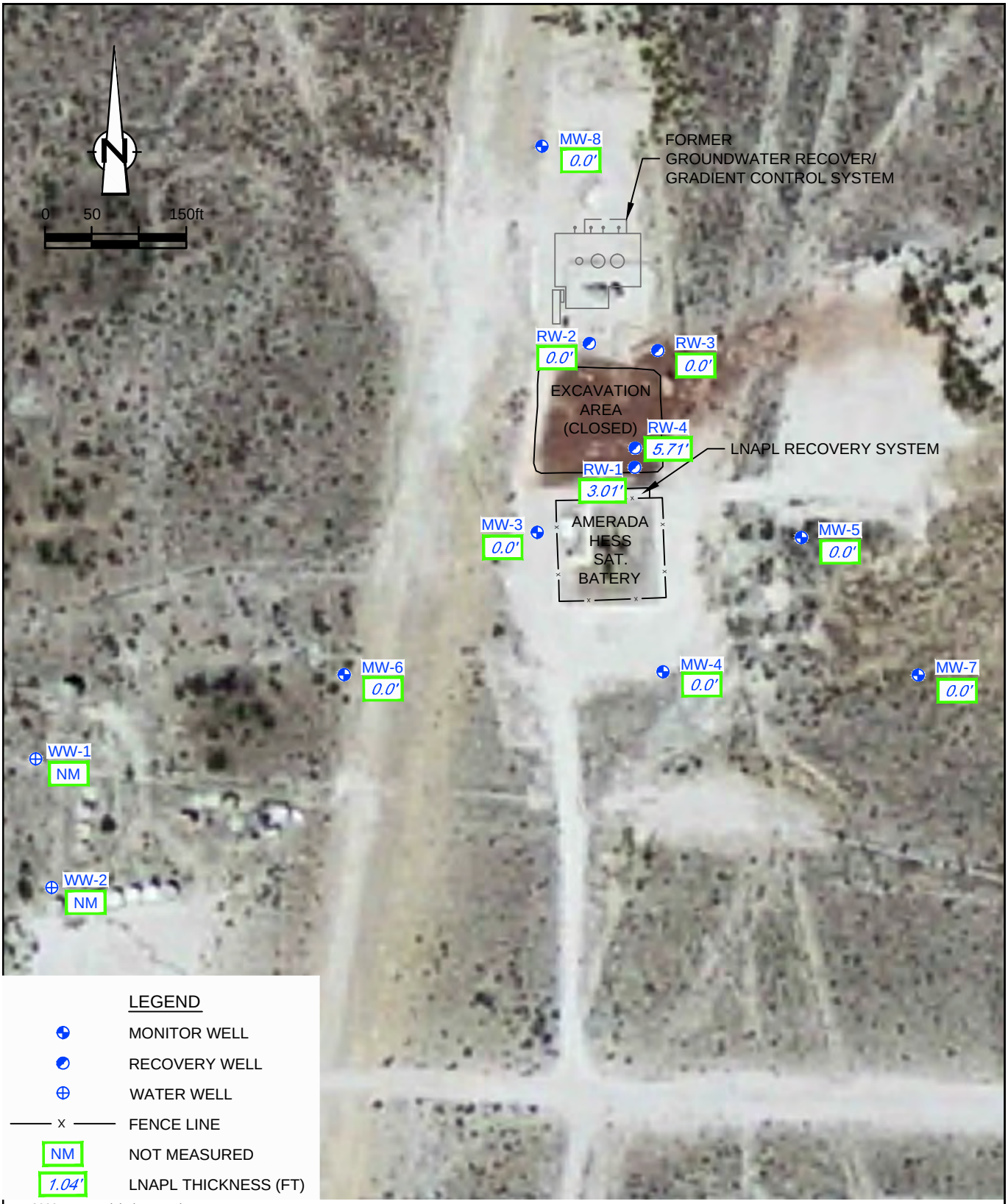
RE: 2009 NAIP Aerial Photograph

figure 5

JUNE 2011 LNAPL THICKNESS
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron Environmental Management Company

039122-10(008)GN-BR004 Mar 15/2012



RE: 2009 NAIP Aerial Photograph

figure 6

SEPTEMBER 2011 LNAPL THICKNESS
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron Environmental Management Company

039122-10(008)GN-BR005 Mar 15/2012

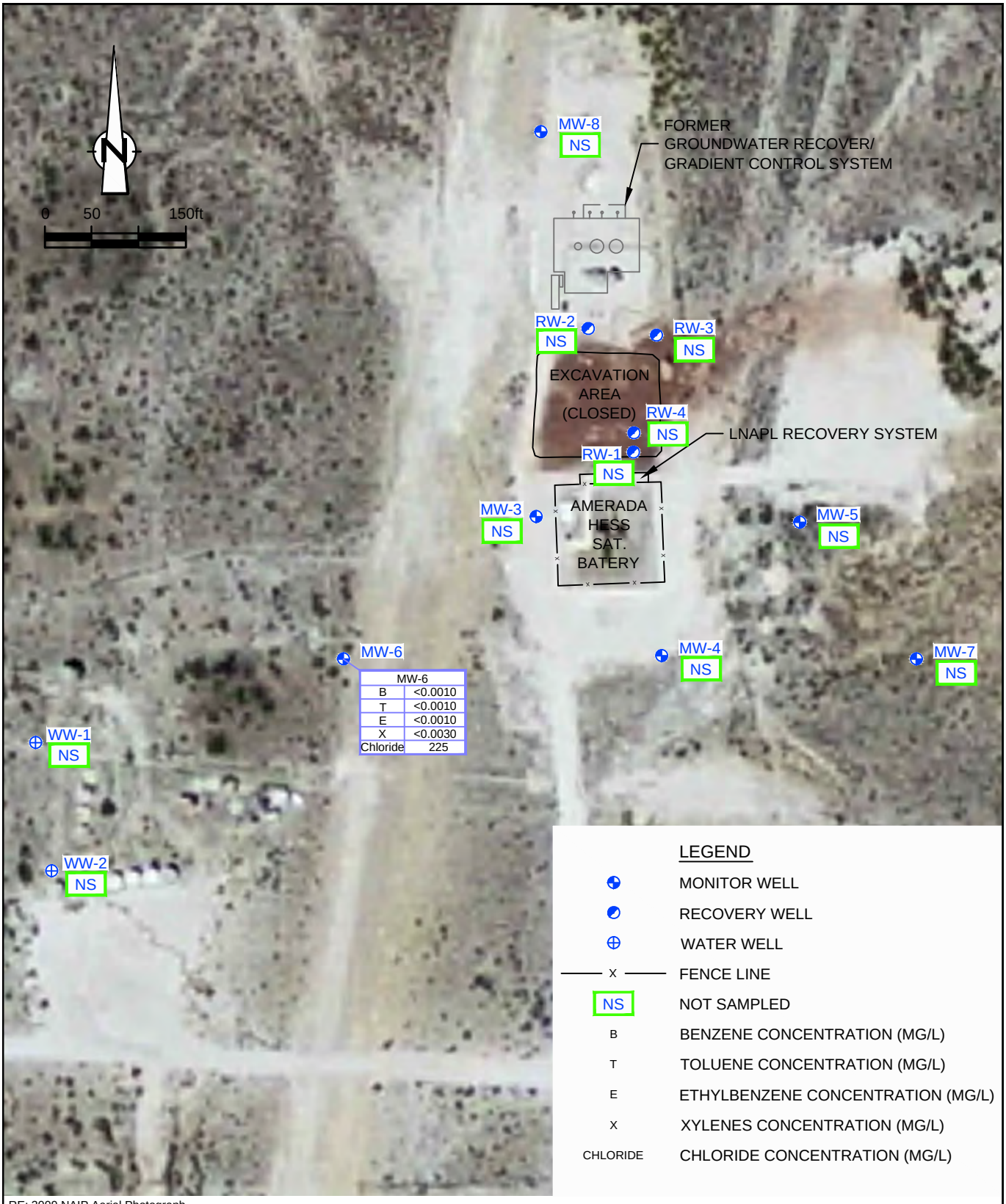
RE: 2009 NAIP Aerial Photograph

figure 7

DECEMBER 2011 LNAPL THICKNESS
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron Environmental Management Company

039122-10(008)GN-BR006 Mar 15/2012



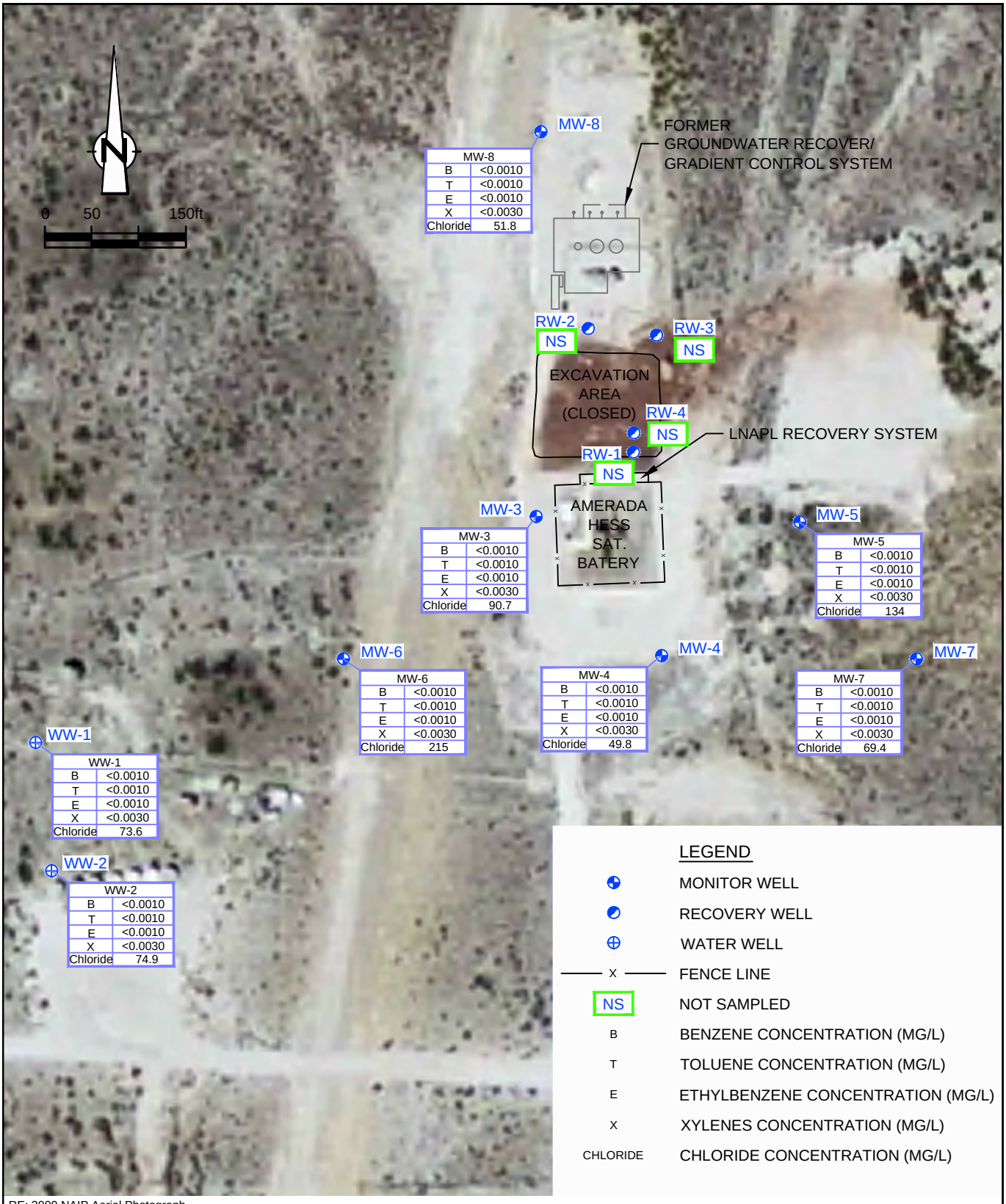
RE: 2009 NAIP Aerial Photograph

figure 8

MARCH 2011 BTEX AND CHLORIDE CONCENTRATION MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron EnviroNSental Management Company

039122-10(008)GN-BR007 Mar 15/2012



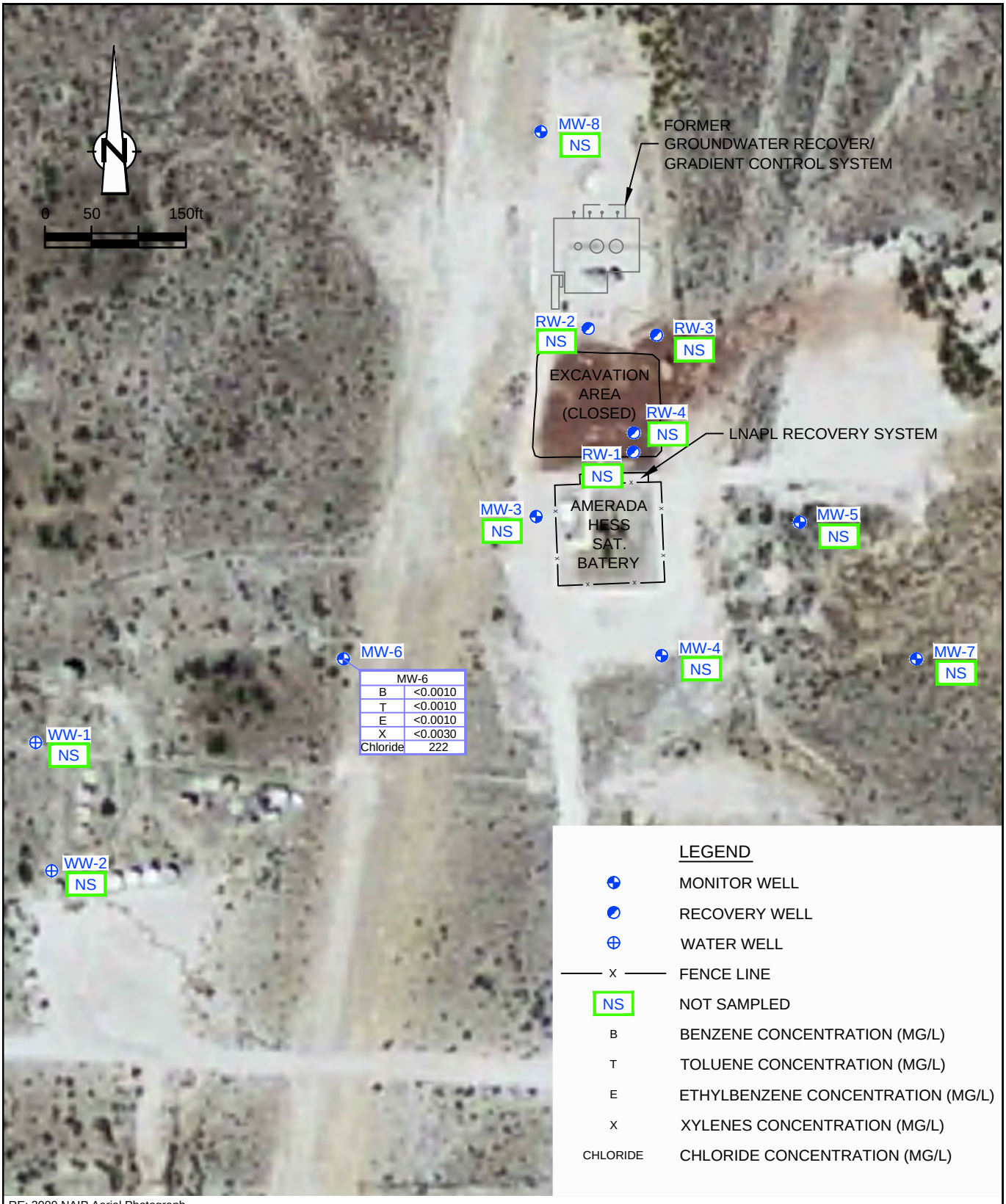
RE: 2009 NAIP Aerial Photograph

figure 9

JUNE 2011 BTEX AND CHLORIDE CONCENTRATION MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron EnviroNSental Management Company

039122-10(008)GN-BR008 Mar 15/2012



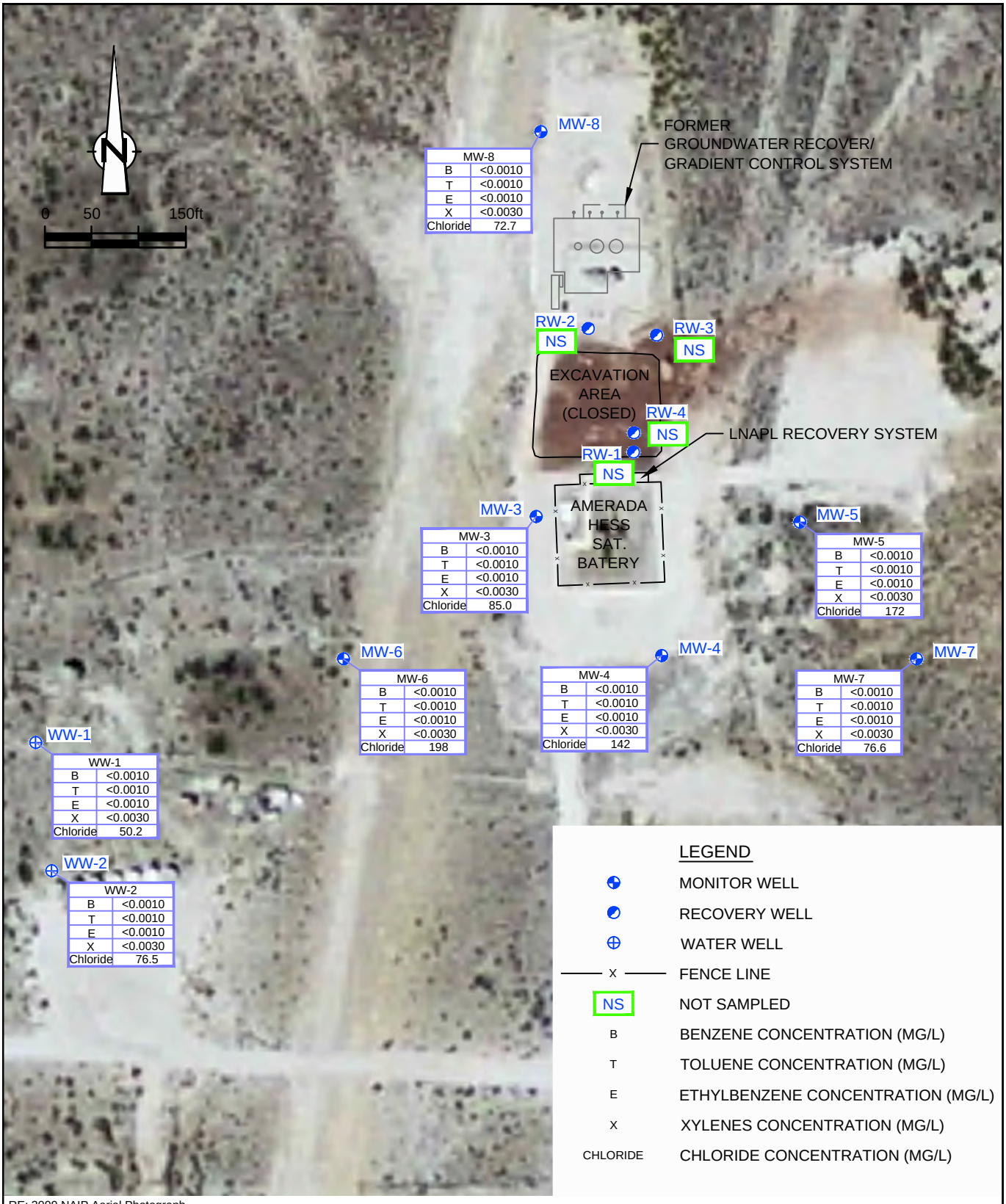
RE: 2009 NAIP Aerial Photograph

figure 10

SEPTEMBER 2011 BTEX AND CHLORIDE CONCENTRATION MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron EnviroNSental Management Company

039122-10(008)GN-BR009 Mar 15/2012



RE: 2009 NAIP Aerial Photograph

figure 11

DECEMBER 2011 BTEX AND CHLORIDE CONCENTRATION MAP
NEW MEXICO "F" STATE
GROUNDWATER REMEDIATION PROJECT

Chevron EnviroNSental Management Company

039122-10(008)GN-BR010 Mar 15/2012

TABLES

TABLE I
GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-3	7/28/98	59.53	---	---	3637.32	70.15	55 - 75
3696.85	6/25/99	59.06	---	---	3637.79	---	---
	2/16/01	59.53	---	---	3637.32	---	---
	6/11/02	59.18	---	---	3637.67	---	---
	11/26/02	59.54	---	---	3637.31	---	---
	6/5/03	59.45	---	---	3637.40	---	---
	12/3/03	59.47	---	---	3637.38	---	---
	7/1/04	59.24	---	---	3637.61	---	---
	12/20/04	58.83	---	---	3638.02	---	---
	6/6/05	58.53	---	---	3638.32	---	---
	12/12/05	57.83	---	---	3639.02	---	---
	1/25/06	57.85	---	---	3639.00	---	---
	5/1/06	57.59	---	---	3639.26	---	---
	6/26/06	57.66	---	---	3639.19	---	---
	12/18/06	57.54	---	---	3639.31	---	---
	3/16/07	57.43	---	---	3639.42	---	---
	6/26/07	57.31	---	---	3639.54	---	---
	9/27/07	57.89	---	---	3638.96	---	---
	12/13/07	57.61	---	---	3639.24	---	---
	3/6/08	57.70	—	—	3639.15	—	—
	6/4/08	57.33	—	—	3639.52	—	—
	9/4/08	57.45	—	—	3639.40	—	—
	11/13/08	57.26	—	—	3639.59	—	—
	3/5/09	57.65	—	—	3639.20	—	—
	6/15/09	57.40	—	—	3639.45	—	—
	9/9/09	57.64	—	—	3639.21	—	—
	11/19/09	57.59	—	—	3639.26	—	—
	3/23/10	57.60	—	—	3639.25	—	—
	6/29/10	58.34	—	—	3638.51	—	—
	9/22/10	58.35	—	—	3638.50	—	—
	11/8/10	57.61	—	—	3639.24	—	—
	6/2/11	57.49	—	—	3639.36	—	—
	12/1/11	58.42	—	—	3638.43	—	—
MW-4	7/28/98	69.72	---	---	3629.78	68.74	55 - 75
3699.50	6/25/99	62.31	---	---	3637.19	---	---

TABLE I
GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-4	2/16/01	62.52	---	---	3636.98	---	---
(cont)	6/11/02	62.39	---	---	3637.11	---	---
	11/26/02	62.76	---	---	3636.74	---	---
	6/5/03	62.71	---	---	3636.79	---	---
	12/3/03	62.67	---	---	3636.83	---	---
	7/1/04	62.43	---	---	3637.07	---	---
	12/20/04	62.02	---	---	3637.48	---	---
	6/6/05	61.67	---	---	3637.83	---	---
	12/12/05	61.11	---	---	3638.39	---	---
	1/25/06	61.11	---	---	3638.39	---	---
	5/1/06	60.89	---	---	3638.61	---	---
	6/26/06	60.93	---	---	3638.57	---	---
	12/18/06	60.79	---	---	3638.71	---	---
	3/16/07	60.72	---	---	3638.78	---	---
	6/26/07	60.60	---	---	3638.90	---	---
	9/27/07	61.02	---	---	3638.48	---	---
	12/13/07	60.88	---	---	3638.62	---	---
	3/6/08	60.96	—	—	3638.54	—	—
	6/4/08	60.65	—	—	3638.85	—	—
	9/4/08	60.75	—	—	3638.75	—	—
	11/13/08	60.61	—	—	3638.89	—	—
	3/5/09	60.75	—	—	3638.75	—	—
	6/15/09	60.70	—	—	3638.80	—	—
	9/9/09	60.89	—	—	3638.61	—	—
	11/19/09	60.83	—	—	3638.67	—	—
	3/23/10	60.91	—	—	3638.59	—	—
	6/29/10	61.54	—	—	3637.96	—	—
	9/22/10	61.53	—	—	3637.97	—	—
	11/8/10	60.96	—	—	3638.54	—	—
	6/2/11	60.85	—	—	3638.65	—	—
	12/1/11	61.63	—	—	3637.87	—	—
MW-5	7/28/98	56.53	---	---	3636.99	66.80	48 - 68
3693.52	3/23/99	56.30	---	---	3637.22	---	---
	6/25/99	56.21	---	---	3637.31	---	---
	2/16/01	56.31	---	---	3637.21	---	---
	6/11/02	56.29	---	---	3637.23	---	---

