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**AGWMR**

**OCT 2012**



# 2011 ANNUAL GROUNDWATER MONITORING REPORT

LOVINGTON UNIT WATER PLANT  
SECTION 1, TOWNSHIP 17 SOUTH, RANGE 36 EAST  
LEA COUNTY, NEW MEXICO

**Prepared For:**

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**OCTOBER 2012  
REF. NO. 073016 (2)**

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION .....	1
2.0 HISTORY OF ACTIVITIES AT THE SITE .....	2
3.0 REGULATORY FRAMEWORK.....	3
4.0 GROUNDWATER MONITORING .....	4
4.1 FIELD METHODOLOGY.....	4
4.2 POTENTIOMETRIC SURFACE AND GRADIENT .....	4
4.3 RESULTS OF ANALYSES OF DISSOLVED-PHASE CONTAMINANTS IN GROUNDWATER.....	5
5.0 SUMMARY OF FINDINGS .....	7
6.0 PLANNED ACTIVITIES.....	8

LIST OF FIGURES  
(Following Text)

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE DETAILS MAP
FIGURE 3	MAP OF THE POTENTIOMETRIC SURFACE--MARCH 1, 2011
FIGURE 4	MAP OF THE POTENTIOMETRIC SURFACE – APRIL 13, 2011
FIGURE 5	MAP OF THE POTENTIOMETRIC SURFACE – JULY 15, 2011
FIGURE 6	MAP OF THE POTENTIOMETRIC SURFACE – DECEMBER 22, 2011
FIGURE 7	DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS--MARCH 1, 2011
FIGURE 8	DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS--APRIL 13, 2011
FIGURE 9	DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS – JULY 15, 2011
FIGURE 10	DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS--DECEMBER, 2011

LIST OF TABLES  
(Following Text)

TABLE I	CUMULATIVE SUMMARY OF FLUID LEVEL MEASUREMENTS
TABLE II	CUMULATIVE SUMMARY OF ANALYTICAL RESULTS IN GROUNDWATER

LIST OF APPENDICES

APPENDIX A	CHARTS OF CONCENTRATIONS OF TOTAL DISSOLVED SOLIDS AND DISSOLVED CHLORIDES VERSUS TIME
APPENDIX B	CERTIFIED LABORATORY REPORTS

## 1.0 INTRODUCTION

This annual report is a review of ground water monitoring at the Lovington Unit Water Plant Site during 2011. Conestoga-Rovers & Associates, Inc. (CRA) has prepared this report on behalf of Chevron Environmental Management Company (CEMC). Data presented in this report were gathered during four quarterly groundwater monitoring events that were conducted on March 1, April 13, July 15, and December 22, 2011.

The Lovington Unit Water Plant Site is located in Section 1 of Township 17 South, Range 36 East in Lea County, New Mexico. Latitudinal and longitudinal coordinates are 32°52'3.77" N and 103°18'20.39" W, respectively. The site lies on land owned by the City of Lovington. Chevron operates an active water injection facility on the site that is related to oil production in the vicinity. A map showing the general location of the site is in Figure 1.

## 2.0 HISTORY OF ACTIVITIES AT THE SITE

The City of Lovington requested that Chevron assess chloride concentrations in the groundwater between the Lovington Unit Water Plant and the location of a surface release from a salt water disposal pipeline operated by Rice Operating Company. That release occurred since 2000 and approximately 700 feet southeast of the Lovington Unit Water Plant site and down gradient with respect to elevation on the water table. Details such as the date of the release; volume released; and volume recovered are not available.

Four monitor wells, MW-1, MW-2, MW-3, and MW-4 shown on Figure 2 were installed in January 2010 as part of the investigation. Screening of soils during drilling and analyses conducted by a laboratory indicated low chloride concentrations in soil penetrated by MW-1, MW-2, and MW-3, while higher concentrations of chlorides were present in soil penetrated by MW-4. Groundwater in all four wells was sampled in January and February 2010. Concentrations of chlorides and TDS in all samples groundwater collected from MW-1, MW-2, and MW-3 exceeded groundwater standards set by the New Mexico Water Quality Control Commission (NMWQCC). Both chlorides and total dissolved solids (TDS) in groundwater from MW-4 were below the same standards in both samples collected. Results of the investigation were reported to CEMC by Stantec in June 2010. CRA was retained by CEMC to manage monitoring activities of this site in November 2010.