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Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-5	11/26/02	56.13	---	---	3637.39	---	---
(cont)	6/5/03	56.53	---	---	3636.99	---	---
	12/3/03	56.57	---	---	3636.95	---	---
	7/1/04	54.34	---	---	3639.18	---	---
	12/20/04	55.86	---	---	3637.66	---	---
	6/6/05	55.60	---	---	3637.92	---	---
	12/12/05	55.04	---	---	3638.48	---	---
	1/25/06	55.07	---	---	3638.45	---	---
	5/1/06	54.87	---	---	3638.65	---	---
	6/26/06	54.86	---	---	3638.66	---	---
	12/18/06	54.61	---	---	3638.91	---	---
	3/16/07	54.51	---	---	3639.01	---	---
	6/26/07	54.49	---	---	3639.03	---	---
	9/27/07	54.84	---	---	3638.68	---	---
	12/13/07	54.74	---	---	3638.78	---	---
	3/6/08	54.77	—	—	3638.75	—	—
	6/4/08	54.58	—	—	3638.94	—	—
	9/4/08	54.68	—	—	3638.84	—	—
	11/13/08	54.57	—	—	3638.95	—	—
	3/5/09	54.70	—	—	3638.82	—	—
	6/15/09	54.69	—	—	3638.83	—	—
	9/9/09	54.86	—	—	3638.66	—	—
	11/19/09	54.81	—	—	3638.71	—	—
	3/23/10	54.80	—	—	3638.72	—	—
	6/29/10	55.38	—	—	3638.14	—	—
	9/22/10	55.40	—	—	3638.12	—	—
	11/8/10	54.84	—	—	3638.68	—	—
	6/2/11	55.79	—	—	3637.73	—	—
	12/1/11	55.49	—	—	3638.03	—	—
MW-6	7/28/98	67.86	---	---	3636.95	78.25	56 - 76
3704.81	6/25/99	67.25	---	---	3637.56	---	---
	2/16/01	67.45	---	---	3637.36	---	---
	6/11/02	67.19	---	---	3637.62	---	---
	11/26/02	67.09	---	---	3637.72	---	---
	6/5/03	67.57	---	---	3637.24	---	---

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Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-6	12/3/03	67.61	---	---	3637.20	---	---
(cont)	7/1/04	67.43	---	---	3637.38	---	---
	12/20/04	67.55	---	---	3637.26	---	---
	6/6/05	66.41	---	---	3638.40	---	---
	12/12/05	65.80	---	---	3639.01	---	---
	1/25/06	65.88	---	---	3638.93	---	---
	5/1/06	65.57	---	---	3639.24	---	---
	6/26/06	65.82	---	---	3638.99	---	---
	12/18/06	65.67	---	---	3639.14	---	---
	3/16/07	65.69	---	---	3639.12	---	---
	6/26/07	65.41	---	---	3639.40	---	---
	9/27/07	66.46	---	---	3638.35	---	---
	12/13/07	65.85	---	---	3638.96	---	---
	3/6/08	65.68	—	—	3639.13	—	—
	6/4/08	65.39	—	—	3639.42	—	—
	9/4/08	65.56	—	—	3639.25	—	—
	11/13/08	65.32	—	—	3639.49	—	—
	3/5/09	65.88	—	—	3638.93	—	—
	6/15/09	65.38	—	—	3639.43	—	—
	9/9/09	65.67	—	—	3639.14	—	—
	11/19/09	65.70	—	—	3639.11	—	—
	3/23/10	65.69	—	—	3639.12	—	—
	6/29/10	66.69	—	—	3638.12	—	—
	9/22/10	66.72	—	—	3638.09	—	—
	11/8/10	65.75	—	—	3639.06	—	—
	3/3/11	65.52	—	—	3639.29	—	—
	6/2/11	65.28	—	—	3639.53	—	—
	9/27/11	67.49	—	—	3637.32	—	—
	12/1/11	66.55	—	—	3638.26	—	—
MW-7	7/28/98	58.08	---	---	3636.50	68.88	49 - 69
3694.58	6/25/99	57.96	---	---	3636.62	---	---
	2/16/01	58.09	---	---	3636.49	---	---
	6/11/02	58.07	---	---	3636.51	---	---
	11/26/02	57.92	---	---	3636.66	---	---
	6/5/03	58.29	---	---	3636.29	---	---
	12/3/03	58.33	---	---	3636.25	---	---

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LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-7	7/1/04	58.11	---	---	3636.47	---	---
(cont)	12/20/04	57.62	---	---	3636.96	---	---
	6/6/05	57.28	---	---	3637.30	---	---
	12/12/05	56.84	---	---	3637.74	---	---
	1/25/06	56.86	---	---	3637.72	---	---
	5/1/06	56.69	---	---	3637.89	---	---
	6/26/06	56.66	---	---	3637.92	---	---
	12/18/06	56.40	---	---	3638.18	---	---
	3/16/07	56.28	---	---	3638.30	---	---
	6/26/07	56.29	---	---	3638.29	---	---
	9/27/07	56.59	---	---	3637.99	---	---
	12/13/07	56.51	---	---	3638.07	---	---
	3/6/08	56.56	—	—	3638.02	—	—
	6/4/08	56.38	—	—	3638.20	—	—
	9/4/08	56.49	—	—	3638.09	—	—
	11/13/08	56.40	—	—	3638.18	—	—
	3/5/09	56.48	—	—	3638.10	—	—
	6/15/09	56.51	—	—	3638.07	—	—
	9/9/09	56.64	—	—	3637.94	—	—
	11/19/09	56.59	—	—	3637.99	—	—
	3/23/10	56.63	—	—	3637.95	—	—
	6/29/10	57.13	—	—	3637.45	—	—
	9/22/10	57.15	—	—	3637.43	—	—
	11/8/10	56.61	—	—	3637.97	—	—
	6/2/11	56.58	—	—	3638.00	—	—
	12/1/11	57.22	—	—	3637.36	—	—
MW-8	7/28/98	56.84	---	---	3638.77	66.91	46 - 66
3694.58	6/25/99	56.56	---	---	3639.05	---	---
	2/16/01	56.49	---	---	3639.12	---	---
	6/11/02	56.56	---	---	3639.05	---	---
	11/26/02	56.88	---	---	3638.73	---	---
	6/5/03	56.89	---	---	3638.72	---	---
	12/3/03	56.91	---	---	3638.70	---	---
	7/1/04	56.70	---	---	3638.91	---	---
	12/20/04	56.23	---	---	3639.38	---	---

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LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
MW-8	6/6/05	55.86	---	---	3639.75	---	---
(cont)	12/12/05	55.29	---	---	3640.32	---	---
	1/25/06	55.30	---	---	3640.31	---	---
	5/1/06	55.03	---	---	3640.58	---	---
	6/26/06	54.96	---	---	3640.65	---	---
	12/18/06	54.80	---	---	3640.81	---	---
	3/16/07	54.68	---	---	3640.93	---	---
	6/26/07	54.67	---	---	3640.94	---	---
	9/27/07	54.95	---	---	3640.66	---	---
	12/13/07	54.82	---	---	3640.79	---	---
	3/6/08	54.82	—	—	3640.79	—	—
	6/4/08	54.70	—	—	3640.91	—	—
	9/4/08	54.77	—	—	3640.84	—	—
	11/13/08	54.73	—	—	3640.88	—	—
	3/5/09	55.05	—	—	3640.56	—	—
	6/15/09	54.96	—	—	3640.65	—	—
	9/9/09	55.14	—	—	3640.47	—	—
	11/19/09	55.12	—	—	3640.49	—	—
	3/23/10	55.16	—	—	3640.45	—	—
	6/29/10	55.66	—	—	3639.95	—	—
	9/22/10	55.65	—	—	3639.96	—	—
	11/8/10	55.12	—	—	3640.49	—	—
	6/2/11	55.02	—	—	3640.59	—	—
	12/1/11	55.73			3639.88		
RW-1	11/3/99	62.17	---	---	3637.75	71.60	55 - 75
3699.92	2/16/01	62.37	62.33	0.04	3637.59	---	---
	6/11/02	62.26	61.86	0.40	3638.01	---	---
	11/26/02	62.60	62.07	0.53	3637.79	---	---
	6/5/03	63.00	62.84	0.16	3637.06	---	---
	12/3/03	63.26	62.61	0.65	3637.23	---	---
	7/1/04	63.10	62.33	0.77	3637.50	---	---
	12/20/04	61.80	60.96	0.84	3638.86	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	61.44	58.67	2.77	3640.92	---	---
	5/1/06	61.56	58.38	3.18	3641.16	---	---

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Well ID *TOC Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-1	6/26/06	61.59	58.43	3.16	3641.11	---	---
(cont)	11/21/06	59.87	58.72	1.15	3641.06	---	---
	11/28/06	Installed skimmer pump system					
	11/28/06	60.96	58.32	2.64	3641.28	---	---
	12/4/06	60.35	58.30	2.05	3641.37	---	---
	12/15/06	58.75	58.48	0.27	3641.41	---	---
	12/18/06	58.78	58.55	0.23	3641.34	---	---
	1/5/07	60.54	58.19	2.35	3641.49	---	---
	2/2/07	59.00	58.51	0.49	3641.36	---	---
	2/9/07	58.52	58.36	0.16	3641.54	---	---
	2/23/07	58.62	58.25	0.37	3641.63	---	---
	3/2/07	59.78	58.18	1.60	3641.58	---	---
	3/8/07	58.55	58.23	0.32	3641.66	---	---
	3/16/07	58.74	58.30	0.44	3641.57	---	---
	3/23/07	58.81	58.31	0.50	3641.56	---	---
	3/28/07	58.48	58.24	0.24	3641.66	---	---
	4/4/07	58.69	58.48	0.21	3641.42	---	---
	5/23/07	58.95	58.48	0.47	3641.39	---	---
	6/20/07	59.09	58.50	0.59	3641.36	---	---
	6/26/07	58.52	58.37	0.15	3641.53	---	---
	7/2/07	58.69	58.29	0.40	3641.59	---	---
	9/13/07	60.18	58.66	1.52	3641.10	---	---
	9/17/07	59.18	58.65	0.53	3641.22	---	---
	9/27/07	59.40	58.72	0.68	3641.13	---	---
	11/16/07	58.52	58.35	0.17	3641.55	---	---
	12/13/07	60.90	58.44	2.46	3641.23	---	---
	3/6/08	59.24	58.76	0.48	3641.11	—	—
	4/1/08	59.27	58.70	0.57	3641.16	—	—
	5/6/08	59.31	58.73	0.58	3641.13	—	—
	6/4/08	59.37	58.59	0.78	3641.25	—	—
	6/25/08	58.51	58.40	0.11	3641.51	—	—
	7/15/08	58.92	58.46	0.46	3641.41	—	—
	8/19/08	58.80	58.52	0.28	3641.37	—	—
	9/4/08	58.82	58.51	0.31	3641.38	—	—
	9/15/08	60.56	58.43	2.13	3641.27	—	—
	10/1/08	60.38	58.45	1.93	3641.27	—	—

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Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-1	10/16/08	60.80	58.41	2.39	3641.26	—	—
(cont)	11/13/08	60.59	58.10	2.49	3641.56	—	—
	12/17/08	60.48	58.47	2.01	3641.24	—	—
	1/13/09	60.38	58.18	2.20	3641.51	—	—
	1/21/09	58.93	58.47	0.46	3641.40	—	—
	1/28/09	60.85	58.30	2.55	3641.36	—	—
	2/3/09	59.16	58.67	0.49	3641.20	—	—
	3/5/09	60.82	58.50	2.32	3641.18	—	—
	3/20/09	60.60	58.40	2.20	3641.29	—	—
	4/22/09	58.89	58.64	0.25	3641.25	—	—
	6/3/09	60.95	58.48	2.47	3641.19	—	—
	6/11/09	58.80	58.54	0.26	3641.35	—	—
	6/15/09	60.65	58.28	2.37	3641.40	—	—
	7/6/09	60.90	58.30	2.60	3641.35	—	—
	8/12/09	61.39	58.59	2.80	3641.04	—	—
	9/9/09	60.77	58.50	2.27	3641.19	—	—
	9/23/09	61.22	58.45	2.77	3641.18	—	—
	10/7/09	60.84	58.51	2.33	3641.17	—	—
	11/4/09	60.59	58.51	2.08	3641.20	—	—
	11/19/09	58.96	58.63	0.33	3641.26	—	—
	1/6/10	61.02	58.50	2.52	3641.16	—	—
	1/27/10	59.48	58.62	0.86	3641.21	—	—
	2/26/10	61.45	58.84	2.61	3640.81	—	—
	3/23/10	61.51	58.80	2.71	3640.84	—	—
	4/28/10	60.80	59.00	1.80	3640.73	—	—
	6/22/10	59.53	59.24	0.29	3640.65	—	—
	6/29/10	62.18	59.00	3.18	3640.59	—	—
	8/10/10	62.09	59.03	3.06	3640.57	—	—
	9/8/10	50.50	---	---	3649.42	—	—
	9/15/10	59.58	58.60	0.98	3641.22	—	—
	9/22/10	60.80	58.40	2.40	3641.27	—	—
	11/8/10	61.16	58.39	2.77	3641.24	—	—
	6/2/11	61.23	58.36	2.87	3641.26	—	—
	6/21/11	61.43	58.65	2.78	3640.98	—	—
	7/22/11	61.00	59.94	1.06	3639.87	—	—
	8/1/11	59.38	59.21	0.17	3640.69	—	—

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Well ID *TOC Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-1	9/27/11	62.44	59.43	3.01	3640.18	—	—
(cont)	11/1/11	62.84	59.24	3.60	3640.31	—	—
	12/2/11	62.24	58.95	3.29	3640.63	—	—
RW-2	10/14/99	53.28	---	---	3638.84	67.55	47 - 67
3692.12	11/3/99	53.95	---	---	3638.17	---	---
	2/16/01	54.01	---	---	3638.11	---	---
	6/11/02	54.01	53.98	0.03	3638.14	---	---
	11/26/02	54.28	54.07	0.21	3638.02	---	---
	6/5/03	53.24	53.23	0.01	3638.89	---	---
	12/3/03	54.51	54.38	0.13	3637.72	---	---
	7/1/04	54.51	54.12	0.39	3637.95	---	---
	12/20/04	53.69	53.52	0.17	3638.58	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	51.55	51.14	0.41	3640.93	---	---
	5/1/06	51.34	50.91	0.43	3641.16	---	---
	6/26/06	51.02	50.94	0.08	3641.17	---	---
	11/28/06	Absorbant sock installed in well					
	12/18/06	51.15	50.75	0.40	3641.32	---	---
	1/12/07	50.89	50.63	0.26	3641.46	---	---
	1/15/07	50.20	---	---	3641.92	---	---
	2/2/07	50.72	---	---	3641.40	---	---
	2/9/07	50.60	---	---	3641.52	---	---
	2/23/07	50.54	---	---	3641.58	---	---
	3/2/07	50.60	---	---	3641.52	---	---
	3/8/07	50.61	---	---	3641.51	---	---
	3/16/07	50.69	---	---	3641.43	---	---
	3/23/07	50.67	---	---	3641.45	---	---
	3/28/07	50.54	---	---	3641.58	---	---
	4/4/07	50.66	---	---	3641.46	---	---
	4/12/07	50.62	---	---	3641.50	---	---
	4/19/07	50.61	---	---	3641.51	---	---
	4/25/07	50.80	---	---	3641.32	---	---
	5/1/07	50.80	---	---	3641.32	---	---
	5/8/07	50.73	---	---	3641.39	---	---
	5/23/07	50.74	---	---	3641.38	---	---

TABLE I
GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	5/29/07	50.70	---	---	3641.42	---	---
(cont)	6/5/07	50.68	---	---	3641.44	---	---
	6/14/07	50.66	---	---	3641.46	---	---
	6/20/07	50.72	---	---	3641.40	---	---
	6/26/07	50.63	---	---	3641.49	---	---
	7/2/07	50.59	---	---	3641.53	---	---
	7/13/07	50.60	---	---	3641.52	---	---
	7/20/07	50.61	---	---	3641.51	---	---
	7/27/07	50.65	—	---	3641.47	---	---
	8/14/07	50.83	—	—	3641.29	—	—
	8/22/07	50.96	---	---	3641.16	---	---
	9/4/07	50.88	---	---	3641.24	---	---
	9/13/07	50.49	---	---	3641.63	---	---
	9/17/07	50.92	---	---	3641.20	---	---
	9/27/07	51.00	---	---	3641.12	---	---
	10/4/07	50.92	---	---	3641.20	---	---
	10/11/07	50.87	---	---	3641.25	---	---
	11/2/07	50.79	---	---	3641.33	---	---
	11/16/07	50.65	---	---	3641.47	---	---
	11/20/07	50.73	---	---	3641.39	---	---
	12/13/07	50.92	---	---	3641.20	---	---
	1/2/08	50.91	---	---	3641.21	---	---
	3/6/08	50.90	—	—	3641.22	—	—
	3/11/08	50.77	—	—	3641.35	—	—
	3/17/08	50.83	—	—	3641.29	—	—
	3/25/08	50.75	—	—	3641.37	—	—
	4/1/08	50.74	—	—	3641.38	—	—
	4/9/08	50.70	—	—	3641.42	—	—
	4/15/08	50.68	—	—	3641.44	—	—
	4/23/08	50.69	—	—	3641.43	—	—
	4/28/08	50.67	—	—	3641.45	—	—
	5/6/08	50.72	—	—	3641.40	—	—
	5/23/08	50.75	—	—	3641.37	—	—
	5/29/08	50.68	—	—	3641.44	—	—
	6/4/08	50.65	—	—	3641.47	—	—
	6/12/08	50.68	—	—	3641.44	—	—
	6/18/08	50.64	—	—	3641.48	—	—

TABLE I
GROUNDWATER GAUGING SUMMARY
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FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	6/25/08	50.60	—	—	3641.52	—	—
(cont)	6/30/08	50.61	—	—	3641.51	—	—
	7/7/08	50.66	—	—	3641.46	—	—
	7/15/08	50.63	—	—	3641.49	—	—
	7/21/08	50.59	—	—	3641.53	—	—
	7/31/08	50.63	—	---	3641.49	—	—
	8/4/08	50.59	—	---	3641.53	—	—
	8/10/08	50.53	—	---	3641.59	—	—
	8/19/08	50.70	—	---	3641.42	—	—
	8/26/08	50.71	—	---	3641.41	—	—
	9/4/08	50.73	—	---	3641.39	—	—
	9/10/08	50.72	—	---	3641.40	—	—
	9/15/08	50.84	—	---	3641.28	—	—
	9/23/08	50.84	—	---	3641.28	—	—
	10/1/08	50.85	—	---	3641.27	—	—
	10/6/08	50.85	—	---	3641.27	—	—
	10/16/08	50.85	—	---	3641.27	—	—
	10/21/08	50.75	—	—	3641.37	—	—
	10/28/08	50.75	—	—	3641.37	—	—
	11/13/08	50.67	—	—	3641.45	—	—
	11/19/08	50.69	—	—	3641.43	—	—
	11/25/08	50.76	—	—	3641.36	—	—
	12/3/08	50.85	—	—	3641.27	—	—
	12/9/08	50.98	—	—	3641.14	—	—
	12/17/08	50.93	—	—	3641.19	—	—
	12/22/08	50.95	—	—	3641.17	—	—
	12/30/08	50.98	—	—	3641.14	—	—
	1/6/09	50.85	—	—	3641.27	—	—
	1/13/09	50.71	—	—	3641.41	—	—
	1/21/09	50.83	—	—	3641.29	—	—
	1/28/09	50.85	—	—	3641.27	—	—
	2/3/09	50.93	—	—	3641.19	—	—
	2/10/09	50.84	—	—	3641.28	—	—
	2/16/09	51.02	—	—	3641.10	—	—
	2/23/09	51.08	—	—	3641.04	—	—
	3/5/09	51.03	—	—	3641.09	—	—

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CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	3/12/09	51.10	—	—	3641.02	—	—
(cont)	3/20/09	50.91	—	—	3641.21	—	—
	3/24/09	51.10	—	—	3641.02	—	—
	4/2/09	51.02	—	—	3641.10	—	—
	4/9/09	50.87	—	---	3641.25	—	—
	4/15/09	50.79	—	---	3641.33	—	—
	4/22/09	50.85	—	—	3641.27	—	—
	5/1/09	50.88	—	---	3641.24	—	—
	5/13/09	50.81	—	---	3641.31	—	—
	6/3/09	51.15	50.94	0.21	3641.16	—	—
	6/11/09	50.87	50.84	0.03	3641.28	—	—
	6/15/09	50.80	—	---	3641.32	—	—
	7/6/09	50.84	—	---	3641.28	—	—
	7/22/09	50.88	—	---	3641.24	—	—
	8/12/09	51.09	51.03	0.06	3641.08	—	—
	8/26/09	51.00	50.96	0.04	3641.16	—	—
	9/9/09	51.02	50.97	0.05	3641.14	—	—
	9/23/09	51.05	51.02	0.03	3641.10	—	—
	10/7/09	51.10	50.98	0.12	3641.13	—	—
	10/21/09	51.10	50.92	0.18	3641.18	—	—
	11/4/09	51.12	50.97	0.15	3641.13	—	—
	11/19/09	50.99	50.95	0.04	3641.17	—	—
	12/2/09	51.01	---	---	3641.11	—	—
	12/17/09	51.20	---	---	3640.92	—	—
	1/6/10	51.12	---	---	3641.00	—	—
	1/27/10	51.29	---	---	3640.83	—	—
	2/26/10	51.38	51.31	0.07	3640.80	—	—
	3/10/10	51.18	---	---	3640.94	—	—
	3/23/10	51.16	---	---	3640.96	—	—
	4/8/10	51.21	---	---	3640.91	—	—
	4/20/10	51.28	---	---	3640.84	—	—
	4/28/10	51.31	---	---	3640.81	—	—
	5/10/10	51.46	51.45	0.01	3640.67	—	—
	5/19/10	51.51	---	---	3640.61	—	—
	5/25/10	51.50	---	---	3640.62	—	—
	6/2/10	51.55	---	---	3640.57	—	—

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GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-2	6/9/10	51.43	---	---	3640.69	—	—
(cont)	6/16/10	51.44	---	---	3640.68	—	—
	6/22/10	51.46	---	---	3640.66	—	—
	6/29/10	51.70	51.56	0.14	3640.55	—	—
	7/14/10	51.59	51.58	0.01	3640.54	—	—
	7/21/10	51.62	---	---	3640.50	—	—
	7/28/10	51.65	---	---	3640.47	—	—
	8/4/10	51.71	---	---	3640.41	—	—
	8/10/10	51.68	---	---	3640.44	—	—
	8/17/10	51.65	---	---	3640.47	—	—
	8/30/10	51.07	---	---	3641.05	—	—
	9/15/10	51.64	---	---	3640.48	—	—
	9/22/10	51.65	---	---	3640.47	—	—
	10/6/10	51.66	---	---	3640.46	—	—
	10/19/10	51.00	---	---	3641.12	—	—
	11/8/10	50.95	50.94	0.01	3641.18	—	—
	11/29/10	50.89	---	---	3641.23	—	—
	1/5/11	51.01	---	---	3641.11	—	—
	1/12/11	51.05	---	---	3641.07	—	—
	2/4/11	50.82	---	---	3641.30	—	—
	4/26/11	50.89	---	---	3641.23	—	—
	5/9/11	50.88	---	---	3641.24	—	—
	6/2/11	50.91	---	---	3641.21	—	—
	6/21/11	50.86	---	---	3641.26	—	—
	7/6/11	50.93	---	---	3641.19	—	—
	8/1/11	51.45	51.47	0.02	3640.69	—	—
	8/29/11	51.77	51.74	0.03	3640.38	—	—
	9/6/11	51.73	51.69	0.04	3640.43	—	—
	9/13/11	51.74	51.72	0.02	3640.40	—	—
	9/27/11	51.97	---	---	3640.15	—	—
	10/18/11	51.85	---	---	3640.27	—	—
	11/1/11	51.91	---	---	3640.21	—	—
	11/7/11	51.30	---	---	3640.82	—	—
	11/16/11	51.86	---	---	3640.26	—	—
	11/21/11	51.83	---	---	3640.29	—	—
	12/2/11	51.85	---	---	3640.27	—	—

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GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-3	10/14/99	45.82	---	---	3645.04	68.65	47 - 67
3690.86	11/3/99	52.82	---	---	3638.04	---	---
	2/16/01	52.88	---	---	3637.98	---	---
	6/11/02	52.91	---	---	3637.95	---	---
	11/26/02	53.22	53.15	0.07	3637.70	---	
	6/5/03	54.56	54.40	0.16	3636.44	---	---
	12/3/03	53.23	---	---	3637.63	---	---
	7/1/04	53.19	52.98	0.21	3637.85	---	---
	12/20/04	52.50	52.09	0.41	3638.72	---	---
	3/1/05	Start-up groundwater extraction system				---	---
	1/25/06	50.71	---	---	3640.15	---	---
	5/1/06	50.49	---	---	3640.37	---	---
	6/26/06	50.50	---	---	3640.36	---	---
	11/28/06	Absorbant sock installed in well					
	12/18/06	50.31	---	---	3640.55	---	---
	1/12/07	50.17	---	---	3640.69	---	---
	1/15/07	50.21	50.20	0.01	3640.66	---	---
	2/2/07	50.23	---	---	3640.63	---	---
	2/9/07	50.13	---	---	3640.73	---	---
	2/23/07	50.03	---	---	3640.83	---	---
	3/2/07	50.12	---	---	3640.74	---	---
	3/8/07	50.14	---	---	3640.72	---	---
	3/16/07	50.22	---	---	3640.64	---	---
	3/23/07	50.20	---	---	3640.66	---	---
	3/28/07	50.08	---	---	3640.78	---	---
	4/4/07	50.18	---	---	3640.68	---	---
	4/12/07	50.14	---	---	3640.72	---	---
	4/19/07	50.13	---	---	3640.73	---	---
	4/25/07	50.28	---	---	3640.58	---	---
	5/1/07	50.29	---	---	3640.57	---	---
	5/8/07	50.24	---	---	3640.62	---	---
	5/23/07	50.23	---	---	3640.63	---	---
	5/29/07	50.21	---	---	3640.65	---	---
	6/5/07	50.19	---	---	3640.67	---	---
	6/14/07	50.18	---	---	3640.68	---	---
	6/20/07	50.26	---	---	3640.60	---	---

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LEA COUNTY, NEW MEXICO

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RW-3	6/26/07	50.15	---	---	3640.71	---	---
(cont)	7/2/07	50.11	---	---	3640.75	---	---
	7/13/07	50.14	---	---	3640.72	---	---
	7/20/07	50.11	---	---	3640.75	---	---
	7/27/07	50.17	---	---	3640.69	---	---
	8/14/07	50.37	---	---	3640.49	---	---
	8/22/07	50.45	---	---	3640.41	---	---
	9/4/07	50.36	---	---	3640.50	---	---
	9/13/07	50.44	---	---	3640.42	---	---
	9/17/07	50.44	---	---	3640.42	---	---
	9/27/07	50.49	---	---	3640.37	---	---
	10/4/07	50.42	---	---	3640.44	---	---
	10/11/07	50.39	---	---	3640.47	---	---
	11/2/07	50.31	---	---	3640.55	---	---
	11/16/07	50.19	---	---	3640.67	---	---
	11/20/07	50.27	---	---	3640.59	---	---
	12/13/07	52.38	---	---	3638.48	---	---
	1/2/08	52.35	---	---	3638.51	---	---
	3/6/08	50.42	---	---	3640.44	—	—
	3/11/08	50.32	---	---	3640.54	—	—
	3/17/08	50.39	---	---	3640.47	—	—
	3/25/08	50.27	---	---	3640.59	—	—
	4/1/08	50.25	---	---	3640.61	—	—
	4/9/08	50.22	---	---	3640.64	—	—
	4/15/08	50.22	---	---	3640.64	—	—
	4/23/08	50.24	---	---	3640.62	—	—
	4/28/08	50.25	---	---	3640.61	—	—
	5/6/08	50.22	---	---	3640.64	—	—
	5/23/08	50.29	---	---	3640.57	—	—
	5/29/08	50.36	---	---	3640.50	—	—
	6/4/08	50.32	---	---	3640.54	—	—
	6/12/08	50.23	---	---	3640.63	—	—
	6/18/08	50.19	---	---	3640.67	—	—
	6/25/08	50.18	---	---	3640.68	—	—
	6/30/08	50.17	---	---	3640.69	—	—
	7/7/08	50.21	---	---	3640.65	—	—

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LEA COUNTY, NEW MEXICO

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RW-3	7/15/08	50.19	---	---	3640.67	—	—
(cont)	7/21/08	50.05	---	---	3640.81	—	—
	7/31/08	50.20	---	---	3640.66	—	—
	8/4/08	50.21	---	---	3640.65	—	—
	8/10/08	50.19	---	---	3640.67	—	—
	8/19/08	50.23	---	---	3640.63	—	—
	8/26/08	50.24	---	---	3640.62	—	—
	9/4/08	50.90	---	---	3639.96	—	—
	9/10/08	50.20	---	---	3640.66	—	—
	9/15/08	50.38	---	---	3640.48	—	—
	9/23/08	50.32	---	---	3640.54	—	—
	10/1/08	50.34	---	---	3640.52	—	—
	10/6/08	50.41	---	---	3640.45	—	—
	10/16/08	50.39	---	---	3640.47	—	—
	10/21/08	50.29	---	---	3640.57	—	—
	10/28/08	50.33	---	---	3640.53	—	—
	11/13/08	50.15	---	---	3640.71	—	—
	11/19/08	50.17	---	---	3640.69	—	—
	11/25/08	50.33	---	---	3640.53	—	—
	12/3/08	50.40	---	---	3640.46	—	—
	12/9/08	50.50	---	---	3640.36	—	—
	12/17/08	50.48	---	---	3640.38	—	—
	12/22/08	50.50	---	---	3640.36	—	—
	12/30/08	50.47	---	---	3640.39	—	—
	1/6/09	50.35	---	---	3640.51	—	—
	1/13/09	50.21	---	---	3640.65	—	—
	1/21/09	50.36	---	---	3640.50	—	—
	1/28/09	50.35	---	---	3640.51	—	—
	2/3/09	50.46	---	---	3640.40	—	—
	2/10/09	50.35	---	---	3640.51	—	—
	2/16/09	50.48	---	---	3640.38	—	—
	2/23/09	50.50	---	---	3640.36	—	—
	3/5/09	50.49	---	---	3640.37	—	—
	3/12/09	50.54	---	---	3640.32	—	—
	3/20/09	50.50	---	---	3640.36	—	—
	3/24/09	50.55	---	---	3640.31	—	—

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LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-3	4/2/09	50.50	---	---	3640.36	—	—
(cont)	4/9/09	50.42	---	---	3640.44	—	—
	4/15/09	50.33	---	---	3640.53	—	—
	4/22/09	50.40	---	---	3640.46	—	—
	5/1/09	50.45	---	---	3640.41	—	—
	5/13/09	50.37	---	---	3640.49	—	—
	6/3/09	50.46	---	---	3640.40	—	—
	6/11/09	50.40	---	---	3640.46	—	—
	6/15/09	50.35	---	---	3640.51	—	—
	7/6/09	50.40	---	---	3640.46	—	—
	7/22/09	50.42	---	---	3640.44	—	—
	8/12/09	50.58	---	---	3640.28	—	—
	8/26/09	50.51	---	---	3640.35	—	—
	9/9/09	50.52	---	---	3640.34	—	—
	9/23/09	50.55	---	---	3640.31	—	—
	10/7/09	50.52	---	---	3640.34	—	—
	10/21/09	50.48	---	---	3640.38	—	—
	11/4/09	50.53	---	---	3640.33	—	—
	11/19/09	50.50	---	---	3640.36	—	—
	12/2/09	50.51	---	---	3640.35	—	—
	12/17/09	50.59	---	---	3640.27	—	—
	1/6/10	50.57	---	---	3640.29	—	—
	1/27/10	50.60	---	---	3640.26	—	—
	2/26/10	50.81	50.80	0.01	3640.06	—	—
	3/10/10	51.70	---	---	3639.16	—	—
	3/23/10	51.73	---	---	3639.13	—	—
	4/8/10	51.82	---	---	3639.04	—	—
	4/20/10	51.80	---	---	3639.06	—	—
	4/28/10	51.83	---	---	3639.03	—	—
	5/10/10	50.95	---	---	3639.91	—	—
	5/19/10	51.12	---	---	3639.74	—	—
	5/25/10	51.15	---	---	3639.71	—	—
	6/2/10	51.09	---	---	3639.77	—	—
	6/9/10	51.43	---	---	3639.43	—	—
	6/16/10	50.97	---	---	3639.89	—	—
	6/22/10	50.98	---	---	3639.88	—	—

TABLE I
GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-3	6/29/10	51.10	---	---	3639.76	—	—
(cont)	7/14/10	51.12	---	---	3639.74	—	—
	7/21/10	51.15	---	---	3639.71	—	—
	7/28/10	51.65	---	---	3639.21	—	—
	8/4/10	51.15	---	---	3639.71	—	—
	8/10/10	51.13	---	---	3639.73	—	—
	8/17/10	51.18	---	---	3639.68	—	—
	8/30/10	50.57	---	---	3640.29	—	—
	9/15/10	51.19	---	---	3639.67	—	—
	9/22/10	51.22	---	---	3639.64	—	—
	10/6/10	51.25	---	---	3639.61	—	—
	10/19/10	50.55	---	---	3640.31	—	—
	11/8/10	50.65	50.64	0.01	3640.22	—	—
	11/29/10	50.43	---	---	3640.43	—	—
	1/5/11	50.58	---	---	3640.28	—	—
	1/12/11	50.66	---	---	3640.20	—	—
	2/4/11	50.39	---	---	3640.47	—	—
	4/26/11	50.33	---	---	3640.53	—	—
	5/9/11	50.43	---	---	3640.43	—	—
	6/2/11	54.01	---	---	3636.85	—	—
	6/21/11	54.00	---	---	3636.86	—	—
	7/6/11	53.98	---	---	3636.88	—	—
	8/1/11	50.95	---	---	3639.91	—	—
	8/29/11	51.12	---	---	3639.74	—	—
	9/6/11	51.17	---	---	3639.69	—	—
	9/13/11	51.16	---	---	3639.70	—	—
	9/27/11	51.55	---	---	3639.31	—	—
	10/18/11	51.34	---	---	3639.52	—	—
	11/1/11	51.39	---	---	3639.47	—	—
	11/7/11	51.30	---	---	3639.56	—	—
	11/16/11	51.43	---	---	3639.43	—	—
	11/21/11	51.37	---	---	3639.49	—	—
	12/2/11	51.39	---	---	3639.47	—	—
RW-4	6/2/11	60.44	59.40	1.04	3640.43	75.00	35-75
3699.94	6/21/11	63.15	59.35	3.80	3640.20	—	—
	7/6/11	63.08	59.34	3.74	3640.22	—	—

TABLE I
GROUNDWATER GAUGING SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Well ID *TOC* *Elevation*	Collection Date	Depth to Groundwater (ft TOC)	Depth to LNAPL (ft TOC)	LNAPL Thickness (ft)	Corrected Groundwater Elevation (ft above MSL)	Well Depth (ft TOC)	Well Screen Interval (ft bgs)
RW-4	7/22/11	62.20	58.81	3.39	3640.78	—	—
(cont)	8/1/11	64.23	59.68	4.55	3639.79	—	—
	8/29/11	65.03	59.74	5.29	3639.66	—	—
	9/6/11	65.19	59.82	5.37	3639.57	—	—
	9/13/11	65.14	59.78	5.36	3639.61	—	—
	9/27/11	65.66	59.95	5.71	3639.40	—	—
	10/13/11	65.60	59.96	5.64	3639.40	—	—
	11/1/11	64.63	60.01	4.62	3639.45	—	—
	12/2/11	63.54	59.82	3.72	3639.74	—	—
WW-1	6/11/02	66.35	---	---	3637.82	Unknown	Unknown
3704.17	6/5/03	68.25	---	---	3635.92	---	---
WW-2	6/11/02	66.18	---	---	3637.66	Unknown	Unknown
3703.84	11/26/02	66.18	---	---	3637.66	---	---
	6/5/03	68.54	---	---	3635.30	---	---

Notes:

1. Data through June 6, 2005 provided by Larson & Associates, Inc.
2. TOC - Top of Casing.
3. MSL - Mean Sea Level.
4. bgs - Below ground surface.
5. Corrected groundwater elevations from July 1998 to December 2006 were calculated using LNAPL specific gravity of 0.88.
6. Corrected groundwater elevations from January 2007 to December 2007 were calculated using LNAPL specific gravity of 0.897.
7. MW-1, MW-2 and MW-9 were plugged and abandoned and replaced with RW-1, RW-2 and RW-3 in November 1999.
8. Monitor wells (MWs) are 2-inch in diameter; Recovery wells (RWs) are 4-inch in diameter.

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**
MW-3	7/28/98	**0.003**	<0.001	<0.001	**0.002**	**36.0**
	2/16/01	<0.005	<0.005	<0.005	<0.005	**31**
	6/12/02	<0.005	<0.005	<0.005	<0.005	**27.1**
	11/26/03	<0.001	<0.001	<0.001	<0.001	**31.9**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**27.5**
	12/4/03	<0.001	<0.001	<0.001	**0.0017**	**26.1**
	7/2/04	<0.005	<0.005	<0.005	<0.005	**28.0**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**32.3**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**34.3**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**29.3**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**31.1**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**28.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**31.0**
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	**31**
	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	**30**
DUP	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**32**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**32**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**35**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**40**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**50.4**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**64.0**
	6/2/11	**0.00053J**	**0.00061J**	<0.0010	<0.0030	**90.7**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**85.0**
DUP	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**85.7**
MW-4	7/28/98	<0.001	<0.001	<0.001	<0.001	**94.0**
	2/16/01	<0.005	<0.005	<0.005	**0.008**	**170**
	6/12/02	<0.005	<0.005	<0.005	<0.005	**85.6**
	11/26/03	**0.002**	<0.001	<0.001	<0.005	**160.0**
	6/6/03	<0.001	<0.001	<0.001	**0.0026**	**111.0**
	12/4/03	**0.0015**	<0.001	<0.001	<0.001	**104.0**
	7/2/04	<0.001	<0.001	<0.001	<0.001	**72.4**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**59.7**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**58.4**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**55.3**
	6/27/06	**0.000597**	<0.000500	<0.000500	<0.001	**48.8**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**
MW-4	12/19/06	<0.005	<0.005	<0.005	<0.001	**34.0**
(cont)	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**39.0**
	12/13/07	0.000968	<0.000500	<0.000500	0.00254	**63.1**
	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	**61.0**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**52.0**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**59.0**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**58.0**
	7/1/10	**0.00032J**	<0.00020	<0.00020	<0.00070	**54.5**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**57.5**
DUP	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**58.4**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**49.8**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**142.0**
MW-5	7/28/98	<0.001	<0.001	<0.001	<0.001	**360.0**
	2/16/01	<0.005	<0.005	<0.005	<0.005	**120**
	6/12/02	<0.005	<0.005	<0.005	<0.005	**90.2**
	11/26/03	**0.002**	<0.001	**0.003**	<0.002	**59.1**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**48.6**
	12/4/03	<0.001	<0.001	<0.001	<0.001	**36.5**
	7/2/04	<0.005	<0.005	<0.005	<0.005	**32.9**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**39.8**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**41.1**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**39.7**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**43.2**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**51.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**67**
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	**101**
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**78.7**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**100**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**140**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**110**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**115**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**168**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**134**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**172**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**
MW-6	7/28/98	<0.001	<0.001	<0.001	<0.001	**43.0**
	2/16/01	<0.005	<0.005	**0.006**	**0.006**	**52**
	6/12/02	<0.001	<0.001	<0.001	<0.001	**54.1**
	11/26/03	<0.001	<0.001	<0.001	<0.002	**65.0**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**43.7**
	12/4/03	<0.001	<0.001	<0.001	<0.001	**45.3**
	7/2/04	<0.001	<0.001	<0.001	<0.001	**57.5**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**61.3**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**66.7**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**80.9**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**86.4**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**88.0**
	3/16/07	<0.000500	<0.000500	<0.000500	<0.001	**92.2**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**110**
	9/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**99.5**
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	**99.2**
	3/6/08	<0.000370	<0.000390	<0.000420	<0.000350	**88.8**
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**117**
	9/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**130**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**130**
	3/5/09	<0.00037	<0.00039	<0.00042	<0.00035	**140**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**160**
	9/9/09	<0.00037	<0.00039	<0.00042	<0.00035	**160**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**140**
	3/23/10	<0.00020	<0.00020	<0.00020	<0.00070	**169**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**161**
DUP	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**169**
	9/22/10	**0.00033J**	<0.00010	<0.00010	<0.00030	**157**
	11/9/10	<0.00010	<0.00010	**0.0010**	<0.00030	**182**
	3/3/11	<0.00010	<0.00010	<0.00010	<0.00030	**225**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**215**
DUP	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**221**
	9/27/11	<0.00010	<0.00010	<0.00010	<0.00030	**222**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**198**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**
MW-7	7/28/98	<0.001	<0.001	<0.001	<0.001	**82.0**
	2/16/01	<0.005	<0.005	<0.005	<0.005	**150**
	6/12/02	<0.005	<0.005	<0.005	<0.005	**96.7**
	11/26/03	<0.001	<0.001	<0.001	<0.002	**133.0**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**199.0**
	12/4/03	<0.001	<0.001	<0.001	<0.001	**230.0**
	7/2/04	<0.001	<0.001	<0.001	<0.001	**215.0**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**274.0**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**221.0**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**204.0**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**158.0**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**130.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**110**
	12/13/07	<0.000500	<0.000500	<0.000500	<0.00100	**135**
	6/5/08	<0.00037	<0.00039	<0.00042	<0.00035	**72.4**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**66**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**58**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**47**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**51.2**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**67.1**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**69.4**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**76.6**
MW-8	7/28/98	<0.001	<0.001	<0.001	<0.001	**29.0**
	2/16/01	<0.005	<0.005	<0.005	<0.005	**94**
	6/12/02	<0.005	<0.005	<0.005	<0.005	**180.0**
	11/26/03	<0.001	<0.001	<0.001	<0.002	**239.0**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**244.0**
	12/4/03	<0.001	<0.001	<0.001	<0.001	**251.0**
	7/2/04	<0.005	<0.005	<0.005	<0.005	**206.0**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**244.0**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**227.0**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**144.0**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**92.6**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**83.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**79**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**
MW-8	12/13/07	<0.000500	<0.000500	<0.000500	<0.00100	**82.9**
(cont)	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**54.9**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**47**
	6/16/09	<0.00037	<0.00039	<0.00042	<0.00035	**45**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**36**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**38.4**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**47.6**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**51.8**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**72.7**
WW-1	7/28/98	<0.001	<0.001	<0.001	<0.001	**100.0**
	6/12/02	<0.001	<0.001	<0.001	<0.001	**43.6**
	11/26/02	<0.001	<0.001	<0.001	<0.002	**80.0**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**73.4**
	12/4/03	<0.001	<0.001	<0.001	<0.001	**65.3**
	7/2/04	<0.001	<0.001	<0.001	<0.001	**66.5**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**74.3**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**63.4**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**41.1**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**50.0**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**80.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**52**
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	**59.8**
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**64.1**
DUP	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**64.4**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**73**
	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	**60**
	11/20/09	<0.00037	<0.00039	<0.00042	<0.00035	**64**
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**41.0**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**77.0**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**73.6**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**50.2**
WW-2	6/12/02	<0.001	<0.001	<0.001	<0.001	**53.7**
	11/26/02	<0.001	<0.001	<0.001	<0.002	**70.9**
	6/6/03	<0.001	<0.001	<0.001	<0.001	**71.1**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard		**0.01**	**0.75**	**0.75**	**0.62**	**250**
WW-2	12/4/03	<0.001	<0.001	<0.001	<0.001	**52.4**
(cont)	7/2/04	<0.001	<0.001	<0.001	<0.001	**51.0**
	12/21/04	<0.005	<0.005	<0.005	<0.005	**55.6**
	6/6/05	<0.00100	<0.00100	<0.00100	<0.00100	**55.3**
	12/13/05	<0.005	<0.005	<0.005	<0.010	**75.3**
	6/27/06	<0.000500	<0.000500	<0.000500	<0.001	**69.7**
	12/19/06	<0.005	<0.005	<0.005	<0.001	**57.0**
	6/27/07	<0.000500	<0.000500	<0.000500	<0.00100	**46**
	12/14/07	<0.000500	<0.000500	<0.000500	<0.00100	**83.1**
	6/4/08	<0.00037	<0.00039	<0.00042	<0.00035	**65.9**
	11/14/08	<0.00037	<0.00039	<0.00042	<0.00035	**73**
	6/17/09	<0.00037	<0.00039	<0.00042	<0.00035	**60**
	11/20/09	Not Sampled		Pump not working		
	7/1/10	<0.00020	<0.00020	<0.00020	<0.00070	**66.3**
	11/9/10	<0.00010	<0.00010	<0.00010	<0.00030	**77.2**
	6/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**74.9**
	12/2/11	<0.00010	<0.00010	<0.00010	<0.00030	**76.5**
RW-1[7]	6/5/08	**0.0119**	<0.0039	<0.0042	<0.0035	**36.2**
	6/17/09	**0.012**	**0.0055**	**0.0018**	**0.012**	**49.0**
	7/1/10	**0.022**	**0.00070J**	**0.0027**	**0.017**	**41.1**
RW-2	6/27/07	**0.00287**	<0.0025	<0.00250	**0.0303**	**60**
	6/5/08	<0.0037	<0.0039	<0.0042	<0.0035	**51.1**
	6/17/09	<0.00037	**0.0046**	<0.00042	**0.016**	**44**
	7/1/10	**0.0016**	<0.00020	<0.00020	**0.0067**	**30.1**
RW-3	6/11/02	<0.005	<0.005	<0.005	<0.005	**25.9**
	12/3/04	<0.001	<0.001	<0.001	<0.001	**36.6**
	6/27/07	**0.00855**	<0.00250	**0.0122**	**0.0270**	**130**
	6/5/08	<0.0037	<0.0039	<0.0042	**0.0129**	**90.6**
	6/17/09	**0.0052**	**0.0042**	**0.011**	**0.0250**	**74**
	11/20/09	<0.00037	**0.001**	**0.0027**	**0.0076**	**60**
DUP	11/20/09	<0.00037	**0.0013**	**0.003**	**0.0080**	**60**
	7/1/10	**0.0065**	<0.00020	**0.0066**	**0.0030**	**68.3**

TABLE II
GROUNDWATER ANALYTICAL SUMMARY
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
FORMER NEW MEXICO "F" STATE TANK BATTERY
LEA COUNTY, NEW MEXICO

Sample ID	Sample Date	Benzene[1]	Toluene[1]	Ethyl-benzene[1]	Total Xylenes[1]	Chloride[2]
New Mexico Water Quality Control Commission Groundwater Standard						
		0.01	**0.75**	**0.75**	**0.62**	**250**

Notes:

1. Result shown in mg/L.
2. Data through June 6, 2005 provided by Larson & Associates, Inc.
3. Bold indicates detection above method detection limit.
4. Shaded cells indicate New Mexico Water Quality Control Commission (NMWQCC) exceedance.
5. [1]Human Health Standards for Groundwater.
6. [2]Other Standards for Domestic Water Supply.
7. [3]RW-1 was sampled by dropping a disposable PVC bailer below 3.18 feet of LNAPL.