### 3.0 REGULATORY FRAMEWORK

The New Mexico Oil Conservation Division of the New Mexico Energy, Minerals, and Natural Resources Department (NMOCD) has regulatory jurisdiction over corrective actions being conducted at the Lovington Unit Water Plant Site. Corrective actions follow guidance given by the NMOCD in *Guidelines for Remediation of Leaks, Spills, and Releases (August 13, 1993)*. These guidelines require remediation of groundwater to the human health standards of the New Mexico Water Quality Control Commission (NMWQCC) set forth in New Mexico Administrative Code (NMAC) 20.6.2.3103B that are shown in the following table.

<i>Analyte</i>	<i>NMWQCC Standard for Groundwater (mg/L)</i>
Chloride	250
Total Dissolved Solids	1000

## 4.0 GROUNDWATER MONITORING

The Lovington Unit Water Plant includes 4 active monitor wells, MW-1, MW-2, MW-3, and MW-4. They are shown on Figure 2. These four monitor wells were included in monitoring activities during 2011, which were conducted during four quarterly events. They took place on March 1, April 13, July 15, and December 22.

### 4.1 FIELD METHODOLOGY

Fluid levels were measured before any sampling activities began. Fluid levels were measured to the nearest hundredth of a foot with an electronic water level meter. Fluid levels were measured from the permanent reference point on the top of the casing in each well or from the north side of the top of the casing where no permanent reference point had been marked.

Depth to water was measured; then, conductivity was measured at 2- or 3-foot intervals below the water table in each well before any well was purged. A Solinst water level meter with a conductivity sensor was used for these purposes. Each well was sampled from the depth of the highest measured conductivity. Temperature, conductivity, and pH of purge water were measured during purging using a YSL 556MPS or a Hach MP60 meter. Purging continued until temperature, conductivity, and pH stabilized within 10% of previous readings. Each sample was labeled, recorded on a chain-of-custody form, and placed on ice in a cooler to maintain a temperature of 40°F (4°C) or lower. Field equipment was decontaminated with a Liquinox™ wash and distilled water rinse before beginning field activities and between wells. Samples of groundwater collected during the first two quarterly monitoring events were analyzed by ALS Environmental in Houston, Texas. Samples collected during the third and fourth quarterly monitoring events were submitted to Xenco Laboratories in Odessa, Texas for analyses. Proper chain-of-custody documentation was maintained throughout sampling and analytical processes and analyses were completed within required holding times.

Samples collected during 2011 were analyzed for dissolved chloride according to method EPA300.0 and for total dissolved solids (TDS) by method SM2540C.

### 4.2 POTENTIOMETRIC SURFACE AND GRADIENT

Fluid level measurements collected during 2011 are shown in Table I. Elevations of tops of casings are shown in feet above mean sea level (famsl). Elevations of the potentiometric surface are also shown in famsl. During all monitoring events in 2011, the elevation on the water table was lowest in MW-3 and highest in MW-4. The map of

elevations of the potentiometric surface during the first quarterly monitoring event is shown in Figure 3. It indicates that the direction of flow of groundwater at that time was toward the Northeast. The magnitude of the gradient was 0.0042 ft./ft.

The map of elevations of the potentiometric surface during the second monitoring event on April 13 is shown in Figure 4. This map indicates that the direction of flow of groundwater was also to the Northeast. Its magnitude was 0.0048 ft./ft.

The potentiometric surface during the third monitoring event on July 15 is depicted in Figure 5. This map indicates that the direction of flow of groundwater was also to the Northeast. Its magnitude was 0.0048 ft./ft.

The potentiometric surface on December 22, during the fourth quarterly monitoring event, is shown in Figure 6. This map indicates that the direction of flow of groundwater was also to the Northeast. Its magnitude was 0.0059 ft./ft.

Magnitude of the gradients increased slightly through 2011 from 0.0042 ft./ft. in March to 0.0059 ft./ft. in December. Elevations of the potentiometric surface declined in all wells during 2011. The range of decline was 0.43 ft. to 1.04 ft. between March and December 2011. The average decline among those wells was 0.66 feet.