TABLE III

SUMMARY OF FIELD DUPLICATE SAMPLE RESULTS
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
F STATE
LEA COUNTY, NEW MEXICO

Date	Original Sample ID	Sample Result (mg/L	Duplicate Sample ID	Sample Result (mg/L	RPD
6/4/2008	WW-1	64.1	DUP	64.4	0.46692607
11/14/2008	MW-3	32	DUP	32	0
11/20/2010	RW-3	0.0027 0.0076 60	DUP	0.003 0.008 60	10.52631579 5.128205128 0
7/1/2010	MW-6	161	DUP	169	4.848484848
11/9/2010	MW-4	57.5	DUP	58.4	1.553062985
6/2/2011	MW-6	215	DUP	221	2.752293578
12/2/2011	MW-3	85	DUP	85.7	0.820152314

TABLE IV

SUMMARY OF SOIL ANALYTICAL DATA – BTEX/TPH
FORMER NEW MEXICO "F" STATE TANK BATTERY
Lea County, NM

SAMPLE ID	DATE	DEPTH (feet)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TPH (8015 Modified)		
								TPH GRO	TPH DRO	TPH (GRO/DRO)
New Mexico Oil Conservation Division Recommended Remediation Action Levels (Total Ranking Score >19)										
			10 mg/Kg	**---**	**---**	**---**	**50.0 mg/Kg**	**---**	**---**	**100 mg/Kg**
Soil Boring Samples										
RW-4/35'-40'	5/31/2011	35'-40'	<0.005	<0.005	**0.0077**	**0.056**	**0.0637**	**2**	**2800**	**2802**
RW-4/55'-60'	5/31/2011	55'-60'	<0.005	**0.039**	**0.047**	**0.32**	**0.406**	**8.5**	**3700**	**3708.5**
RW-4/70'-75'	5/31/2011	70'-75'	<0.005	<0.005	<0.005	**0.033**	**0.033**	**1.8**	**2400**	**2401.8**

APPENDICES

APPENDIX A

16-Mar-2011

Patricia Lynch
Conestoga-Rovers & Associates
6320 Rothway, Suite 100
Houston, TX 77040

Tel: (713) 734-3090
Fax: (713) 734-3391

Re: NM "F" State Work Order: **1103196**

Dear Patricia,

ALS Environmental received 2 samples on 05-Mar-2011 09:10 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

R. Kevin Given

Electronically approved by: Glenda H. Ramos

R. Kevin Given
Project Manager

Certificate No: TX: T104704231-10-3

ALS Environmental

Date: 14-Mar-11

Client: Conestoga-Rovers & Associates
Project: NM "F" State
Work Order: **1103196**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1103196-01	MW-6	Water		3/3/2011 12:26	3/5/2011 09:10	☐
1103196-02	Trip Blank	Water		3/3/2011	3/5/2011 09:10	☐

Client:	Conestoga-Rovers & Associates
Project:	NM "F" State
Work Order:	1103196

Case Narrative

Batch R106594, BTEX, Sample "MW-6": The recoveries of Toluene and Ethylbenzene were outside control limits on the MSD.

ALS Environmental

Date: *14-Mar-11*

Client: Conestoga-Rovers & Associates

Project: NM "F" State **Work Order:** 1103196

Sample ID: MW-6 **Lab ID:** 1103196-01

Collection Date: 3/3/2011 12:26 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Prep	Date Analyzed
BTEX			**SW8021B**				Analyst: **KKP**
Benzene	ND		1.0	µg/L	1		3/10/2011 10:11 AM
Toluene	ND		1.0	µg/L	1		3/10/2011 10:11 AM
Ethylbenzene	ND		1.0	µg/L	1		3/10/2011 10:11 AM
Methyl tert-butyl ether	ND		5.0	µg/L	1		3/10/2011 10:11 AM
Xylenes, Total	ND		3.0	µg/L	1		3/10/2011 10:11 AM
Surr: 4-Bromofluorobenzene	*111*		*77-129*	*%REC*	1		3/10/2011 10:11 AM
Surr: Trifluorotoluene	*102*		*75-130*	*%REC*	1		3/10/2011 10:11 AM
ANIONS			**SW9056**				Analyst: **TDW**
Chloride	**225**		**5.00**	**mg/L**	10		3/14/2011 12:36 PM
Surr: Selenate (surr)	*114*		*85-115*	*%REC*	10		3/14/2011 12:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R106594** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW2-030911-R106594** Units: **µg/L** Analysis Date: **3/10/2011 03:30 AM**

Client ID: Run ID: **BTEX1_110309C** SeqNo: **2306927** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether	ND	5.0								
Xylenes, Total	ND	3.0								
Surr: 4-Bromofluorobenzene	*33.06*	1.0	*30*	0	*110*	*77-129*	0			
Surr: Trifluorotoluene	*30.65*	1.0	*30*	0	*102*	*75-130*	0			

LCS Sample ID: **BLCSW2-030911-R106594** Units: **µg/L** Analysis Date: **3/10/2011 02:55 AM**

Client ID: Run ID: **BTEX1_110309C** SeqNo: **2306923** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.58	1.0	20	0	103	77-126	0			
Toluene	21.29	1.0	20	0	106	80-124	0			
Ethylbenzene	21.71	1.0	20	0	109	76-125	0			
Methyl tert-butyl ether	83.79	5.0	100	0	83.8	75-128	0			
Xylenes, Total	62.85	3.0	60	0	105	79-124	0			
Surr: 4-Bromofluorobenzene	*34.79*	1.0	*30*	0	*116*	*77-129*	0			
Surr: Trifluorotoluene	*31.49*	1.0	*30*	0	*105*	*75-130*	0			

MS Sample ID: **1103196-01AMS** Units: **µg/L** Analysis Date: **3/10/2011 10:29 AM**

Client ID: **MW-6** Run ID: **BTEX1_110309C** SeqNo: **2306960** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	23.98	1.0	20	0	120	77-126	0			
Toluene	24.7	1.0	20	0	123	80-124	0			
Ethylbenzene	24.86	1.0	20	0	124	76-125	0			
Methyl tert-butyl ether	99.65	5.0	100	0	99.6	75-128	0			
Xylenes, Total	72.25	3.0	60	0	120	79-124	0			
Surr: 4-Bromofluorobenzene	*35.67*	1.0	*30*	0	*119*	*77-129*	0			
Surr: Trifluorotoluene	*31.29*	1.0	*30*	0	*104*	*75-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1103196
Project: NM "F" State

QC BATCH REPORT

Batch ID: **R106594** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1103196-01AMSD** Units: **µg/L** Analysis Date: **3/10/2011 10:46 AM**

Client ID: **MW-6** Run ID: **BTEX1_110309C** SeqNo: **2306961** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	24.05	1.0	20	0	120	77-126	23.98	0.265	20	
Toluene	24.83	1.0	20	0	124	80-124	24.7	0.545	20	S
Ethylbenzene	25.08	1.0	20	0	125	76-125	24.86	0.9	20	S
Methyl tert-butyl ether	100.5	5.0	100	0	100	75-128	99.65	0.84	20	
Xylenes, Total	72.7	3.0	60	0	121	79-124	72.25	0.631	20	
Surr: 4-Bromofluorobenzene	*35.66*	1.0	*30*	0	*119*	*77-129*	35.67	*0.0147*	*20*	
Surr: Trifluorotoluene	*31.44*	1.0	*30*	0	*105*	*75-130*	31.29	*0.456*	*20*	

The following samples were analyzed in this batch: 1103196-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1103196
Project: NM "F" State

QC BATCH REPORT

Batch ID: **R106800** Instrument ID **ICS2100** Method: **SW9056**

MBLK Sample ID: **WBLKW1-031411-R106800** Units: **mg/L** Analysis Date: **3/14/2011 02:18 PM**
Client ID: Run ID: **ICS2100_110314A** SeqNo: **2311540** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
Surr: Selenate (surr)	*5.719*	0.10	*5*	0	*114*	*85-115*	0			

LCS Sample ID: **WLCSW1-031411-R106800** Units: **mg/L** Analysis Date: **3/14/2011 02:32 PM**
Client ID: Run ID: **ICS2100_110314A** SeqNo: **2311541** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.4	0.50	20	0	102	90-110	0			
Surr: Selenate (surr)	*5.658*	0.10	*5*	0	*113*	*85-115*	0			

LCSD Sample ID: **WLCSDW1-031411-R106800** Units: **mg/L** Analysis Date: **3/14/2011 02:47 PM**
Client ID: Run ID: **ICS2100_110314A** SeqNo: **2311542** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.37	0.50	20	0	102	90-110	20.4	0.152	20	
Surr: Selenate (surr)	*5.69*	0.10	*5*	0	*114*	*85-115*	5.658	*0.564*	*20*	

MSD Sample ID: **1103196-01BMS** Units: **mg/L** Analysis Date: **3/14/2011 12:50 PM**
Client ID: **MW-6** Run ID: **ICS2100_110314A** SeqNo: **2311534** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	328.2	5.0	100	225.1	103	80-120	0			
Surr: Selenate (surr)	*56*	1.0	*50*	0	*112*	*85-115*	0			

MSD Sample ID: **1103196-01BMSD** Units: **mg/L** Analysis Date: **3/14/2011 01:05 PM**
Client ID: **MW-6** Run ID: **ICS2100_110314A** SeqNo: **2311535** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	337.2	5.0	100	225.1	112	80-120	0			
Surr: Selenate (surr)	*55.75*	1.0	*50*	0	*111*	*85-115*	0			

The following samples were analyzed in this batch: 1103196-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 14-Mar-11

Client: Conestoga-Rovers & Associates
Project: NM "F" State
WorkOrder: **1103196**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

☐ ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

☐ ALS Laboratory Group
3352 128th Ave.
Holland, MI 49424-9263
Tel: +1 616 399 6070
Fax: +1 616 399 6185

ALS Project Manager: | ALS Work Order #: 1103196

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	NM "F" State	A	BTEX/MTBE (8021)
Work Order		Project Number	039122	B	Anions (9056) Cl
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates	C	
Send Report To	Patricia Lynch / Desiree Crenshaw	Invoice Attn	Patricia Lynch	D	
Address	6320 Rothway, Suite 100 2135 S Loop 250 W	Address	6320 Rothway, Suite 100	E F	
City/State/Zip	Houston, TX 77040 Midland, TX 79703	City/State/Zip	Houston, TX 77040	G	
Phone	(713) 734-3090	Phone	(713) 734-3090	H	
Fax	(713) 734-3391	Fax	(713) 734-3391	I	
e-Mail Address	dcrenshaw@cnwarld.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-6	3-3-11	1226	W	2.8	4	✓	✓									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: for Justin Primera / Desiree Crenshaw

Shipment Method:

Required Turnaround Time: (Check Box) ☐ Std 10 WK Days ☑ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	3-4-11	1200	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			3/5/11 0910
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 5 Day TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD _____
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-HOU** Date/Time Received: **05-Mar-11 09:10**

Work Order: **1103196** Received by: **RDH**

Checklist completed by Rishel D. Naran (eSignature) 05-Mar-11 (Date) Reviewed by: R. Kevin Given (eSignature) 07-Mar-11 (Date)

Matrices: WATER
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6	002	
Cooler(s)/Kit(s):	2502		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ıd This portion can be removed for Recipient's records.

FedEx Tracking Number 874763320486

ıder's ne Desiree Crenshaw Phone 432 778 3962

Company CRA

Address 2135 S Loop 250 W Dept/Floor/Suite/Room

Midland State TX ZIP 79703

ur Internal Billing Reference

1103196.

Environmental
Tanglewood Rd., Suite 210
Texas 77080
281 530 5656
281 530 5887

CUSTODY SEAL

Date: 3-4-11 Time: 1000

Name: Desiree Crenshaw

Company: CRA

Seal Broken By:

Date: 3/5/11

14-Jun-2011

Desiree Crenshaw
Conestoga-Rovers & Associates
2135 S Loop 250 West
Midland, TX 79703

Tel: (432) 686-0086
Fax: (432) 686-0186

Re: New Mexico -F- State -SSOW 039122 Work Order: **1106114**

Dear Desiree,

ALS Environmental received 3 samples on 03-Jun-2011 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Patricia L. Lynch

Electronically approved by: Makenzie L. Henderson

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 14-Jun-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
Work Order: **1106114**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106114-01	RW-4 35-40'	Soil		5/31/2011 10:54	6/3/2011 09:00	☐
1106114-02	RW-4 55-60'	Soil		5/31/2011 11:04	6/3/2011 09:00	☐
1106114-03	RW-4 70-75'	Soil		5/31/2011 11:10	6/3/2011 09:00	☐

Client:	Conestoga-Rovers & Associates
Project:	New Mexico -F- State -SSOW 039122
Work Order:	1106114

Case Narrative

Batch 52943 TPH (DRO/ORO) surrogates were diluted out due to high dilution factors.

Batch 52943 TPH (DRO/ORO): MS/MSD is for an unrelated sample.

Batch R111159 TPH (GRO) surrogate recoveries were high. Confirmed as matrix interference by reanalysis.

Batch R111159 TPH (GRO): MS/MSD recoveries were low for sample RW-4 70-75' due to matrix interference. LCS/LCSD recoveries were in control.

Batch R111200 BTEX/ MTBE: Numerous results are flagged with P due to possible coelution or matrix interference on one the the dual columns. The lower of the two results is reported per the method. All data is reported from 5-fold dilutions due to the sample matrices.

Batch R111200 BTEX/ MTBE: LCS/LCSD and CCV recoveries for MTBE were above the control limits where this compound was non-detect in the associated samples.

Batch R111200 BTEX/ MTBE: MS/MSD is for an unrelated sample.

ALS Environmental

Date: *14-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106114

Sample ID: RW-4 35-40' **Lab ID:** 1106114-01

Collection Date: 5/31/2011 10:54 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH DRO/ORO			**SW8015M**		Prep Date: **6/6/2011**	Analyst: **RPM**
TPH (Diesel Range)	**2,800**		**170**	**mg/Kg**	100	6/13/2011 10:08 PM
TPH (Motor Oil Range)	**2,800**		**340**	**mg/Kg**	100	6/13/2011 10:08 PM
Surr: 2-Fluorobiphenyl	*0*	S	*70-130*	*%REC*	100	6/13/2011 10:08 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **JFT**
Gasoline Range Organics	**2.0**		**0.050**	**mg/Kg**	1	6/9/2011 01:23 PM
Surr: 4-Bromofluorobenzene	*247*	S	*70-130*	*%REC*	1	6/9/2011 01:23 PM
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		5.0	µg/Kg	5	6/10/2011 04:03 AM
Toluene	U		5.0	µg/Kg	5	6/10/2011 04:03 AM
Ethylbenzene	**7.7**		**5.0**	**µg/Kg**	5	6/10/2011 04:03 AM
Methyl tert-butyl ether	U		25	µg/Kg	5	6/10/2011 04:03 AM
Xylenes, Total	**56**	P	**15**	**µg/Kg**	5	6/10/2011 04:03 AM
Surr: 4-Bromofluorobenzene	*103*		*75-131*	*%REC*	5	6/10/2011 04:03 AM
Surr: Trifluorotoluene	*78.6*		*73-130*	*%REC*	5	6/10/2011 04:03 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *14-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106114

Sample ID: RW-4 55-60' **Lab ID:** 1106114-02

Collection Date: 5/31/2011 11:04 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH DRO/ORO			**SW8015M**		Prep Date: **6/6/2011**	Analyst: **RPM**
TPH (Diesel Range)	**3,700**		**170**	**mg/Kg**	100	6/13/2011 10:27 PM
TPH (Motor Oil Range)	**3,400**		**340**	**mg/Kg**	100	6/13/2011 10:27 PM
Surr: 2-Fluorobiphenyl	*0*	S	*70-130*	*%REC*	100	6/13/2011 10:27 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **JFT**
Gasoline Range Organics	**8.5**		**0.050**	**mg/Kg**	1	6/9/2011 01:39 PM
Surr: 4-Bromofluorobenzene	*566*	S	*70-130*	*%REC*	1	6/9/2011 01:39 PM
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		5.0	µg/Kg	5	6/10/2011 04:21 AM
Toluene	**39**	P	**5.0**	**µg/Kg**	5	6/10/2011 04:21 AM
Ethylbenzene	**47**	P	**5.0**	**µg/Kg**	5	6/10/2011 04:21 AM
Methyl tert-butyl ether	U		25	µg/Kg	5	6/10/2011 04:21 AM
Xylenes, Total	**320**	P	**15**	**µg/Kg**	5	6/10/2011 04:21 AM
Surr: 4-Bromofluorobenzene	*79.9*		*75-131*	*%REC*	5	6/10/2011 04:21 AM
Surr: Trifluorotoluene	*90.2*		*73-130*	*%REC*	5	6/10/2011 04:21 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *14-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106114

Sample ID: RW-4 70-75' **Lab ID:** 1106114-03

Collection Date: 5/31/2011 11:10 AM **Matrix:** SOIL

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TPH DRO/ORO			**SW8015M**		Prep Date: **6/6/2011**	Analyst: **RPM**
TPH (Diesel Range)	**2,400**		**170**	**mg/Kg**	100	6/13/2011 10:47 PM
TPH (Motor Oil Range)	**2,700**		**340**	**mg/Kg**	100	6/13/2011 10:47 PM
Surr: 2-Fluorobiphenyl	*0*	S	*70-130*	*%REC*	100	6/13/2011 10:47 PM
GASOLINE RANGE ORGANICS - SW8015C			**SW8015**			Analyst: **JFT**
Gasoline Range Organics	**1.8**		**0.050**	**mg/Kg**	1	6/9/2011 01:56 PM
Surr: 4-Bromofluorobenzene	*225*	S	*70-130*	*%REC*	1	6/9/2011 01:56 PM
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		5.0	µg/Kg	5	6/10/2011 04:38 AM
Toluene	U		5.0	µg/Kg	5	6/10/2011 04:38 AM
Ethylbenzene	U		5.0	µg/Kg	5	6/10/2011 04:38 AM
Methyl tert-butyl ether	U		25	µg/Kg	5	6/10/2011 04:38 AM
Xylenes, Total	**33**	P	**15**	**µg/Kg**	5	6/10/2011 04:38 AM
Surr: 4-Bromofluorobenzene	*103*		*75-131*	*%REC*	5	6/10/2011 04:38 AM
Surr: Trifluorotoluene	*82.9*		*73-130*	*%REC*	5	6/10/2011 04:38 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 14-Jun-11

Client: Conestoga-Rovers & Associates

QC BATCH REPORT

Work Order: 1106114

Project: New Mexico -F- State -SSOW 039122

Batch ID: **52943** Instrument ID **FID-7** Method: **SW8015M**

MBLK Sample ID: **FBLKS1-110606-52943** Units: **mg/Kg** Analysis Date: **6/6/2011 10:08 PM**

Client ID: Run ID: **FID-7_110606B** SeqNo: **2422900** Prep Date: **6/6/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	U	1.7								
TPH (Motor Oil Range)	U	3.4								
Surr: 2-Fluorobiphenyl	*3.736*	0.10	*3.33*	0	*112*	*70-130*	0			

LCS Sample ID: **FLCSS1-110606-52943** Units: **mg/Kg** Analysis Date: **6/6/2011 10:27 PM**

Client ID: Run ID: **FID-7_110606B** SeqNo: **2422901** Prep Date: **6/6/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	35.18	1.7	33.33	0	106	70-130	0			
TPH (Motor Oil Range)	38.46	3.4	33.33	0	115	70-130	0			
Surr: 2-Fluorobiphenyl	*3.848*	0.10	*3.33*	0	*116*	*70-130*	0			

MS Sample ID: **1106139-17CMS** Units: **mg/Kg** Analysis Date: **6/7/2011 12:43 AM**

Client ID: Run ID: **FID-7_110606B** SeqNo: **2422962** Prep Date: **6/6/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	252.4	1.7	33.26	227.1	76.1	70-130	0			EO
TPH (Motor Oil Range)	57.03	3.4	33.26	3.634	161	70-130	0			S
Surr: 2-Fluorobiphenyl	*6.891*	0.10	*3.323*	0	*207*	*70-130*	0			*SE*

MSD Sample ID: **1106139-17CMSD** Units: **mg/Kg** Analysis Date: **6/7/2011 01:02 AM**

Client ID: Run ID: **FID-7_110606B** SeqNo: **2422964** Prep Date: **6/6/2011** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
TPH (Diesel Range)	261.9	1.7	33.27	227.1	104	70-130	252.4	3.67	30	EO
TPH (Motor Oil Range)	49.85	3.4	33.27	3.634	139	70-130	57.03	13.4	30	S
Surr: 2-Fluorobiphenyl	*7.659*	0.10	*3.324*	0	*230*	*70-130*	6.891	*10.5*	*30*	*SE*

The following samples were analyzed in this batch: 1106114-01A 1106114-02A 1106114-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106114
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111159** Instrument ID **FID-9** Method: **SW8015**

MBLK Sample ID: **GBLKS-060911-R111159** Units: **mg/Kg** Analysis Date: **6/9/2011 01:07 PM**
Client ID: Run ID: **FID-9_110609A** SeqNo: **2418660** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	U	0.050								
Surr: 4-Bromofluorobenzene	*0.08923*	0.0050	*0.1*	0	*89.2*	*70-130*	0			

LCS Sample ID: **GLCSS-060911-R111159** Units: **mg/Kg** Analysis Date: **6/9/2011 11:43 AM**
Client ID: Run ID: **FID-9_110609A** SeqNo: **2418658** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9608	0.050	1	0	96.1	70-130	0			
Surr: 4-Bromofluorobenzene	*0.1087*	0.0050	*0.1*	0	*109*	*70-130*	0			

LCSD Sample ID: **GLCSDS-060911-R111159** Units: **mg/Kg** Analysis Date: **6/9/2011 11:59 AM**
Client ID: Run ID: **FID-9_110609A** SeqNo: **2418659** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.9472	0.050	1	0	94.7	70-130	0.9608	1.42	30	
Surr: 4-Bromofluorobenzene	*0.1092*	0.0050	*0.1*	0	*109*	*70-130*	0.1087	*0.485*	*30*	

MS Sample ID: **1106114-03AMS** Units: **mg/Kg** Analysis Date: **6/9/2011 02:32 PM**
Client ID: **RW-4 70-75'** Run ID: **FID-9_110609A** SeqNo: **2418664** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.699	0.050	1	1.796	-9.73	70-130	0			S
Surr: 4-Bromofluorobenzene	*0.1751*	0.0050	*0.1*	0	*175*	*70-130*	0			*S*

MSD Sample ID: **1106114-03AMSD** Units: **mg/Kg** Analysis Date: **6/9/2011 02:48 PM**
Client ID: **RW-4 70-75'** Run ID: **FID-9_110609A** SeqNo: **2418665** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	2.08	0.050	1	1.796	28.4	70-130	1.699	20.2	30	S
Surr: 4-Bromofluorobenzene	*0.1812*	0.0050	*0.1*	0	*181*	*70-130*	0.1751	*3.42*	*30*	*S*

The following samples were analyzed in this batch: 1106114-01A 1106114-02A 1106114-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106114
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111200** Instrument ID **BTEX3** Method: **SW8021B**

MBLK Sample ID: **BBLKS2-060911-R111200** Units: **µg/Kg** Analysis Date: **6/9/2011 11:25 PM**

Client ID: Run ID: **BTEX3_110609B** SeqNo: **2419568** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Methyl tert-butyl ether	U	5.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*31.49*	1.0	*30*	0	*105*	*75-131*	0			
Surr: Trifluorotoluene	*29.27*	1.0	*30*	0	*97.6*	*73-130*	0			

LCS Sample ID: **BLCSS2-060911-R111200** Units: **µg/Kg** Analysis Date: **6/9/2011 10:50 PM**

Client ID: Run ID: **BTEX3_110609B** SeqNo: **2418936** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.54	1.0	20	0	103	74-129	0			
Toluene	21.71	1.0	20	0	109	75-128	0			
Ethylbenzene	20.93	1.0	20	0	105	73-127	0			
Methyl tert-butyl ether	128.1	5.0	100	0	128	73-128	0			S
Xylenes, Total	62.49	3.0	60	0	104	74-127	0			
Surr: 4-Bromofluorobenzene	*30.25*	1.0	*30*	0	*101*	*75-131*	0			
Surr: Trifluorotoluene	*29.88*	1.0	*30*	0	*99.6*	*73-130*	0			

LCSD Sample ID: **BLCSDS2-060911-R111200** Units: **µg/Kg** Analysis Date: **6/9/2011 11:08 PM**

Client ID: Run ID: **BTEX3_110609B** SeqNo: **2418937** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.26	1.0	20	0	101	74-129	20.54	1.37	30	
Toluene	20.53	1.0	20	0	103	75-128	21.71	5.6	30	
Ethylbenzene	20.89	1.0	20	0	104	73-127	20.93	0.18	30	
Methyl tert-butyl ether	137.2	5.0	100	0	137	73-128	128.1	6.84	30	S
Xylenes, Total	62.97	3.0	60	0	105	74-127	62.49	0.754	30	
Surr: 4-Bromofluorobenzene	*29.83*	1.0	*30*	0	*99.4*	*75-131*	30.25	*1.4*	*30*	
Surr: Trifluorotoluene	*28.15*	1.0	*30*	0	*93.8*	*73-130*	29.88	*5.98*	*30*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106114
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111200** Instrument ID **BTEX3** Method: **SW8021B**