#### **4.3 RESULTS OF ANALYSES OF DISSOLVED-PHASE CONTAMINANTS IN GROUNDWATER**

Samples of groundwater were collected from wells MW-1, MW-2, MW-3, and MW-4 during all four monitoring events 2011. A cumulative table of all available results of analyses of groundwater samples collected at the Lovington Unit Water Plant Site is shown in Table II. Chemicals of Concern (COCs) are shown in columns across the top of the table. Appropriate standards are shown below the names of analytes. Analytical results for monitoring events in March, April, July, and December 2011 are shown in map form on Figures 7, 8, 9, and 10, respectively.

Trends of concentrations of chemicals of concern over time are shown in Appendix A. Copies of signed analytical reports and chains-of-custody are attached in Appendix B. Dissolved chloride was present in monitor wells MW-1, MW-2, and MW-3 in concentrations consistently above the NMWQCC standard of 250 mg/L during 2011. The trend of concentrations of dissolved chloride in MW-1 during 2011 was stable. The trend of concentrations of dissolved chloride in MW-2 during 2011 was decreasing, and the trend in MW-3 was increasing. Levels of dissolved chloride in MW-4 were consistently below the NMWQCC standard.

Total dissolved solids (TDS) were detected at levels consistently exceeding the NMWQCC standard of 1000 mg/L in the samples MW-2 and MW-3 during 2011. The trend in MW-1 was alternately below then above the standard. Concentrations of TDS in MW-4 were below the NMWQCC standard during 2011.

## 5.0 SUMMARY OF FINDINGS

Based on activities conducted at the Lovington Unit Water Plant Site in 2011, CRA presents the following summary of findings:

- Groundwater monitoring was conducted by CRA on a quarterly basis in 2011. Monitoring events were conducted on March 1, April 13, July 15, and December 22, during which gradients of the potentiometric surface were 0.0042 ft./ft., 0.0048 ft./ft., 0.0048 ft./ft., and 0.0059 ft./ft., respectively. The directions of the gradients were consistently toward the Northeast.
- The elevations of the potentiometric surface fell in all monitor wells from March to December 2011. The range of decline was 0.43 ft. to 1.04 ft. The average decline was 0.66 feet.
- Dissolved chloride was present in monitor wells MW-1, MW-2, and MW-3 in concentrations consistently above the NMWQCC standard of 250 mg/L during 2011. The trend of concentrations in MW-3 was increasing, while trends in MW-1 and MW-2 were stable and declining, respectively. Levels of dissolved chloride in MW-4 were below the NMWQCC standard and stable.
- Total dissolved solids (TDS) were detected at levels exceeding the NMWQCC standard of 1000 mg/L in the samples collected from monitor wells MW-2, and MW-3 during 2011. The trend of concentrations from MW-3 was reached a maximum in April and declined during the balance of 2011. The trend in MW-2 reached its maximum in July and declined in the last quarter of the year. Concentrations of TDS in MW-1 were alternatively below then above the standard. Concentrations of TDS in MW-4 were below the NMWQCC standard and their trend was stable.

## 6.0 PLANNED ACTIVITIES

Quarterly gauging and sampling events were conducted in March, June, and September 2012. A fourth monitoring event has been scheduled for December of this year. Four additional monitoring wells, MW-5, MW-6, MW-7 and MW-8, have been installed at this site during 2012 for the purpose of delineating the contaminant plumes. All eight monitor wells have been included in a quarterly monitoring plan. Monitoring will include measurements of fluid levels and collection of samples of groundwater. Dissolved chloride and total dissolved solids continue to be chemicals of concern at the Lovington Unit Water Plant Site, and samples will be analyzed for them according to analytical methods EPA300.0 and SM2540C, respectively.

Results of activities to further assess the extent of the contaminant plume and four quarterly groundwater monitoring events at the Lovington Unit Water Plant Site during 2012 will be summarized in the annual report for submission to the NMOCD. The report will include stratigraphic and completion logs of new monitor wells; tabulated data from gauging activities; tabulated results of chemical analyses; maps of groundwater gradients and maps of constituents of concern for each monitoring event; and recommendations to expedite the site toward closure.

All of which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES, INC.