MS Sample ID: **1106204-05AMS** Units: **µg/Kg** Analysis Date: **6/10/2011 02:36 AM**
Client ID: Run ID: **BTEX3_110609B** SeqNo: **2418946** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.71	1.0	20	0	78.5	74-129	0			
Toluene	15.92	1.0	20	0	79.6	75-128	0			
Ethylbenzene	15.52	1.0	20	0	77.6	73-127	0			
Methyl tert-butyl ether	103.3	5.0	100	0	103	73-128	0			
Xylenes, Total	42.84	3.0	60	0	71.4	74-127	0			S
Surr: 4-Bromofluorobenzene	*28.64*	1.0	*30*	0	*95.5*	*75-131*	0			
Surr: Trifluorotoluene	*25.62*	1.0	*30*	0	*85.4*	*73-130*	0			

MSD Sample ID: **1106204-05AMSD** Units: **µg/Kg** Analysis Date: **6/10/2011 02:54 AM**
Client ID: Run ID: **BTEX3_110609B** SeqNo: **2418947** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.09	1.0	20	0	80.4	74-129	15.71	2.4	30	
Toluene	17.17	1.0	20	0	85.9	75-128	15.92	7.55	30	
Ethylbenzene	16.48	1.0	20	0	82.4	73-127	15.52	6.03	30	
Methyl tert-butyl ether	98.28	5.0	100	0	98.3	73-128	103.3	4.96	30	
Xylenes, Total	45.4	3.0	60	0	75.7	74-127	42.84	5.79	30	
Surr: 4-Bromofluorobenzene	*28.24*	1.0	*30*	0	*94.1*	*75-131*	28.64	*1.39*	*30*	
Surr: Trifluorotoluene	*27.04*	1.0	*30*	0	*90.1*	*73-130*	25.62	*5.39*	*30*	

The following samples were analyzed in this batch: 1106114-01A 1106114-02A 1106114-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 14-Jun-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
WorkOrder: **1106114**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
µg/Kg	Micrograms per Kilogram
mg/Kg	Milligrams per Kilogram

ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

1106114

CRA-MID: Conestoga-Rovers & Associates

Project: F State

Page ____ of ____

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	~~CENO Cooper-Jal~~ F State	A	Dissolved Metals (6020/7000) Ca, Mg, Na, K
Work Order		Project Number	~~30122~~ 039127	B	Anions (300) Cl, F, SO4
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates	C	Nitrate (300)
Send Report To	~~Patricia Lynch~~ Desiree (Crenshaw)	Invoice Attn	Patricia Lynch	D	Alkalinity
Address	~~6320 Rothway, Suite 100~~ 2135 S Loop 250 W	Address	6320 Rothway, Suite 100	E	TDS
				F	BTEX
City/State/Zip	~~Houston, TX 77040~~ Midland, TX 79703	City/State/Zip	Houston, TX 77040	G	Chlorides
Phone	~~(713) 734-3090~~ 432 686 0086	Phone	(713) 734-3090	H	TPH GRO / DRO
Fax	~~(713) 734-3391~~ 432 686 0186	Fax	(713) 734-3391	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	RW-4 35-40'	5-31-11	1054	Soil	Ice	1						✓	✓	✓			
2	RW-4 55-60'	5-31-11	1104	Soil	Ice	1						✓	✓	✓			
3	RW-4 70-75'	5-31-11	1110	Soil	Ice	1						✓	✓	✓			
4													DC				
5													No Chlorides				
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: DC

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date: 6-2-11	Time: 1713	Received by:	
Relinquished by:	Date: 6-2-11	Time: 1714	Received by (Laboratory):	6/3/11 09:00
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes: 10 Day TAT. Chevron site.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)
☑ Level II Std QC ☐ TRRP CheckList
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and ... liability.
3. The Chain of Custody is a legal ... liability.

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-MID** Date/Time Received: **03-Jun-11 09:00**

Work Order: **1106114** Received by: **SAY**

Checklist completed by Robert D. Harris (eSignature) 03-Jun-11 (Date) Reviewed by: (eSignature) (Date)

Matrices: soils
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.1c	002	
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	_		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

110611K

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

CUSTODY SEAL

Date: 6-2-11 Time: 1115
Name: J Pricmota
Company: CRA

Seal Broken By: SH
Date: 6/3/11

This portion can be removed for Recipient's records.

FedEx Tracking Number 874196691861

er's e | Phone

pany

ess | Dept./Floor/Suite/Room

State | ZIP

r Internal Billing Reference

15-Jun-2011

Desiree Crenshaw
Conestoga-Rovers & Associates
2135 S Loop 250 West
Midland, TX 79703

Tel: (432) 686-0086
Fax: (432) 686-0186

Re: New Mexico -F- State -SSOW 039122 Work Order: **1106105**

Dear Desiree,

ALS Environmental received 10 samples on 03-Jun-2011 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 22.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Patricia L. Lynch

Electronically approved by: Makenzie L. Henderson

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 15-Jun-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
Work Order: **1106105**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1106105-01	MW-3 060211	Water		6/2/2011 11:52	6/3/2011 09:00	☐
1106105-02	MW-4 060211	Water		6/2/2011 12:18	6/3/2011 09:00	☐
1106105-03	MW-6 060211	Water		6/2/2011 13:40	6/3/2011 09:00	☐
1106105-04	MW-7 060211	Water		6/2/2011 12:35	6/3/2011 09:00	☐
1106105-05	MW-8 060211	Water		6/2/2011 13:12	6/3/2011 09:00	☐
1106105-06	WW-1 060211	Water		6/2/2011 13:50	6/3/2011 09:00	☐
1106105-07	WW-2 060211	Water		6/2/2011 13:55	6/3/2011 09:00	☐
1106105-08	Dup-1	Water		6/2/2011	6/3/2011 09:00	☐
1106105-09	Trip Blank	Water		6/2/2011	6/3/2011 09:00	☐
1106105-10	MW-5 060211	Water		6/2/2011 12:55	6/3/2011 09:00	☐

Client:	Conestoga-Rovers & Associates
Project:	New Mexico -F- State -SSOW 039122
Work Order:	1106105

Case Narrative

Batch R111450 BTEX (sample 1106451-01A): MS/MSD is for an unrelated sample.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-3 060211 **Lab ID:** 1106105-01

Collection Date: 6/2/2011 11:52 AM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	**0.00053**	J	**0.0010**	**mg/L**	1	6/15/2011 02:58 PM
Toluene	**0.00061**	J	**0.0010**	**mg/L**	1	6/15/2011 02:58 PM
Ethylbenzene	U		0.0010	mg/L	1	6/15/2011 02:58 PM
Xylenes, Total	U		0.0030	mg/L	1	6/15/2011 02:58 PM
Surr: 4-Bromofluorobenzene	*111*		*77-129*	*%REC*	1	6/15/2011 02:58 PM
Surr: Trifluorotoluene	*100*		*75-130*	*%REC*	1	6/15/2011 02:58 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**90.7**		**2.50**	**mg/L**	5	6/10/2011 04:10 PM
Surr: Selenate (surr)	*103*		*85-115*	*%REC*	5	6/10/2011 04:10 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-4 060211 **Lab ID:** 1106105-02

Collection Date: 6/2/2011 12:18 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	**0.00033**	J	**0.0010**	**mg/L**	1	6/14/2011 06:23 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 06:23 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 06:23 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 06:23 PM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	6/14/2011 06:23 PM
Surr: Trifluorotoluene	*98.8*		*75-130*	*%REC*	1	6/14/2011 06:23 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**49.8**		**2.50**	**mg/L**	5	6/10/2011 04:25 PM
Surr: Selenate (surr)	*96.1*		*85-115*	*%REC*	5	6/10/2011 04:25 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-6 060211 **Lab ID:** 1106105-03

Collection Date: 6/2/2011 01:40 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 06:43 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 06:43 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 06:43 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 06:43 PM
Surr: 4-Bromofluorobenzene	*109*		*77-129*	*%REC*	1	6/14/2011 06:43 PM
Surr: Trifluorotoluene	*101*		*75-130*	*%REC*	1	6/14/2011 06:43 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**215**		**2.50**	**mg/L**	5	6/10/2011 05:09 PM
Surr: Selenate (surr)	*96.0*		*85-115*	*%REC*	5	6/10/2011 05:09 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-7 060211 **Lab ID:** 1106105-04

Collection Date: 6/2/2011 12:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 07:36 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 07:36 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 07:36 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 07:36 PM
Surr: 4-Bromofluorobenzene	*109*		*77-129*	*%REC*	1	6/14/2011 07:36 PM
Surr: Trifluorotoluene	*108*		*75-130*	*%REC*	1	6/14/2011 07:36 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**69.4**		**2.50**	**mg/L**	5	6/10/2011 05:23 PM
Surr: Selenate (surr)	*96.2*		*85-115*	*%REC*	5	6/10/2011 05:23 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-8 060211 **Lab ID:** 1106105-05

Collection Date: 6/2/2011 01:12 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 07:56 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 07:56 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 07:56 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 07:56 PM
Surr: 4-Bromofluorobenzene	*105*		*77-129*	*%REC*	1	6/14/2011 07:56 PM
Surr: Trifluorotoluene	*101*		*75-130*	*%REC*	1	6/14/2011 07:56 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**51.8**		**2.50**	**mg/L**	5	6/10/2011 05:38 PM
Surr: Selenate (surr)	*102*		*85-115*	*%REC*	5	6/10/2011 05:38 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: WW-1 060211 **Lab ID:** 1106105-06

Collection Date: 6/2/2011 01:50 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 08:16 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 08:16 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 08:16 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 08:16 PM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	6/14/2011 08:16 PM
Surr: Trifluorotoluene	*101*		*75-130*	*%REC*	1	6/14/2011 08:16 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**73.6**		**2.50**	**mg/L**	5	6/10/2011 05:52 PM
Surr: Selenate (surr)	*98.2*		*85-115*	*%REC*	5	6/10/2011 05:52 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: WW-2 060211 **Lab ID:** 1106105-07

Collection Date: 6/2/2011 01:55 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 08:36 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 08:36 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 08:36 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 08:36 PM
Surr: 4-Bromofluorobenzene	*103*		*77-129*	*%REC*	1	6/14/2011 08:36 PM
Surr: Trifluorotoluene	*99.6*		*75-130*	*%REC*	1	6/14/2011 08:36 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**74.9**		**2.50**	**mg/L**	5	6/10/2011 06:07 PM
Surr: Selenate (surr)	*98.0*		*85-115*	*%REC*	5	6/10/2011 06:07 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: Dup-1 **Lab ID:** 1106105-08

Collection Date: 6/2/2011 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 08:56 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 08:56 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 08:56 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 08:56 PM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	6/14/2011 08:56 PM
Surr: Trifluorotoluene	*99.5*		*75-130*	*%REC*	1	6/14/2011 08:56 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**221**		**2.50**	**mg/L**	5	6/10/2011 06:21 PM
Surr: Selenate (surr)	*97.8*		*85-115*	*%REC*	5	6/10/2011 06:21 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *15-Jun-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1106105

Sample ID: MW-5 060211 **Lab ID:** 1106105-10

Collection Date: 6/2/2011 12:55 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	6/14/2011 09:16 PM
Toluene	U		0.0010	mg/L	1	6/14/2011 09:16 PM
Ethylbenzene	U		0.0010	mg/L	1	6/14/2011 09:16 PM
Xylenes, Total	U		0.0030	mg/L	1	6/14/2011 09:16 PM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	6/14/2011 09:16 PM
Surr: Trifluorotoluene	*101*		*75-130*	*%REC*	1	6/14/2011 09:16 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **TDW**
Chloride	**134**		**2.50**	**mg/L**	5	6/10/2011 06:36 PM
Surr: Selenate (surr)	*96.3*		*85-115*	*%REC*	5	6/10/2011 06:36 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R111402** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-061411-R111402** Units: **µg/L** Analysis Date: **6/14/2011 02:51 PM**

Client ID: Run ID: **BTEX1_110614A** SeqNo: **2423477** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	50								
Toluene	U	50								
Ethylbenzene	U	50								
Xylenes, Total	U	150								
Surr: 4-Bromofluorobenzene	*1547*	50	*1500*	0	*103*	*77-129*	0			
Surr: Trifluorotoluene	*1520*	50	*1500*	0	*101*	*75-130*	0			

MBLK Sample ID: **BBLKW1-061411-R111402** Units: **µg/L** Analysis Date: **6/14/2011 03:11 PM**

Client ID: Run ID: **BTEX1_110614A** SeqNo: **2423478** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*31.37*	1.0	*30*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*30.18*	1.0	*30*	0	*101*	*75-130*	0			

LCS Sample ID: **BLCSW1-061411-R111402** Units: **µg/L** Analysis Date: **6/14/2011 02:31 PM**

Client ID: Run ID: **BTEX1_110614A** SeqNo: **2423476** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	18.39	1.0	20	0	92	77-126	0			
Toluene	17.99	1.0	20	0	90	80-124	0			
Ethylbenzene	18.37	1.0	20	0	91.8	76-125	0			
Xylenes, Total	54.45	3.0	60	0	90.8	79-124	0			
Surr: 4-Bromofluorobenzene	*32.3*	1.0	*30*	0	*108*	*77-129*	0			
Surr: Trifluorotoluene	*30.75*	1.0	*30*	0	*102*	*75-130*	0			

MS Sample ID: **1106410-01AMS** Units: **µg/L** Analysis Date: **6/14/2011 05:03 PM**

Client ID: Run ID: **BTEX1_110614A** SeqNo: **2423483** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.77	1.0	20	0	88.9	77-126	0			
Toluene	18.31	1.0	20	0	91.6	80-124	0			
Ethylbenzene	18.1	1.0	20	0	90.5	76-125	0			
Xylenes, Total	54.34	3.0	60	0	90.6	79-124	0			
Surr: 4-Bromofluorobenzene	*32.67*	1.0	*30*	0	*109*	*77-129*	0			
Surr: Trifluorotoluene	*31.37*	1.0	*30*	0	*105*	*75-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106105
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111402** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1106410-01AMSD** Units: **µg/L** Analysis Date: **6/14/2011 05:23 PM**

Client ID: Run ID: **BTEX1_110614A** SeqNo: **2423484** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.56	1.0	20	0	82.8	77-126	17.77	7.08	20	
Toluene	17.85	1.0	20	0	89.3	80-124	18.31	2.52	20	
Ethylbenzene	17.65	1.0	20	0	88.3	76-125	18.1	2.48	20	
Xylenes, Total	53.04	3.0	60	0	88.4	79-124	54.34	2.43	20	
Surr: 4-Bromofluorobenzene	*32.86*	1.0	*30*	0	*110*	*77-129*	32.67	*0.573*	*20*	
Surr: Trifluorotoluene	*31.14*	1.0	*30*	0	*104*	*75-130*	31.37	*0.744*	*20*	

The following samples were analyzed in this batch:

1106105-02A	1106105-03A	1106105-04A
1106105-05A	1106105-06A	1106105-07A
1106105-08A	1106105-10A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106105
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111450** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **MEOHW1-061511-R111450** Units: **µg/L** Analysis Date: **6/15/2011 11:42 AM**
Client ID: Run ID: **BTEX1_110614B** SeqNo: **2424586** Prep Date: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	50								
Toluene	U	50								
Ethylbenzene	U	50								
Xylenes, Total	U	150								
Surr: 4-Bromofluorobenzene	*1581*	50	*1500*	0	*105*	*77-129*	0			
Surr: Trifluorotoluene	*1546*	50	*1500*	0	*103*	*75-130*	0			

MBLK Sample ID: **BBLKW1-061511-R111450** Units: **µg/L** Analysis Date: **6/15/2011 12:01 PM**
Client ID: Run ID: **BTEX1_110614B** SeqNo: **2424587** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*31.18*	1.0	*30*	0	*104*	*77-129*	0			
Surr: Trifluorotoluene	*29.72*	1.0	*30*	0	*99.1*	*75-130*	0			

LCS Sample ID: **BLCSW1-061511-R111450** Units: **µg/L** Analysis Date: **6/15/2011 11:22 AM**
Client ID: Run ID: **BTEX1_110614B** SeqNo: **2424585** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17.32	1.0	20	0	86.6	77-126	0			
Toluene	17.45	1.0	20	0	87.2	80-124	0			
Ethylbenzene	17.82	1.0	20	0	89.1	76-125	0			
Xylenes, Total	53.2	3.0	60	0	88.7	79-124	0			
Surr: 4-Bromofluorobenzene	*34.14*	1.0	*30*	0	*114*	*77-129*	0			
Surr: Trifluorotoluene	*32.39*	1.0	*30*	0	*108*	*75-130*	0			

MS Sample ID: **1106451-01AMS** Units: **µg/L** Analysis Date: **6/15/2011 03:18 PM**
Client ID: Run ID: **BTEX1_110614B** SeqNo: **2424749** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.72	1.0	20	0	78.6	77-126	0			
Toluene	16.06	1.0	20	0	80.3	80-124	0			
Ethylbenzene	16.26	1.0	20	0	81.3	76-125	0			
Xylenes, Total	48.34	3.0	60	0	80.6	79-124	0			
Surr: 4-Bromofluorobenzene	*31.85*	1.0	*30*	0	*106*	*77-129*	0			
Surr: Trifluorotoluene	*30.58*	1.0	*30*	0	*102*	*75-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106105
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111450** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1106451-01AMSD** Units: **µg/L** Analysis Date: **6/15/2011 03:38 PM**

Client ID: Run ID: **BTEX1_110614B** SeqNo: **2424752** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	15.31	1.0	20	0	76.6	77-126	15.72	2.62	20	S
Toluene	16.26	1.0	20	0	81.3	80-124	16.06	1.26	20	
Ethylbenzene	16.22	1.0	20	0	81.1	76-125	16.26	0.235	20	
Xylenes, Total	48.2	3.0	60	0	80.3	79-124	48.34	0.292	20	
Surr: 4-Bromofluorobenzene	*31.84*	1.0	*30*	0	*106*	*77-129*	31.85	*0.0404*	*20*	
Surr: Trifluorotoluene	*30.13*	1.0	*30*	0	*100*	*75-130*	30.58	*1.5*	*20*	

The following samples were analyzed in this batch: 1106105-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106105
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111300** Instrument ID **ICS2100** Method: **E300**

MBLK Sample ID: **WBLKW3-061011-R111300** Units: **mg/L** Analysis Date: **6/10/2011 02:03 PM**
Client ID: Run ID: **ICS2100_110610A** SeqNo: **2421159** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Surr: Selenate (surr)	*5.258*	0.10	*5*	0	*105*	*85-115*	0			

LCS Sample ID: **WLCSW3-061011-R111300** Units: **mg/L** Analysis Date: **6/10/2011 02:17 PM**
Client ID: Run ID: **ICS2100_110610A** SeqNo: **2421160** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.03	0.50	20	0	100	90-110	0			
Surr: Selenate (surr)	*4.936*	0.10	*5*	0	*98.7*	*85-115*	0			

LCSD Sample ID: **WLCSDW3-061011-R111300** Units: **mg/L** Analysis Date: **6/10/2011 02:32 PM**
Client ID: Run ID: **ICS2100_110610A** SeqNo: **2421161** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.62	0.50	20	0	98.1	90-110	20.03	2.1	20	
Surr: Selenate (surr)	*4.818*	0.10	*5*	0	*96.4*	*85-115*	4.936	*2.42*	*20*	

MS Sample ID: **1106105-10BMS** Units: **mg/L** Analysis Date: **6/10/2011 06:50 PM**
Client ID: **MW-5 060211** Run ID: **ICS2100_110610A** SeqNo: **2421178** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	187.7	2.5	50	133.5	108	80-120	0			
Surr: Selenate (surr)	*25.03*	0.50	*25*	0	*100*	*85-115*	0			

MS Sample ID: **1106281-06AMS** Units: **mg/L** Analysis Date: **6/10/2011 08:47 PM**
Client ID: Run ID: **ICS2100_110610A** SeqNo: **2421186** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1569	10	200	1386	91.5	80-120	0			O
Surr: Selenate (surr)	*98.46*	2.0	*100*	0	*98.5*	*85-115*	0			

MSD Sample ID: **1106105-10BMSD** Units: **mg/L** Analysis Date: **6/10/2011 07:05 PM**
Client ID: **MW-5 060211** Run ID: **ICS2100_110610A** SeqNo: **2421179** Prep Date: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	189.8	2.5	50	133.5	113	80-120	187.7	1.13	20	
Surr: Selenate (surr)	*25.32*	0.50	*25*	0	*101*	*85-115*	25.03	*1.14*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1106105
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R111300** Instrument ID **ICS2100** Method: **E300**

MSD Sample ID: **1106281-06AMSD** Units: **mg/L** Analysis Date: **6/10/2011 09:01 PM**

Client ID: Run ID: **ICS2100_110610A** SeqNo: **2421187** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1590	10	200	1386	102	80-120	1569	1.36	20	O
Surr: Selenate (surr)	*100.2*	2.0	*100*	0	*100*	*85-115*	98.46	*1.7*	*20*	

The following samples were analyzed in this batch:

1106105-01B	1106105-02B	1106105-03B
1106105-04B	1106105-05B	1106105-06B
1106105-07B	1106105-08B	1106105-10B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 15-Jun-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
WorkOrder: **1106105**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
mg/L	Milligrams per Liter

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page ____ of ____

COC ID: 32247

1106105

CRA-HOU: Conestoga-Rovers & Associates

Project: New Mexico "F" State

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	New Mexico "F" State	A	BTEX/MTBE(8021)
Work Order		Project Number	39122	B	Anions(300) Cl
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates	C	
Send Report To	Desiree Crenshaw	Invoice Attn	Desiree Crenshaw	D	
Address	6320 Rothway Ste. 100	Address	6320 Rothway, Suite 100	E	
				F	
City/State/Zip	Houston, TX 77040	City/State/Zip	Houston, TX 77040	G	
Phone	(713) 734-3090	Phone	(713) 734-3090	H	
Fax	(713) 264-6138	Fax	(713) 734-3301	I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-3 060211	6-2-11	1152	W		4	X	X									
2	MW-4 060211	6-2-11	1218			4	X	X									
3	MW-5 060211	6-2-11	1255			4	X	X									
4	MW-6 060211	6-2-11	1340			4	X	X									
5	MW-7 060211	6-2-11	1235			4	X	X									
6	MW-8 060211	6-2-11	1312			4	X	X									
7	WW-1 060211	6-2-11	1350			4	X	X									
8	WW-2 060211	6-2-11	1355			4	X	X									
9	Dup-1	6-2-11	—	X		4	X	X									
10																	

Sampler(s) Please Print & Sign: J. RIMERA

Shipment Method: FEDEX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	6-2-11	1701	
Relinquished by:	Date:	Time:	Received by (Laboratory):
			6.3.11 0900.
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.
3836.	

QC Package: (Check One Box Below)

☑ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Data ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other / EDD

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note:
1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-MID** Date/Time Received: **03-Jun-11 09:00**

Work Order: **1106105** Received by: **PMG**

Checklist completed by Raymond N Gamboa (eSignature) 03-Jun-11 (Date) Reviewed by: Patricia L. Lynch (eSignature) 06-Jun-11 (Date)

Matrices: Water
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6c	002	
Cooler(s)/Kit(s):	3896		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	_		

Login Notes: Trip blank not on COC--logged in without analysis.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order 11061C

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date: 6-2-
Name:
Company:

CUSTODY SEAL

Time: 1707
IL TRIMERA
CRA

Seal Broken By:
Date: 6-3-

This portion can be removed for recipient's records.

FedEx Tracking Number 875394692043

Recipient's Name Phone

Company

Address

Dept./Floor/Suite/Room

City State ZIP

Your Internal Billing Reference

11-Oct-2011

Desiree Crenshaw
Conestoga-Rovers & Associates
2135 S Loop 250 West
Midland, TX 79703

Tel: (432) 686-0086
Fax: (432) 686-0186

Re: New Mexico -F- State -SSOW 039122 Work Order: **1109942**

Dear Desiree,

ALS Environmental received 2 samples on 29-Sep-2011 02:10 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Patricia L. Lynch

Electronically approved by: Yvan K. Ty

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 11-Oct-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
Work Order: **1109942**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1109942-01	MW-6 092711	Water		9/27/2011 13:05	9/29/2011 14:10	☐
1109942-02	Trip Blank 092111-40	Water		9/27/2011	9/29/2011 14:10	☑

ALS Environmental

Date: *11-Oct-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1109942

Sample ID: MW-6 092711 **Lab ID:** 1109942-01

Collection Date: 9/27/2011 01:05 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **JFT**
Benzene	U		0.0010	mg/L	1	10/3/2011 09:02 PM
Toluene	U		0.0010	mg/L	1	10/3/2011 09:02 PM
Ethylbenzene	U		0.0010	mg/L	1	10/3/2011 09:02 PM
Xylenes, Total	U		0.0030	mg/L	1	10/3/2011 09:02 PM
Surr: 4-Bromofluorobenzene	*111*		*77-129*	*%REC*	1	10/3/2011 09:02 PM
Surr: Trifluorotoluene	*97.2*		*75-130*	*%REC*	1	10/3/2011 09:02 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**222**		**5.00**	**mg/L**	10	10/10/2011 10:47 PM
Surr: Selenate (surr)	*96.2*		*85-115*	*%REC*	10	10/10/2011 10:47 PM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R117080** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW2-111003-R117080** Units: **µg/L** Analysis Date: **10/3/2011 08:27 PM**

Client ID: Run ID: **BTEX1_111003B** SeqNo: **2546091** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*33.19*	1.0	*30*	0	*111*	*77-129*	0			
Surr: Trifluorotoluene	*29*	1.0	*30*	0	*96.7*	*75-130*	0			

LCS Sample ID: **BLCSW2-111003-R117080** Units: **µg/L** Analysis Date: **10/3/2011 07:53 PM**

Client ID: Run ID: **BTEX1_111003B** SeqNo: **2546089** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.38	1.0	20	0	107	77-126	0			
Toluene	18.48	1.0	20	0	92.4	80-124	0			
Ethylbenzene	18.77	1.0	20	0	93.8	76-125	0			
Xylenes, Total	56.13	3.0	60	0	93.5	79-124	0			
Surr: 4-Bromofluorobenzene	*33.45*	1.0	*30*	0	*112*	*77-129*	0			
Surr: Trifluorotoluene	*29.52*	1.0	*30*	0	*98.4*	*75-130*	0			

LCSD Sample ID: **BLCSDW2-111003-R117080** Units: **µg/L** Analysis Date: **10/3/2011 08:10 PM**

Client ID: Run ID: **BTEX1_111003B** SeqNo: **2546090** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.22	1.0	20	0	106	77-126	21.38	0.785	20	
Toluene	18.31	1.0	20	0	91.6	80-124	18.48	0.911	20	
Ethylbenzene	18.62	1.0	20	0	93.1	76-125	18.77	0.804	20	
Xylenes, Total	55.63	3.0	60	0	92.7	79-124	56.13	0.901	20	
Surr: 4-Bromofluorobenzene	*33.48*	1.0	*30*	0	*112*	*77-129*	33.45	*0.0735*	*20*	
Surr: Trifluorotoluene	*29.67*	1.0	*30*	0	*98.9*	*75-130*	29.52	*0.498*	*20*	

MS Sample ID: **1109984-01AMS** Units: **µg/L** Analysis Date: **10/3/2011 09:36 PM**

Client ID: Run ID: **BTEX1_111003B** SeqNo: **2546095** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.26	1.0	20	0.2238	100	77-126	0			
Toluene	17.22	1.0	20	0	86.1	80-124	0			
Ethylbenzene	17.27	1.0	20	0	86.4	76-125	0			
Xylenes, Total	51.86	3.0	60	0	86.4	79-124	0			
Surr: 4-Bromofluorobenzene	*33.66*	1.0	*30*	0	*112*	*77-129*	0			
Surr: Trifluorotoluene	*29.59*	1.0	*30*	0	*98.6*	*75-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1109942
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R117080** Instrument ID **BTEX1** Method: **SW8021B**

MSD Sample ID: **1109984-01AMSD** Units: **µg/L** Analysis Date: **10/3/2011 09:53 PM**

Client ID: Run ID: **BTEX1_111003B** SeqNo: **2546097** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.16	1.0	20	0.2238	105	77-126	20.26	4.34	20	
Toluene	18.06	1.0	20	0	90.3	80-124	17.22	4.73	20	
Ethylbenzene	18.08	1.0	20	0	90.4	76-125	17.27	4.55	20	
Xylenes, Total	54.14	3.0	60	0	90.2	79-124	51.86	4.29	20	
Surr: 4-Bromofluorobenzene	*33.35*	1.0	*30*	0	*111*	*77-129*	33.66	*0.911*	*20*	
Surr: Trifluorotoluene	*29.17*	1.0	*30*	0	*97.2*	*75-130*	29.59	*1.42*	*20*	

The following samples were analyzed in this batch: 1109942-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1109942
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R117445** Instrument ID **ICS3000** Method: **E300**

MBLK Sample ID: **WBLKW1-101011-R117445** Units: **mg/L** Analysis Date: **10/10/2011 03:29 PM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554520** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Surr: Selenate (surr)	*4.757*	0.10	*5*	0	*95.1*	*85-115*	0			

LCS Sample ID: **WLCSW1-101011-R117445** Units: **mg/L** Analysis Date: **10/10/2011 03:08 PM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554519** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.35	0.50	20	0	96.7	90-110	0			
Surr: Selenate (surr)	*4.95*	0.10	*5*	0	*99*	*85-115*	0			

LCSD Sample ID: **WLCSDW1-101011-R117445** Units: **mg/L** Analysis Date: **10/10/2011 03:50 PM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554521** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.45	0.50	20	0	97.3	90-110	19.35	0.526	20	
Surr: Selenate (surr)	*4.983*	0.10	*5*	0	*99.7*	*85-115*	4.95	*0.664*	*20*	

MS Sample ID: **1110139-06CMS** Units: **mg/L** Analysis Date: **10/10/2011 06:13 PM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554527** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	215.8	5.0	100	116.6	99.2	80-120	0			
Surr: Selenate (surr)	*49.19*	1.0	*50*	0	*98.4*	*85-115*	0			

MS Sample ID: **1110290-01FMS** Units: **mg/L** Analysis Date: **10/11/2011 12:33 AM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554545** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	28.13	0.50	10	18.42	97.2	80-120	0			
Surr: Selenate (surr)	*5.073*	0.10	*5*	0	*101*	*85-115*	0			

MSD Sample ID: **1110139-06CMSD** Units: **mg/L** Analysis Date: **10/10/2011 06:34 PM**
Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554528** Prep Date: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	215.3	5.0	100	116.6	98.7	80-120	215.8	0.204	20	
Surr: Selenate (surr)	*49.26*	1.0	*50*	0	*98.5*	*85-115*	49.19	*0.144*	*20*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1109942
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R117445** Instrument ID **ICS3000** Method: **E300**

MSD Sample ID: **1110290-01FMSD** Units: **mg/L** Analysis Date: **10/11/2011 12:54 AM**

Client ID: Run ID: **ICS3000_111010A** SeqNo: **2554546** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	28.38	0.50	10	18.42	99.7	80-120	28.13	0.881	20	
Surr: Selenate (surr)	*5.111*	0.10	*5*	0	*102*	*85-115*	5.073	*0.746*	*20*	

The following samples were analyzed in this batch: 1109942-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 11-Oct-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
WorkOrder: **1109942**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
mg/L	Milligrams per Liter

☐ ALS Laboratory Group
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

1109942

Page 1 of 1

CRA-MID: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	F State	A	BTEX 8021B
Work Order		Project Number	039122	B	Chloride E300.0
Company Name	CRA	Bill To Company	CRA	C	
Send Report To	Desiree Crenshaw	Invoice Attn	Claudia Ramos	D	
Address	2135 S. Loop 250W.	Address	6320 Rothway Suite 100	E	
				F	
City/State/Zip	Midland TX	City/State/Zip	Houston, TX 77040	G	
Phone	432-686-0086	Phone	713 734 3090	H	
Fax	432-686-0186	Fax		I	
e-Mail Address		e-Mail Address	cramos@craworld.com	J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-6 092711	9-27-11	1305	L			X	X									
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: Glenn Quinney

Shipment Method: DROP OFF

Required Turnaround Time: (Check Box) ☐ Other ____ ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

	Date:	Time:	
Relinquished by:			Received by:
Relinquished by:			Received by (Laboratory): 9/29/11 14:10
Logged by (Laboratory):			Checked by (Laboratory):

Notes:

Cooler ID	Cooler Temp

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other ____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.
2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-MID** Date/Time Received: **29-Sep-11 14:10**

Work Order: **1109942** Received by: **RNG**

Checklist completed by Johnnie B. Allen (eSignature) 29-Sep-11 (Date) Reviewed by: Nicole Brown (eSignature) 01-Oct-11 (Date)

Matrices: WATER
Carrier name: Client

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☑	Not Present ☐
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	2.4 C	002	
Cooler(s)/Kit(s):	4265		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

12-Dec-2011

Desiree Crenshaw
Conestoga-Rovers & Associates
2135 S Loop 250 West
Midland, TX 79703

Tel: (432) 686-0086
Fax: (432) 686-0186

Re: New Mexico -F- State -SSOW 039122 Work Order: **1112202**

Dear Desiree,

ALS Environmental received 10 samples on 06-Dec-2011 10:26 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 18.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Patricia L. Lynch

Electronically approved by: Mary K. Knowles

Patricia L. Lynch
Project Manager

Certificate No: T104704231-09A-TX

ALS Environmental

Date: 12-Dec-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
Work Order: **1112202**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1112202-01	MW-3 12211	Water		12/2/2011 12:35	12/6/2011 10:26	☐
1112202-02	MW-4 12211	Water		12/2/2011 12:55	12/6/2011 10:26	☐
1112202-03	MW-5 12211	Water		12/2/2011 13:15	12/6/2011 10:26	☐
1112202-04	MW-6 12211	Water		12/2/2011 13:45	12/6/2011 10:26	☐
1112202-05	MW-7 12211	Water		12/2/2011 14:10	12/6/2011 10:26	☐
1112202-06	MW-8 12211	Water		12/2/2011 14:40	12/6/2011 10:26	☐
1112202-07	WW-1 12211	Water		12/2/2011 15:05	12/6/2011 10:26	☐
1112202-08	WW-2 12211	Water		12/2/2011 15:20	12/6/2011 10:26	☐
1112202-09	DUP-1 12211	Water		12/2/2011	12/6/2011 10:26	☐
1112202-10	Trip Blank	Water		12/2/2011	12/6/2011 10:26	☑

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-3 12211 **Lab ID:** 1112202-01

Collection Date: 12/2/2011 12:35 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 09:17 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 09:17 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 09:17 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 09:17 PM
Surr: 4-Bromofluorobenzene	*104*		*77-129*	*%REC*	1	12/8/2011 09:17 PM
Surr: Trifluorotoluene	*99.8*		*75-130*	*%REC*	1	12/8/2011 09:17 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**85.0**		**2.50**	**mg/L**	5	12/10/2011 01:04 AM
Surr: Selenate (surr)	*91.8*		*85-115*	*%REC*	5	12/10/2011 01:04 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-4 12211 **Lab ID:** 1112202-02

Collection Date: 12/2/2011 12:55 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 10:09 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 10:09 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 10:09 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 10:09 PM
Surr: 4-Bromofluorobenzene	*105*		*77-129*	*%REC*	1	12/8/2011 10:09 PM
Surr: Trifluorotoluene	*104*		*75-130*	*%REC*	1	12/8/2011 10:09 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**142**		**2.50**	**mg/L**	5	12/10/2011 01:26 AM
Surr: Selenate (surr)	*93.3*		*85-115*	*%REC*	5	12/10/2011 01:26 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-5 12211 **Lab ID:** 1112202-03

Collection Date: 12/2/2011 01:15 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 10:27 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 10:27 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 10:27 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 10:27 PM
Surr: 4-Bromofluorobenzene	*100*		*77-129*	*%REC*	1	12/8/2011 10:27 PM
Surr: Trifluorotoluene	*99.1*		*75-130*	*%REC*	1	12/8/2011 10:27 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**172**		**5.00**	**mg/L**	10	12/10/2011 01:48 AM
Surr: Selenate (surr)	*92.9*		*85-115*	*%REC*	10	12/10/2011 01:48 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-6 12211 **Lab ID:** 1112202-04

Collection Date: 12/2/2011 01:45 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 10:44 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 10:44 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 10:44 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 10:44 PM
Surr: 4-Bromofluorobenzene	*102*		*77-129*	*%REC*	1	12/8/2011 10:44 PM
Surr: Trifluorotoluene	*99.2*		*75-130*	*%REC*	1	12/8/2011 10:44 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**198**		**5.00**	**mg/L**	10	12/10/2011 02:09 AM
Surr: Selenate (surr)	*93.5*		*85-115*	*%REC*	10	12/10/2011 02:09 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-7 12211 **Lab ID:** 1112202-05

Collection Date: 12/2/2011 02:10 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 11:01 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 11:01 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 11:01 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 11:01 PM
Surr: 4-Bromofluorobenzene	*102*		*77-129*	*%REC*	1	12/8/2011 11:01 PM
Surr: Trifluorotoluene	*97.7*		*75-130*	*%REC*	1	12/8/2011 11:01 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**76.6**		**2.50**	**mg/L**	5	12/10/2011 02:31 AM
Surr: Selenate (surr)	*93.0*		*85-115*	*%REC*	5	12/10/2011 02:31 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: MW-8 12211 **Lab ID:** 1112202-06

Collection Date: 12/2/2011 02:40 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 11:18 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 11:18 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 11:18 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 11:18 PM
Surr: 4-Bromofluorobenzene	*103*		*77-129*	*%REC*	1	12/8/2011 11:18 PM
Surr: Trifluorotoluene	*98.9*		*75-130*	*%REC*	1	12/8/2011 11:18 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**72.7**		**2.50**	**mg/L**	5	12/10/2011 02:53 AM
Surr: Selenate (surr)	*92.9*		*85-115*	*%REC*	5	12/10/2011 02:53 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: WW-1 12211 **Lab ID:** 1112202-07

Collection Date: 12/2/2011 03:05 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 11:36 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 11:36 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 11:36 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 11:36 PM
Surr: 4-Bromofluorobenzene	*103*		*77-129*	*%REC*	1	12/8/2011 11:36 PM
Surr: Trifluorotoluene	*98.1*		*75-130*	*%REC*	1	12/8/2011 11:36 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**50.2**		**2.50**	**mg/L**	5	12/10/2011 03:14 AM
Surr: Selenate (surr)	*92.8*		*85-115*	*%REC*	5	12/10/2011 03:14 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: WW-2 12211 **Lab ID:** 1112202-08

Collection Date: 12/2/2011 03:20 PM **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/8/2011 11:53 PM
Toluene	U		0.0010	mg/L	1	12/8/2011 11:53 PM
Ethylbenzene	U		0.0010	mg/L	1	12/8/2011 11:53 PM
Xylenes, Total	U		0.0030	mg/L	1	12/8/2011 11:53 PM
Surr: 4-Bromofluorobenzene	*101*		*77-129*	*%REC*	1	12/8/2011 11:53 PM
Surr: Trifluorotoluene	*99.8*		*75-130*	*%REC*	1	12/8/2011 11:53 PM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**76.5**		**2.50**	**mg/L**	5	12/10/2011 04:20 AM
Surr: Selenate (surr)	*93.4*		*85-115*	*%REC*	5	12/10/2011 04:20 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: *12-Dec-11*

Client: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122 **Work Order:** 1112202

Sample ID: DUP-1 12211 **Lab ID:** 1112202-09

Collection Date: 12/2/2011 **Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
BTEX			**SW8021B**			Analyst: **SMA**
Benzene	U		0.0010	mg/L	1	12/9/2011 12:10 AM
Toluene	U		0.0010	mg/L	1	12/9/2011 12:10 AM
Ethylbenzene	U		0.0010	mg/L	1	12/9/2011 12:10 AM
Xylenes, Total	U		0.0030	mg/L	1	12/9/2011 12:10 AM
Surr: 4-Bromofluorobenzene	*106*		*77-129*	*%REC*	1	12/9/2011 12:10 AM
Surr: Trifluorotoluene	*97.0*		*75-130*	*%REC*	1	12/9/2011 12:10 AM
ANIONS - EPA 300.0 (1993)			**E300**			Analyst: **JKP**
Chloride	**85.7**		**2.50**	**mg/L**	5	12/10/2011 04:41 AM
Surr: Selenate (surr)	*93.3*		*85-115*	*%REC*	5	12/10/2011 04:41 AM

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Batch ID: **R120377** Instrument ID **BTEX1** Method: **SW8021B**

MBLK Sample ID: **BBLKW2-111208-R120377** Units: **µg/L** Analysis Date: **12/8/2011 07:16 PM**

Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623157** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Methyl tert-butyl ether	U	5.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*30.07*	1.0	*30*	0	*100*	*77-129*	0			
Surr: Trifluorotoluene	*30.28*	1.0	*30*	0	*101*	*75-130*	0			

MBLK Sample ID: **BBLKW2-111208-R120377** Units: **µg/L** Analysis Date: **12/8/2011 07:33 PM**

Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623158** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Toluene	U	1.0								
Ethylbenzene	U	1.0								
Methyl tert-butyl ether	U	5.0								
Xylenes, Total	U	3.0								
Surr: 4-Bromofluorobenzene	*29.52*	1.0	*30*	0	*98.4*	*77-129*	0			
Surr: Trifluorotoluene	*30.41*	1.0	*30*	0	*101*	*75-130*	0			

LCS Sample ID: **BLCSW2-111208-R120377** Units: **µg/L** Analysis Date: **12/8/2011 06:42 PM**

Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623155** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.35	1.0	20	0	107	77-126	0			
Toluene	23.11	1.0	20	0	116	80-124	0			
Ethylbenzene	23.56	1.0	20	0	118	76-125	0			
Methyl tert-butyl ether	92.69	5.0	100	0	92.7	75-128	0			
Xylenes, Total	71.74	3.0	60	0	120	79-124	0			
Surr: 4-Bromofluorobenzene	*31.04*	1.0	*30*	0	*103*	*77-129*	0			
Surr: Trifluorotoluene	*31.46*	1.0	*30*	0	*105*	*75-130*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112202
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R120377** Instrument ID **BTEX1** Method: **SW8021B**

LCSD Sample ID: **BLCSDW2-111208-R120377** Units: **µg/L** Analysis Date: **12/8/2011 06:59 PM**
Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623156** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.7	1.0	20	0	109	77-126	21.35	1.65	20	
Toluene	21.68	1.0	20	0	108	80-124	23.11	6.38	20	
Ethylbenzene	20.94	1.0	20	0	105	76-125	23.56	11.8	20	
Methyl tert-butyl ether	92.88	5.0	100	0	92.9	75-128	92.69	0.199	20	
Xylenes, Total	62.46	3.0	60	0	104	79-124	71.74	13.8	20	
Surr: 4-Bromofluorobenzene	*30.06*	1.0	*30*	0	*100*	*77-129*	31.04	*3.23*	*20*	
Surr: Trifluorotoluene	*31.13*	1.0	*30*	0	*104*	*75-130*	31.46	*1.06*	*20*	

MS Sample ID: **1112239-02AMS** Units: **µg/L** Analysis Date: **12/8/2011 08:08 PM**
Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623160** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.83	1.0	20	0	109	77-126	0			
Toluene	23.76	1.0	20	0	119	80-124	0			
Ethylbenzene	24.34	1.0	20	0	122	76-125	0			
Methyl tert-butyl ether	89.06	5.0	100	0	89.1	75-128	0			
Xylenes, Total	72.35	3.0	60	0	121	79-124	0			
Surr: 4-Bromofluorobenzene	*30.84*	1.0	*30*	0	*103*	*77-129*	0			
Surr: Trifluorotoluene	*30.94*	1.0	*30*	0	*103*	*75-130*	0			

MSD Sample ID: **1112239-02AMSD** Units: **µg/L** Analysis Date: **12/8/2011 08:25 PM**
Client ID: Run ID: **BTEX1_111208E** SeqNo: **2623228** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	22.79	1.0	20	0	114	77-126	21.83	4.33	20	
Toluene	23.9	1.0	20	0	120	80-124	23.76	0.604	20	
Ethylbenzene	24.74	1.0	20	0	124	76-125	24.34	1.66	20	
Methyl tert-butyl ether	95.33	5.0	100	0	95.3	75-128	89.06	6.8	20	
Xylenes, Total	72	3.0	60	0	120	79-124	72.35	0.477	20	
Surr: 4-Bromofluorobenzene	*31.13*	1.0	*30*	0	*104*	*77-129*	30.84	*0.919*	*20*	
Surr: Trifluorotoluene	*30.99*	1.0	*30*	0	*103*	*75-130*	30.94	*0.162*	*20*	

The following samples were analyzed in this batch:

1112202-01A	1112202-02A	1112202-03A
1112202-04A	1112202-05A	1112202-06A
1112202-07A	1112202-08A	1112202-09A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Conestoga-Rovers & Associates
Work Order: 1112202
Project: New Mexico -F- State -SSOW 039122

QC BATCH REPORT

Batch ID: **R120413** Instrument ID **ICS3K2** Method: **E300**

MBLK Sample ID: **WBLKW1-120811-R120413** Units: **mg/L** Analysis Date: **12/9/2011 08:00 PM**
Client ID: Run ID: **ICS3K2_111209A** SeqNo: **2623784** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
Surr: Selenate (surr)	*4.254*	0.10	*5*	0	*85.1*	*85-115*	0			

LCS Sample ID: **WLCSW1-120811-R120413** Units: **mg/L** Analysis Date: **12/9/2011 08:22 PM**
Client ID: Run ID: **ICS3K2_111209A** SeqNo: **2623785** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.32	0.50	20	0	102	90-110	0			
Surr: Selenate (surr)	*4.926*	0.10	*5*	0	*98.5*	*85-115*	0			

LCSD Sample ID: **WLCSDW1-120811-R120413** Units: **mg/L** Analysis Date: **12/9/2011 08:44 PM**
Client ID: Run ID: **ICS3K2_111209A** SeqNo: **2623786** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.3	0.50	20	0	102	90-110	20.32	0.0788	20	
Surr: Selenate (surr)	*4.901*	0.10	*5*	0	*98*	*85-115*	4.926	*0.509*	*20*	

MS Sample ID: **1112178-01BMS** Units: **mg/L** Analysis Date: **12/9/2011 09:27 PM**
Client ID: Run ID: **ICS3K2_111209A** SeqNo: **2623788** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	57.08	0.50	10	46.7	104	80-120	0			O
Surr: Selenate (surr)	*4.679*	0.10	*5*	0	*93.6*	*85-115*	0			

MSD Sample ID: **1112178-01BMSD** Units: **mg/L** Analysis Date: **12/9/2011 09:49 PM**
Client ID: Run ID: **ICS3K2_111209A** SeqNo: **2623789** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	57.14	0.50	10	46.7	104	80-120	57.08	0.0876	20	O
Surr: Selenate (surr)	*4.671*	0.10	*5*	0	*93.4*	*85-115*	4.679	*0.171*	*20*	

The following samples were analyzed in this batch:

1112202-01B	1112202-02B	1112202-03B
1112202-04B	1112202-05B	1112202-06B
1112202-07B	1112202-08B	1112202-09B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 12-Dec-11

Client: Conestoga-Rovers & Associates
Project: New Mexico -F- State -SSOW 039122
WorkOrder: **1112202**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Units Reported	Description
mg/L	Milligrams per Liter

ALS Environmental

Chain of Custody

1112202

Page ____ of ____

COC ID: 4915

CRA-MID: Conestoga-Rovers & Associates

Project: New Mexico -F- State -SSOW 039122

ALS Project Manage

Lake City, UT 801 266 7700

ing City, PA 610 948 4903

k, PA 717 505 5280

Customer Information		Project Information	
Purchase Order		Project Name	New Mexico "F" Site
Work Order		Project Number	39122
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates
Send Report To	Desiree Crenshaw	Invoice Attn	Desiree Crenshaw
Address	2135 S Loop 250 West	Address	2135 S Loop 250 West
City/State/Zip	Midland, TX 79703	City/State/Zip	Midland, TX 79703
Phone	(432) 686-0086	Phone	(432) 686-0086
Fax	(432) 686-0186	Fax	(432) 686-0186
e-Mail Address		e-Mail Address	

A	BTEX (8021)
B	Anions (300) Cl
C	
D	
E	
F	
G	
H	
I	
J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-3 12211	12-2-11	1235	L	1	4	3	1									
2	MW-4 12211	12-2-11	1255	L	1	4	3	1									
3	MW-5 12211	12-2-11	1315	L	1	4	3	1									
4	MW-6 12211	12-2-11	1345	L	1	4	3	1									
5	MW-7 12211	12-2-11	1410	L	1	4	3	1									
6	MW-8 12211	12-2-11	1440	L	1	4	3	1									
7	WW-1 12211	12-2-11	1505	L	1	4	3	1									
8	WW-2 12211	12-2-11	1520	L	1	4	3	1									
9	DUP-1 12211	12-2-11		L	1	4	3	1									
10	Trip Blank			L													

Sampler(s) Please Print & Sign: Glenn Quinney

Shipment Method: FED EX

Required Turnaround Time: (Check Box) ☑ Std 10 WK Days ☐ 5 WK Days ☐ Other ____ ☐ 2 WK Days ☐ 24 Hour

Results Due Date:

Relinquished by: Date: 12-5-11 Time: 1700 Received by:

Relinquished by: Date: Time: Received by (Laboratory): 12/6/11 10:26

Logged by (Laboratory): Date: Time: Checked by (Laboratory):

Notes: 10 Day TAT.

Cooler ID	Cooler Temp.

QC Package: (Check One Box Below)

- ☑ Level II Std QC
- ☐ Level III Std QC/Raw Data
- ☐ Level IV SW846/CLP
- ☐ Other / EDD ____
- ☐ TRRP CheckList
- ☐ TRRP Level IV

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Environmental

Sample Receipt Checklist

Client Name: **CRA-MID** Date/Time Received: **06-Dec-11 10:26**

Work Order: **1112202** Received by: **RNG**

Checklist completed by Rishel D. Naran (eSignature) 07-Dec-11 (Date) Reviewed by: Hector Coronado (eSignature) 07-Dec-11 (Date)

Matrices: WATER
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.2	002	
Cooler(s)/Kit(s):	4621		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☑	N/A ☐
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

1112202.

This portion can be removed for Recipient's records.

e 12-5-11 FedEx Tracking Number 875882536588

der's ne Glenn Quincy Phone 432 686-0086

Company CRA

Address 2135 S Loop 250 W.

Dept./Floor/Suite/Room

Midland State TX ZIP 79703

ır Internal Billing Reference A39127

ALS Environmental
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Date:
Name
Comp

CUSTODY SEAL

12-5-11 Time: 1100

any: CRA

Seal Broken By:

Date:

APPENDIX B

SOIL BORING LOG

Project: F State

Client: CEMC

No. RW-4

File No.: 39122
Date: 5/31/2011
Drilling Co.: Harrison & Cooper
Supervisor: Ken Cooper
Type Rig: Air Rotary
Logged by: Brittany Ford

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 11:35 Finish Time: 12:10
											Red Clay
											Caliche
						6.7					
								5			Light tan/white, subangular gravel, limestone with silty sands
						16.5					
								10			Light tan/white, subangular gravel, limestone with silty sands and red clay; slight odor
						26.2					
								15			Stronger odor; Medium brown/ white,subangular to subrounded gravel, limestone with silty sands
						15.5					
								20			Subangular to subrounded limestone, light brown to white, odor, minus sands
						20.8					
								25			Limestone to sand, subrounded, light brown/ white; odor
						31.0					
								30			Silty sands with small pieces of limestone, stronger oder, light brown
						56.2					
								35			Yellowish tan silty sands
						(115)					
								40			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

▽ Water First Noted

(115) Analyzed Sample

SOIL BORING LOG

Project: F State

Client: CEMC

No. RW-4

File No.: 39122
Date: 5/31/2011
Drilling Co.: Harrison & Cooper
Supervisor: Ken Cooper
Type Rig: Air Rotary
Logged by: Brittany Ford

LABORATORY TEST DATA (Results Reported in mg/kg)						FIELD DATA				BORING DATA	
Benzene	Toluene	Ethyl-benzene	Xylenes	Total TPH (C6-C35)	Chlorides	Photo-Ionization Detection Reading (ppm)	Sampling	Depth (feet)	Water Level	Screen Interval	Start Time: 11:35 Finish Time: 12:10
											Medium/ dark brown, few rocks, strong odor, slightly moist
						80		45			Medium/ dark brown,little to no rock pieces,slightly moist
						58		50			Medium/dark brown, moist
						25		55	▽		Dark brown sandy clay with red clay
						(93)		60			Dark brown / black sands, slighly product impacted soils,
						78		65			Dark brown sands, slightly product impacted soils
						43		70			Slightly darker bown, traces of product impact
						(66)		75			
								80			

☒ Sampling Interval

Stratification is Inferred And May Not be Exact.
Soil Classification Based on Visual-Manual Procedure

▽ Water First Noted

( ) Analyzed Sample

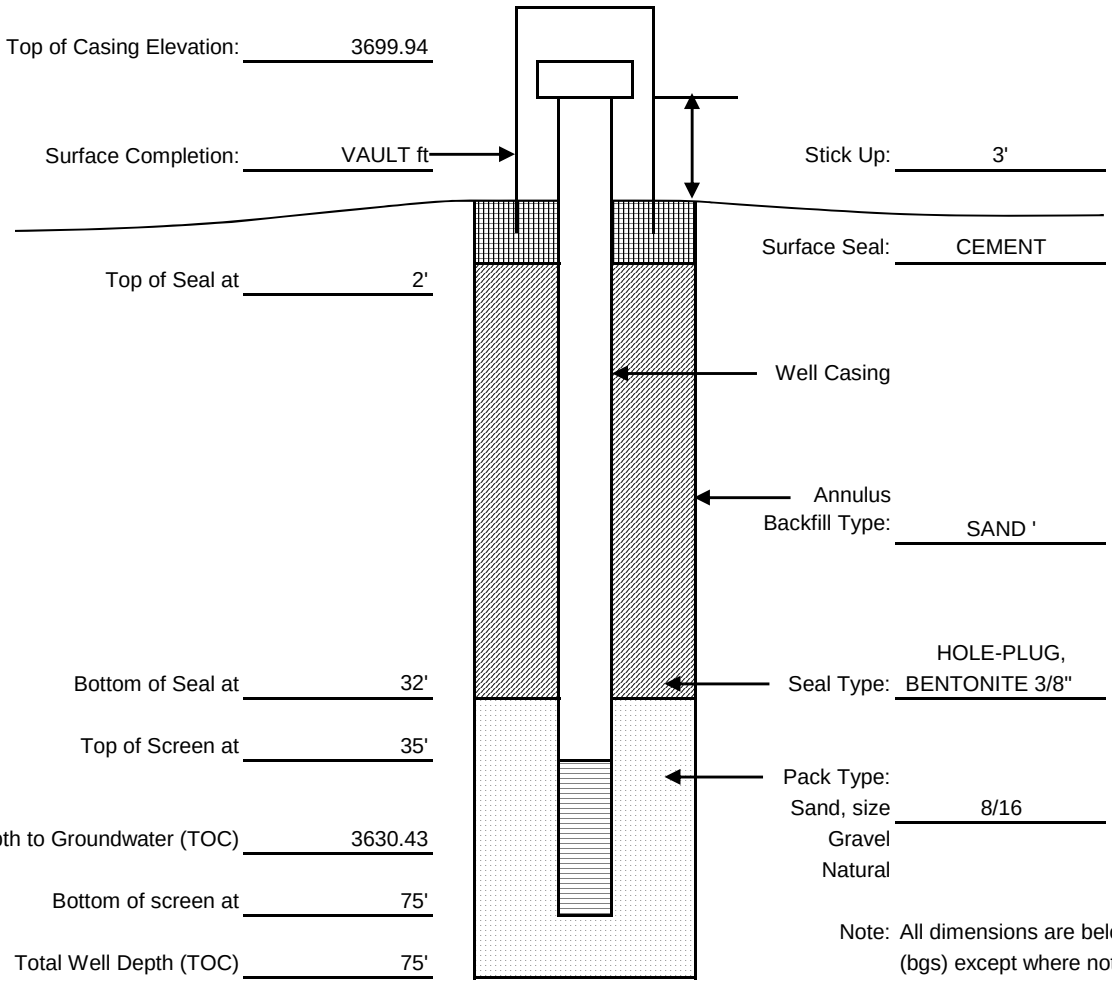
MONITORING WELL CONSTRUCTION DETAIL

Project: F State

Client: CEMC

No. RW-4

File No.: 39122
Date: 5/31/2011
Drilling Co.: Harrison and Cooper
Supervisor: Ken Cooper
Type Rig: Air Rotary
Logged by: Brittany Ford



Top of Casing Elevation: 3699.94

Surface Completion: VAULT ft

Stick Up: 3'

ground surface

Surface Seal: CEMENT

Top of Seal at 2'

Well Casing

Annulus Backfill Type: SAND '

Bottom of Seal at 32'

Seal Type: HOLE-PLUG, BENTONITE 3/8"

Top of Screen at 35'

Pack Type:
Sand, size 8/16
Gravel
Natural

Depth to Groundwater (TOC) 3630.43

Bottom of screen at 75'

Total Well Depth (TOC) 75'

Note: All dimensions are below ground surface (bgs) except where noted.

Screen Type: ☑ slotted ☐ perforated other:

Screen Material: ☐ stainless steel ☑ PVC other:

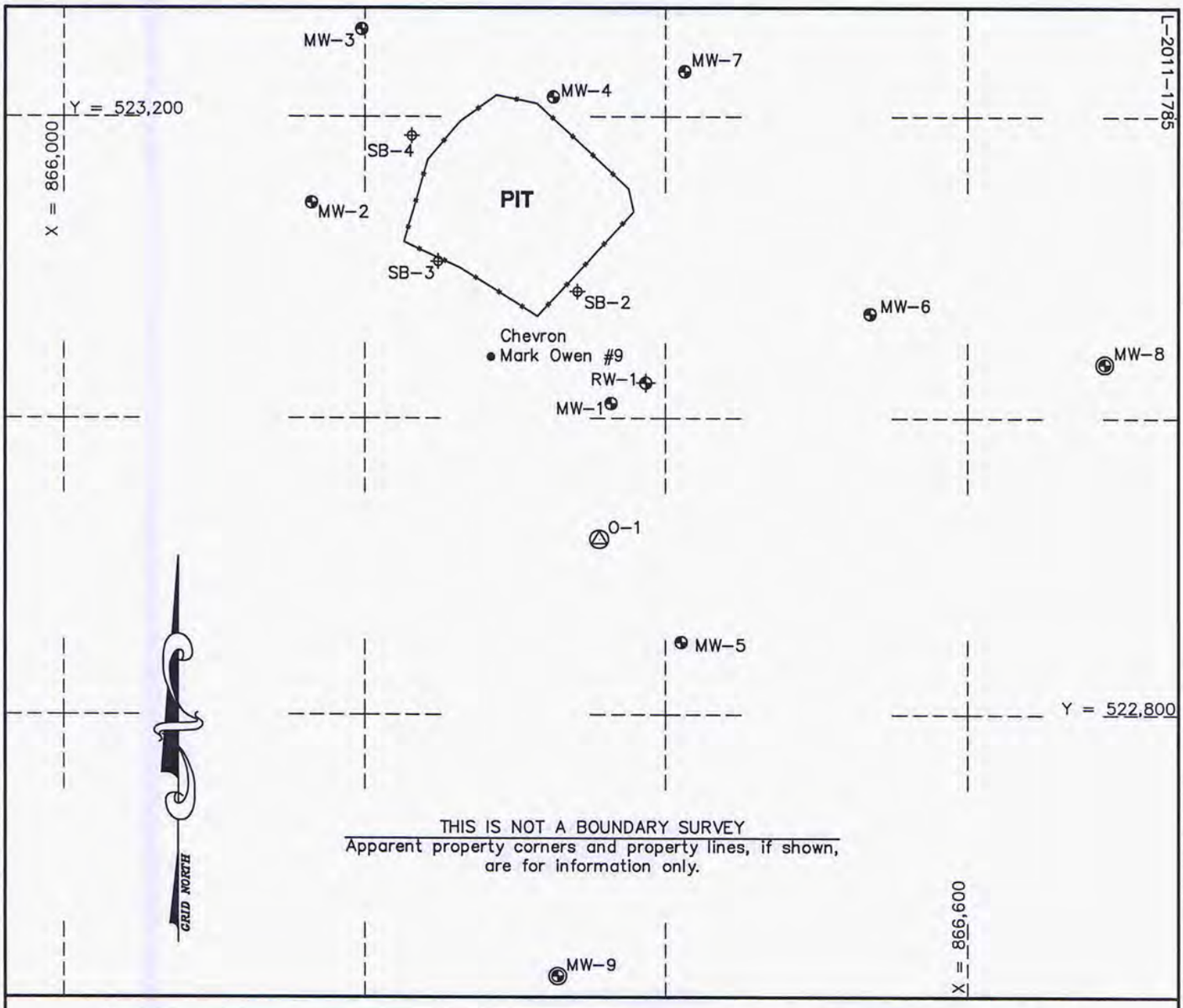
Screen Length: 40' Screen Diameter: 4 inches Screen Slot Size: 0.020 inches

Well Casing Material: PVC Well Casing Diameter:

Development - Method: bailer Hole Diameter:

Duration/Volume:

APPENDIX C



DESCRIPTION	NORTHING (Y)	EASTING (X)	LATITUDE	LONGITUDE	ELEVATION TOP OF CASING	ELEVATION CONCRETE PAD	ELEVATION NATURAL GROUND
MW-1	523,010.0	866,363.8	32°25'56.17" N	103°08'45.33" W	3,403.68	3,401.18	3,400.9
MW-2	523,142.9	866,164.8	32°25'57.51" N	103°08'47.64" W	3,408.23	3,405.66	3,405.5
MW-3	523,257.6	866,197.8	32°25'58.64" N	103°08'47.24" W	3,407.04	3,404.51	3,404.0
MW-4	523,213.0	866,325.2	32°25'58.19" N	103°08'45.76" W	3,404.74	3,401.94	3,401.5
MW-5	522,848.7	866,410.5	32°25'54.57" N	103°08'44.81" W	3,402.10	3,399.51	3,399.1
MW-6	523,069.5	866,535.4	32°25'56.74" N	103°08'43.32" W	3,400.24	3,397.28	3,396.8
MW-7	523,229.9	866,412.7	32°25'58.34" N	103°08'44.73" W	3,402.13	3,399.46	3,399.2
MW-8	523,036.4	866,692.0	32°25'56.40" N	103°08'41.50" W	3,397.24	3,394.73	3,394.4
MW-9	522,624.5	866,328.1	32°25'52.36" N	103°08'45.80" W	3,404.76	3,402.12	3,401.7
RW-1	523,023.8	866,386.9	32°25'56.31" N	103°08'45.06" W	3,403.03	3,400.40	3,399.9
SB-2	523,084.4	866,341.3	32°25'56.91" N	103°08'45.59" W			3,400.6
SB-3	523,104.3	866,248.6	32°25'57.12" N	103°08'46.67" W			3,401.5
SB-4	523,187.0	866,231.1	32°25'57.94" N	103°08'46.86" W			3,403.2
0-1	522,918.4	866,355.8	32°25'55.27" N	103°08'45.44" W			3,400.0

Date Surveyed: December 3, 2007,
October 8, 2010 and October 11, 2011

NOTE:

1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927.

2) Elevations shown hereon reference the National Geodetic Vertical Datum of 1929.

3) Geodetic Coordinates shown hereon references the North American Datum of 1927, (Clarke Spheroid of 1866). Reference Stations – "ODESSA RRP2" – CORS (DF5393), "ROSWELL" – and "ROSWELL" – CORS (DG6517) and "LUBBOCK RRP2" – CORS (DF5391).

LEGEND

- ● – Denotes Producing Well Location
- ◉ – Denotes Newly Installed Monitor Well
- ◉ – Denotes Monitor Well
- ⊕ – Denotes Recovery Well
- ⊕ – Denotes Soil Bore Location
- △ – Denotes Static GPS Control Station
- ——— – Denotes Fence Line

100 0 100 200

Graphic Scale in Feet

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION.

NEW MEXICO 12185 REGISTERED PROFESSIONAL SURVEYOR

MACON McDONALD NEW MEXICO P.L.S. No. 12185

WEST COMPANY
of Midland, Inc.
110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 – (432) 687-0868 FAX

CONESTOGA-ROVERS & ASSOCIATES

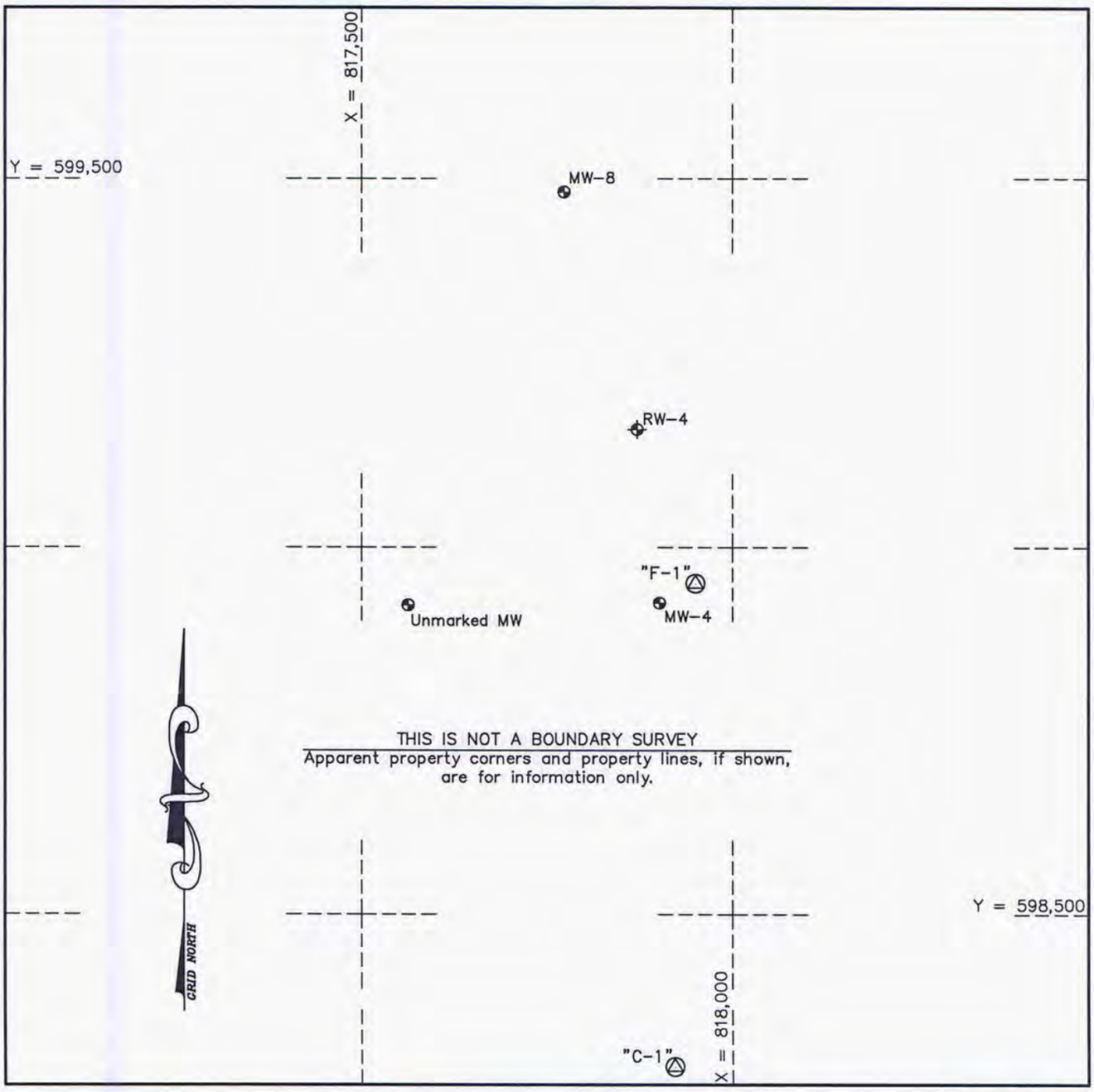
Topographic Survey of

MONITOR WELLS, RECOVERY WELLS AND SOIL BORE LOCATIONS

Located Around the
Chevron Mark Owen #9 Reserve Pit
Section 34, T-21-S, R-37-E, N.M.P.M.
Lea County, New Mexico

Drawn By: SJA	Date: October 24, 2011
Scale: 1" = 100'	Field Book: 376 / 25-28, 56-58, 489 / 70-72
Revision Date:	Quadrangles: Eunice
W.O. No: 2011-1785	Dwg. No.: L-2011-1785

L-2011-1786



DESCRIPTION	NORTHING (Y)	EASTING (X)	LATITUDE	LONGITUDE	ELEVATION TOP OF CASING	ELEVATION CONCRETE PAD	ELEVATION NATURAL GROUND
MW-4	598,924.7	817,902.0	32°38'32.27" N	103°18'02.11" W	3,700.63		
MW-8	599,481.9	817,773.4	32°38'37.80" N	103°18'03.55" W	3,696.77		
Unmarked MW	598,921.6	817,562.6	32°38'32.27" N	103°18'06.07" W	3,705.98		
RW-4	599,161.8	817,872.1	32°38'34.62" N	103°18'02.43" W	3,699.94	3,697.89	3,697.8
"C-1"	598,293.5	817,922.5	32°38'26.02" N	103°18'01.94" W			3,696.8
"F-1"	598,951.0	817,950.3	32°38'32.53" N	103°18'03.54" W			3,696.8

Date Surveyed: October 11, 2011
Weather: Warm & Breezy

NOTE:

1) Plane Coordinates shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927.

2) Elevations shown hereon reference the National Geodetic Vertical Datum of 1929.

3) Geodetic Coordinates shown hereon references the North American Datum of 1927, (Clarke Spheroid of 1866). Reference Stations – "ODESSA" – CORS (DL2764), "PECOS" – CORS (DM4167) and "ANDREWS" – CORS (DM4149).

LEGEND

⊕ – Denotes Recovery Well
△ – Denotes Static GPS Control Station

200 0 200 400
Graphic Scale in Feet

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION.

MACON McDONALD NEW MEXICO P.L.S. No. 12185

MACON McDONALD NEW MEXICO 12185 REGISTERED PROFESSIONAL SURVEYOR

WEST COMPANY
of Midland, Inc.
110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 – (432) 687-0868 FAX

CONESTOGA-ROVERS & ASSOCIATES

Topographic Survey of a

RECOVERY WELL

Located in Section 24
T-19-S, R-36-E, N.M.P.M.
Lea County, New Mexico

Drawn By: SJA	Date: October 25, 2011
Scale: 1" = 200'	Field Book: 489 / 70-72
Revision Date:	Quadrangles: Monument
W.O. No: 2011-1786	Dwg. No.: L-2011-1786

APPENDIX D

AcuVac Remediation Inc.

1656-H Townhurst, Houston, Texas 77043
713.468.6688 · fax:713.468.6689 · www.acuvac.com

June 13, 2011

Ms Desiree Crenshaw
Project Manager
Conestoga-Rovers & Associates
2135 S. Loop 250 W.
Midland, TX 79703

Dear Desiree:

Re: Event #1: "F" State Site, Lea County, NM
Project #039122

The following is the Report and a copy of the Operating Data collected during the Mobile Dual Phase (MDP) Event #1 at the above location on June 9, 2011. Table #1 is the Well Data Information on well RW-4. PSH is referred to as NAPL in this report. GW/NAPL samples are frequently taken in 2,000 ml beakers during each test period to determine the average NAPL percentage of total volume.

Summary of MDP Event #1 - Well RW-4

- The total Event time was 6.5 hours including static data time. The Event was terminated early due to a serious grass range fire in the general area. There is no comparative data.
- The contaminant is crude oil.
- The total GW/NAPL recovered was 1,580 gals of which 3.76% or 59.4 gals were liquid NAPL.
- Total NAPL vapors burned as IC engine fuel was 0.72 gals, **resulting in a total liquid and vapor NAPL recovery of 60.12 gals or 3.81%.**
- Average HORIBA Analytical Data from the influent vapor samples was:
  HC = 2,366 ppmv, CO_2 = 4.93%, CO = zero and O_2 = 15.3%.
- The Average Induced Vacuum was 26.9"H_2O and the average EW vapor flow was 18.85 scfm.
- The GW/NAPL pump was initially set at 67.0 ft BTOC and the average GW pump rate was 3.0 gpm. Due to the high liquid volume and decreasing NAPL recovery, the GW/NAPL pump was reset at 62.5 ft BTOC. The average pump rate during the Event was 4.25 gpm.
- The average GW depression was estimated at 2.0 ft below static level. This estimate is based on the GW pump position and GW/NAPL rate.
- At the start of Event #1, the static NAPL level was 3.45 ft and 0.07 ft of NAPL were recorded at the conclusion of the Event.

Additional information:

- Well RW-4 produced a high liquid volume when an induced vacuum was placed on the well. In order to continue to recover NAPL, the GW/NAPL pump rate was increased from 3.0 to 4.0 to 5.0 and finally to 6.0 gpm. Additionally, the vacuum and pump were cycled ON and OFF during each 0.5 hours to minimize the liquid upwelling and maximize the liquid NAPL recovery.
- The liquid NAPL recovery rate decreased from 10% to 2% of the total recovered liquid volume during the Event period.

Summary and Observations:

During each future Event, the test data will be compared to the previous Event to evaluate the progress for this remediation project.

The HORIBA Analytical instrument is used to record the TPH up to 100,000 ppmv, CO_2 and CO up to 25% and O_2 up to 20.9%. The HORIBA is calibrated with Hexane (mole weight = 86), CO_2 and CO.

The formula used to calculate the Emission Rate is:

$$ER = HC\ (ppmv) \times MW\ (Hexane) \times Flow\ Rate\ (scfm) \times 1.58E^{-7} \frac{(min)(lb\ mole)}{(hr)(ppmv)(ft^3)} = lbs/hr$$

The total NAPL removed including liquid and vapor, during the 6.0 hour Event #1 (well RW-4), was 60.12 gals or 3.81% of the total liquid volume of 1,580 gals. This equates to a NAPL recovery of 10.02 gals/hr.

We can tentatively schedule Event #2 for July 20 or 21, 2011 following the Pilot Test/Event at Kermit Gas Plant.

We appreciate the opportunity to have conducted this service for CRA. If you should have any questions, please contact me.

Sincerely,

James E. Sadler, VP
Engineering/Environmental

110023.REP

Well and Recovery Data Information - Event #1
June 9, 2011

EVENT NO. 1		
WELL NO.		**RW-4**
Total Event Hours		6.0
TD	ft	75.0
Well Size	in	4.0
DTGW - Static - Start Event #1	ft	62.79
DTNAPL - Static - Start Event #1	ft	59.34
NAPL	ft	3.45
DTGW - End Event #1	ft	58.82
DTNAPL - End Event #1	ft	59.75
NAPL	ft	0.07
Average Extraction Well Vacuum	"H_2O	29.9
Average Extraction Well Vapor Flow	scfm	18.85
Average GW/NAPL Pump Rate	gpm	4.25
Average TPH	ppmv	23.66
Average CO_2	%	4.93
Average CO	%	0
Average O_2	%	15.3
Total Liquid Volume Recovered	gals	1,580
Total Liquid NAPL Recovered	gals	59.4
Total Liquid NAPL Recovered	%	3.76
Total Vapor and Liquid NAPL Recovered	gals	60.12
Total NAPL Recovered	%	3.81
Total NAPL Recovered	lbs	421
Total Volume of Well Vapors	cu.ft	6,786

110023.REP

OPERATING DATA - EVENTS # 1 PAGE # 1

ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE SITE - LEA COUNTY, NM Project Engineer: SAUER / LANGFORD

	Date:	6-9-11	-	-	-	-	-
	Parameters	Time 0800	Time 0830	Time 0900	Time 1000	Time 1030	Time 1100
	WELL RW-4	Hr Meter 1202.5	Hr Meter 1203.0	Hr Meter 1203.5	Hr Meter 1204.0	Hr Meter 1204.5	Hr Meter 1205.0
ENGINE/BLOWER	R.P.M.	1800	1800	1800	1800	1800	1800
	Oil Pressure psi	50	50	50	50	50	50
	Water Temp °F	160	160	160	160	160	160
	Volts	13	13	13	13	13	13
	Intake Vacuum "Hg	19	19	19	19	19	19
	Gas Flow Fuel/Propane cfh	130	130	130	130	130	130
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	ON	ON	ON	ON	ON
	Extraction Well Flow RW-4 scfm	18.22	18.22	18.22	18.22	18.22	18.22
	Extraction Well Vacuum RW-4 "H_2O	25	25	25	25	25	25
	Pump Rate RW-4 gals/min	3.0	3.0	3.0	3.0	4.0	4.0
	Total Volume RW-4 gals	-	90	180	270	360	480
	Influent Vapor Temp. °F	72	72	72	72	72	72
	Air Temperature °F	82.3	85.6	89.5	91.4	93.9	95.2
	Barometric Pressure "Hg	30.08	30.09	30.09	30.09	30.09	30.08
VAPOR/ INFLUENT	HC RW-4 ppmv	1204	-	858	-	926	-
	CO_2 / CO %	2.8 / 0	-	2.6 / 0	-	2.2 / 0	-
	O_2 %	18.7	-	18.9	-	18.9	-
NOTES	INITIAL EW induced vacuum set @ 25" H_2O, Vapor well flow = 18.22 scfm EW/NAPL pump rate @ 3.0 gpm - Initial heavy NAPL recovery 0945 Hrs - Shut off pump - Increased EW vacuum = 50" H_2O 0955 Hrs - Restart pump - Heavy NAPL - 1000 Hrs - Increased EW/NAPL = 4.0 gpm - 1100 Hrs - Relocated EW/NAPL pump to 63.0' BTOC						
	NOTE: TANK GAUGE - 1.0" = 33.3 gals TOTAL NAPL = 28.2 gals						
	NAPL % / Vol RW-4 / Gals		10 / 9.0	6 / 5.4	5 / 4.5	5 / 4.5	4 / 4.8
MANIFOLD	Data Logger ft	N/A	-	-	-	-	-
	Depth of GW Depression RW-4 ft	-2.0	-3.0	-3.0	-3.0	-2.0	-2.0
	Extraction Well DTNAPL RW-4 ft	59.39					
	Extraction Well DTGW RW-4 ft	62.74					

( ) Indicates Well Pressure

SP GR = 0.85 NAPL: 3.45'

HE: 59.86'

OPERATING DATA - EVENTS # 1 PAGE # 2

ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE - LEA COUNTY, NM

Project Engineer: SANDEN/WOODRUFF

	Parameters						
	Date:	6-9-11	-	-	-	-	-
		Time 1100	Time 1130	Time 1200	Time 1230	Time 1300	Time 1330
	WELL # RW-4	Hr Meter 1205.5	Hr Meter 1206.0	Hr Meter 1206.5	Hr Meter 1207.0	Hr Meter 1207.5	Hr Meter 1208.0
ENGINE/BLOWER	R.P.M.	1800	1800	1800	1800	1800	1800
	Oil Pressure psi	50	50	50	50	50	50
	Water Temp °F	165	170	170	170	170	170
	Volts	13	13	13	13	13	13
	Intake Vacuum "Hg	19	19	17	17	17	17
	Gas Flow Fuel/Propane cfh	130	130	130	130	130	130
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	ON	ON	ON	ON	ON
	Extraction Well Flow RW-4 scfm	18.22	18.22	22.43	22.43	22.43	22.43
	Extraction Well Vacuum RW-4 "H_2O	25	25	30	30	30	30
	Pump Rate RW-4 gals/min	4.0	4.0	5.0	5.0	5.0	5.0
	Total Volume RW-4 gals	600	720	870	1020	1170	1320
	Influent Vapor Temp. RW-4 °F	73	73	73	74	74	74
	Air Temperature °F	96.0	97.8	98.7	99.8	100.4	102.3
	Barometric Pressure "Hg	30.08	30.07	30.07	30.06	30.06	30.05
VAPOR/ INFLUENT	HC RW-4 ppmv	892	-	4290	-	4180	-
	CO_2 / CO %	1.96/0	-	8.92/0	-	8.76/0	-
	O_2 %	14.1	-	11.6	-	10.4	-
NOTES	EW vacuum and well flow steady @ 25" H_2O, 18.22scfm - GW/NAPL = 4.0 gpm						
	1130 HRS - INCREASED EW vacuum = 30" H_2O, UWF = 25scfm						
	GW/NAPL = 500 gpm 1330HRS INCREASED GW/NAPL = 600 gpm						
	NOTE - H_2S - INFLUENT VAPOR - 1 ppm NAPL = 276 gals						
	NAPL % / Vol RW-4 / Gals	4/4.8	4/4.8	4/60	3/4.5	3/4.5	2/3.0
MANIFOLD	Data Logger ft	N/A	-	-	-	-	-
	Depth of GW Depression RW-4 ft	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
	Extraction Well DTNAPL ft						
	Extraction Well DTGW ft						

( ) Indicates Well Pressure

OPERATING DATA - EVENTS # 1 PAGE # 3

ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE SITE - LEA COUNTY, NM Project Engineer: SANDLIN / LUNDGREN

	Date:	6-9-11	-				
	Parameters	Time 1400	Time 1430	Time	Time	Time	Time
	WELL 4 - RW-4	Hr Meter 1208.5	Hr Meter 1209.0	Hr Meter	Hr Meter	Hr Meter	Hr Meter
ENGINE/BLOWER	R.P.M.	1800	1000				
	Oil Pressure psi	50	50				
	Water Temp °F	170	170				
	Volts	13	13				
	Intake Vacuum "Hg	17	19				
	Gas Flow Fuel/Propane cfh	130	90				
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	OFF				
	Extraction Well Flow RW-4 scfm	22.43	OFF				
	Extraction Well Vacuum RW-4 "H_2O	30	OFF				
	Pump Rate RW-4 gals/min	6.0	OFF				
	Total Volume RW-4 gals	1500	1580				
	Influent Vapor Temp RW-4 °F	74	N/A				
	Air Temperature °F	104.0	105.6				
	Barometric Pressure "Hg	30.04	30.03				
VAPOR/ INFLUENT	HC RW-4 ppmv	4,160	-				
	CO_2 / CO %	7.96/0	-				
	O_2 %	9.8	-				

NOTES

EW induced vacuum and UWF steady @ 30" H_2O, 22.43 scfm GW/NAPL pump rate @ 6.0 gpm - NAPL @ 2% of volume

1405 HRS - Event stopped due to range fire in general area - start demobilization

1430 HRS - Gauged well (RW-4)

1450 HRS - Demobilization completed - Secured well, all equipment loaded - Departed site - NAPL = 3 bbls

	NAPL % / Vol RW-4 / Gals	2/3.6	-				
MANIFOLD	Data Logger ft	N/A	-				
	Depth of GW Depression RW-4 ft	-2.0	-				
	Extraction Well DTNAPL RW-4 ft		59.75				
	Extraction Well DTGW RW-4 ft		59.82				

( ) Indicates Well Pressure

Op.Data.MDP.10./NAPL

NAPL = 0.07'

HE = 59.76

AcuVac Remediation Inc.

1656-H Townhurst, Houston, Texas 77043
713.468.6688 · fax:713.468.6689 · www.acuvac.com

July 22, 2011

Ms Desiree Crenshaw
Project Manager
Conestoga-Rovers & Associates
2135 S. Loop 250 W.
Midland, TX 79703

Dear Desiree:

Re: Event #2: "F" State Site, Lea County, NM

The following is the Report and a copy of the Operating Data collected during the Mobile Dual Phase (MDP) Event #2 at the above location on July 20, 2011. Table #1 is the Well Data Information on well RW-4. PSH is referred to as NAPL in this report. GW samples are frequently taken in 2,000 ml beakers to determine the average NAPL percentage and volume.

Summary of MDP Event #2 - Well RW-4

The total Event time was 8.0 hours. The data is compared to Event #1 conducted on June 9, 2011 which had a total Event time of 6.5 hours.

- The total GW/NAPL recovered was 2,085 gals of which 2.45% or 51.0 gals were NAPL.
- Total NAPL burned as IC engine fuel was 5.60 gals, **resulting in a total liquid and vapor NAPL recovery of 56.6 gals, or 2.71%. This equates to 7.08% gal/hr, which is a decrease of 2.94 gals/hr.**
- Average HORIBA Analytical Data from the influent vapor samples was: HC = 4,616 ppmv, CO_2 = 8.48%, CO = 0% and O_2 = 9.4%.
- Compared with MDP Event #1 data, the TPH levels increased 2,250 ppmv, CO_2 increased 3.51%, CO was equal and O_2 decreased 5.9%.
- The Average Induced Vacuum was 30.6"H_2O and the average EW vapor flow was 22.34 scfm. The average induced vacuum increased 3.7"H_20 and the average well flow increased 3.99 scfm.
- The GW pump was set at 63.0 ft BTOC. The average GW pump rate was 4.32 gpm. The average GW pump rate increased 0.07 gpm.
- The average GW depression was estimated at 2.0 ft below static level which was equal. This estimate is based on the GW pump position and GW rate.

- At the start of Event #2, the static NAPL level was 5.57 ft and 0.02 ft of NAPL were recorded at the conclusion of the Event. The static GW level decreased 0.86 ft based on hydro-equivalent.

Summary and Observations:

During each Event, the test data will be compared to the previous Event to evaluate the progress for this remediation project.

The HORIBA Analytical instrument is calibrated with HEXANE and CO_2.

The formula used to calculate the Emission Rate is:

$$ER = HC\ (ppmv) \times MW\ (Hexane) \times Flow\ Rate\ (scfm) \times 1.58E^{-7} \frac{(min)(lb\ mole)}{(hr)(ppmv)(ft^3)} = lbs/hr$$

The total NAPL removed, including liquid and vapor, during the 8 hour Event #2 (Well RW-4), was 56.6 gals, or 2.71% of the total liquid volume of 2,085 gals. This equates to 7.08 gals/hr.

During the two Events totaling 14 hours, the total NAPL removed, including liquid and vapor, equals 116.7 gals, or 3.18% of a total liquid volume of 3,665 gals. This equates to a NAPL recovery rate of 8.34 gals/hr.

Additional Information:

- During the Event, the average EW induced vacuum was increased to 30.6"H_2O as compared to 26.9"H_2O during Event #1. The increase in vacuum increased the liquid upwelling. In order to recover NAPL, the induced vacuum was cycled from a high of 60"H_2O, to a low of 20"H_2O each 15 minute period. This allowed the recovery of liquid NAPL without increasing the liquid pump rate. The NAPL is a high viscosity crude oil which makes it difficult to establish a constant flow from the surrounding formation.
- An additional Event should be considered in approximately 60 to 90 days.

Gauging Information, Well RW-2					
Time	0645	0845	1045	1245	1445
DTNAPL ft	58.86	59.26	59.29	59.31	59.32
DTGW ft	62.06	62.96	62.93	62.83	63.02
NAPL ft	3.20	3.60	3.64	3.52	3.70
HE ft	59.34	59.90	59.84	59.84	59.87
Drawdown ft	0	-0.56	-0.50	-0.50	-0.53

HE = Hydro Equivalent

Should you have any questions, please contact me.

James E. Sadler, VP
Engineering/Environmental

110033.REP

Well and Recovery Data Information - Event #2

July 20, 2011

EVENT NO. 2		
WELL NO.		**RW-4**
Total Event Hours		8.0
TD	ft	75.0
Well Size	in	4.0
DTGW - Static - Start Event #2	ft	65.45
DTNAPL - Static - Start Event #2	ft	59.88
NAPL	ft	5.57
DTGW - End Event #2	ft	60.19
DTNAPL - End Event #2	ft	60.17
NAPL	ft	0.02
Average Extraction Well Vacuum	"H_2O	30.6
Average Extraction Well Vapor Flow	scfm	22.34
Average GW/NAPL Pump Rate	gpm	4.32
Average TPH	ppmv	4,616
Average CO_2	%	8.48
Average CO	%	0
Average O_2	%	9.4
Total Liquid Volume Recovered	gals	2,085
Total Liquid NAPL Recovered	gals	51.0
Total Liquid NAPL Recovered	%	2.45
Total Vapor and Liquid NAPL Recovered	gals	56.6
Total NAPL Recovered	%	2.71
Total NAPL Recovered	lbs	396
Total Volume of Well Vapors	cu.ft	10,723

OPERATING DATA - EVENT # 2 PAGE # 1

ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE SITE - LEA COUNTY, NM Project Engineer: SADLER / LUNDBERG

	Parameters						
	Date:	7-20-11	-	-	-	-	-
		Time 0645	Time 0715	Time 0745	Time 0815	Time 0845	Time 0915
	WELL - RW-4	Hr Meter 5773.5	Hr Meter 5774.0	Hr Meter 5774.5	Hr Meter 5775.0	Hr Meter 5775.5	Hr Meter 5776.0
ENGINE/BLOWER	R.P.M.	1800	1800	1800	1800	1800	1800
	Oil Pressure psi	50	50	50	50	50	50
	Water Temp °F	140	160	160	160	160	160
	Volts	13	13	13	13	13	13
	Intake Vacuum "Hg	19	19	19	19	19	19
	Gas Flow Fuel/Propane cfh	110	110	110	110	110	110
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	ON	ON	ON	ON	ON
	Extraction Well Flow RW-4 scfm	18.25	18.25	18.25	18.25	18.25	18.25
	Extraction Well Vacuum RW-4 "H_2O	25	25	25	25	25	25
	Pump Rate RW-4 gals/min	4.0	4.0	4.0	4.0	4.0	4.0
	Total Volume RW-4 gals	-	120	240	360	480	600
	Influent Vapor Temp. °F	71	71	71	71	71	71
	Air Temperature °F	76.4	76.8	79.0	83.6	85.2	87.2
	Barometric Pressure PLUS 26.75 "Hg	30.12	30.12	30.12	30.13	30.13	30.13
VAPOR/ INFLUENT	HC RW-4 ppmv	3160	-	3970	-	4160	-
	CO_2 / CO %	7.44 / 0	-	8.26 / 0	-	8.24 / 0	-
	O_2 % / H_2O ppm	10.2 / 1	-	10.8 / 1	-	9.3 / 0	-
NOTES	SET NAPL/GW pump AT 63 ft BTOC & Initial RW induced Vacuum @ 25 " H_2O = Vapor Well Flow (VWF) = 18.25 scfm - Pump Rate (PR) = 4.0 gpm Gals Ues - Increased RW Vacuum = 30 " H_2O, VWF = 22.48 scfm GW pump @ 4.0 gpm						
	NOTE: TANK GAUGE = 1" = 210.8 gals						
	NAPL % / Vol / Gals	-	8 / 9.6	6 / 7.2	2 / 2.4	2 / 2.4	2 / 2.4
MANIFOLD	Data Logger ft	N/A	-	-	-	-	-
	Depth of GW Depression ft	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
	Extraction Well DTNAPL ft	59.88					
	Extraction Well DTGW ft	65.45					

( ) Indicates Well Pressure

Op.Data.MDP 10/NAPL

5.57

NE = 60.72

OPERATING DATA - EVENT # 2 PAGE # 2 — ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE SITE - LEA COUNTY, NM — Project Engineer: SADLER / LUNDGREN

	Date:	7-20-11	"	"	"	"	"
	Parameters	Time 0945 / Hr Meter 5776.5	Time 1015 / Hr Meter 5777.0	Time 1045 / Hr Meter 5777.5	Time 1115 / Hr Meter 5778.0	Time 1145 / Hr Meter 5778.5	Time 1215 / Hr Meter 5779.0
	WELL RW-4						
ENGINE/BLOWER	R.P.M.	1800	1800	1800	1800	1800	1800
	Oil Pressure psi	50	50	50	50	50	50
	Water Temp °F	165	165	165	165	170	170
	Volts	13	13	13	13	13	13
	Intake Vacuum "Hg	19	19	19	19	19	19
	Gas Flow Fuel/Propane cfh	110	110	110	110	110	110
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	ON	ON	ON	ON	ON
	Extraction Well Flow scfm	22.48	22.48	22.48	22.48	22.48	22.48
	Extraction Well Vacuum "H_2O	30	30	30	30	30	30
	Pump Rate gals/min	4.5	4.5	4.5	4.5	4.5	4.5
	Total Volume gals	735	870	1005	1140	1275	1410
	Influent Vapor Temp. °F	71	71	71	71	71	71
	Air Temperature °F	88.3	90.0	93.7	94.7	98.0	98.4
	Barometric Pressure "Hg	30.14	30.14	30.13	30.12	30.12	30.10
VAPOR/ INFLUENT	HC ppmv	4230	"	5020	"	5230	"
	CO_2 / CO %	8.26 / 0	"	9.10 / 0	"	8.86 / 0	"
	O_2 % / H_2S ppm	9.7 / 0	"	9.4 / 1	"	8.4 / 1	"
NOTES	EW vacuum @ 30" H_2O, VWF = 22.48 scfm PR = 4.5 gpm						
	Low liquid NAPL recovery @ 2% of volume						
	NAPL % / Vol / Gals	2 / 2.7	2 / 2.7	2 / 2.7	2 / 2.7	2 / 2.7	2 / 2.7
MANIFOLD	Data Logger ft	N/A	"	"	"	"	
	Depth of GW Depression ft	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
	Extraction Well DTNAPL ft						
	Extraction Well DTGW ft						

( ) Indicates Well Pressure

OPERATING DATA - EVENT # 2 PAGE # 3

ACUVAC MOBILE DUAL PHASE SYSTEM

Location: "F" STATE SITE - LEA COUNTY, NM

Project Engineer: SADLER / LUNDGREN

	Parameters						
	Date:	7-20-11	-	-	-	-	
		Time 1245	Time 1315	Time 1345	Time 1415	Time 1445	Time
	WELL RW-4	Hr Meter 5779.5	Hr Meter 5780.0	Hr Meter 5780.5	Hr Meter 5781.0	Hr Meter 5781.5	Hr Meter
ENGINE/BLOWER	R.P.M.	1800	1800	1800	1800	1800	
	Oil Pressure psi	50	50	50	50	50	
	Water Temp °F	175	175	175	175	175	
	Volts	13	13	13	13	13	
	Intake Vacuum "Hg	18	16	16	16	16	
	Gas Flow Fuel/Propane cfh	110	110	110	110	110	
ATMOSPHERE/VACUUM/AIR PUMP/VOLUME	GW Pump ON/OFF	ON	ON	ON	ON	ON	
	Extraction Well Flow scfm	22.48	28.24	28.24	28.24	28.24	
	Extraction Well Vacuum "H_2O	30	40	40	40	40	
	Pump Rate gals/min	4.5	4.5	4.5	4.5	4.5	
	Total Volume gals	1545	1680	1815	1950	2085	
	Influent Vapor Temp. °F	72	72	72	72	72	
	Air Temperature °F	99.7	100.3	98.3	101.2	102.0	
	Barometric Pressure "Hg	30.10	30.08	30.06	30.05	30.04	
VAPOR/ INFLUENT	HC ppmv	5490	-	5310	-	4970	
	CO_2 / CO %	8.7 / 0	-	8.84 / 0	-	8.12 / 0	
	O_2 % / LEL ppm	8.7 / 1	-	8.8 / 1	-	9.1 / 0	
NOTES	EW induced vacuum steady @ 30" H_2O, VWF = 22.48 scfm - PR: 4.5 GPM						
	LNAPL recovery still @ 2% of volume						
	1245 HRS Increased EW vacuum = 40" H_2O, VWF = 28.24 scfm						
	PR @ 4.5 gpm - NAPL recovery @ 2% of volume when						
	increasing the induced vacuum to 60" H_2O, then decreasing to						
	20" H_2O to allow pump down, could not increase PR due to						
	limited collection tank capacity						
	NAPL % / Vol / Gals	2 / 2.7	2 / 2.7	2 / 2.7	1 / 1.4	1 / 1.3	
MANIFOLD	Data Logger ft	N/A	-	-	-	-	
	Depth of GW Depression ft	-2.0	-2.0	-2.0	-2.0	-2.0	
	Extraction Well DTNAPL ft					60.17	
	Extraction Well DTGW ft					60.19	

( ) Indicates Well Pressure

NAPL = 0.02

HE = 60.18

Op.Data MDP 10 /NAPL