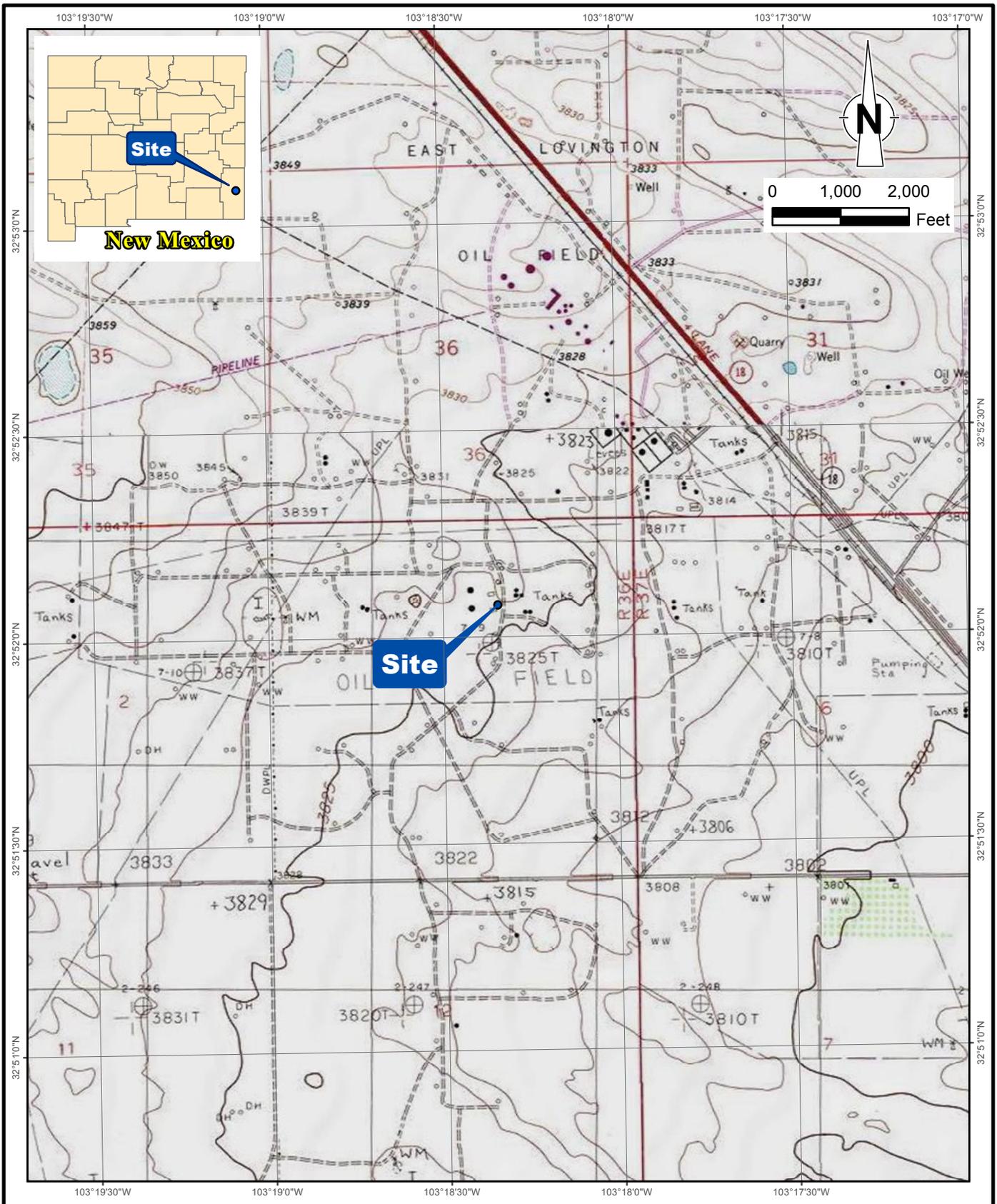


John P. Schnable  
Project Manager



Thomas C. Larson  
Senior Project Manager

# FIGURES



RE: USGS 7.5 Minute Topographic Maps.

figure 1  
 SITE LOCATION MAP  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1 - T17S-R36E, LEA COUNTY, NEW MEXICO  
 Chevron Environmental Management Company





LEGEND

● MONITORING WELL LOCATION



figure 2

SITE DETAILS MAP  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1-T17S-R36E, LEA COUNTY, NM  
*Chevron Environmental Management Company, Houston, Texas*



**LEGEND**

- 3732.01 ELEVATION OF POTENTIOMETRIC SURFACE
- 3731-** CONTOUR OF ELEVATION (INTERVAL - 0.50 FT)
- GROUNDWATER FLOW DIRECTION
- MONITORING WELL LOCATION

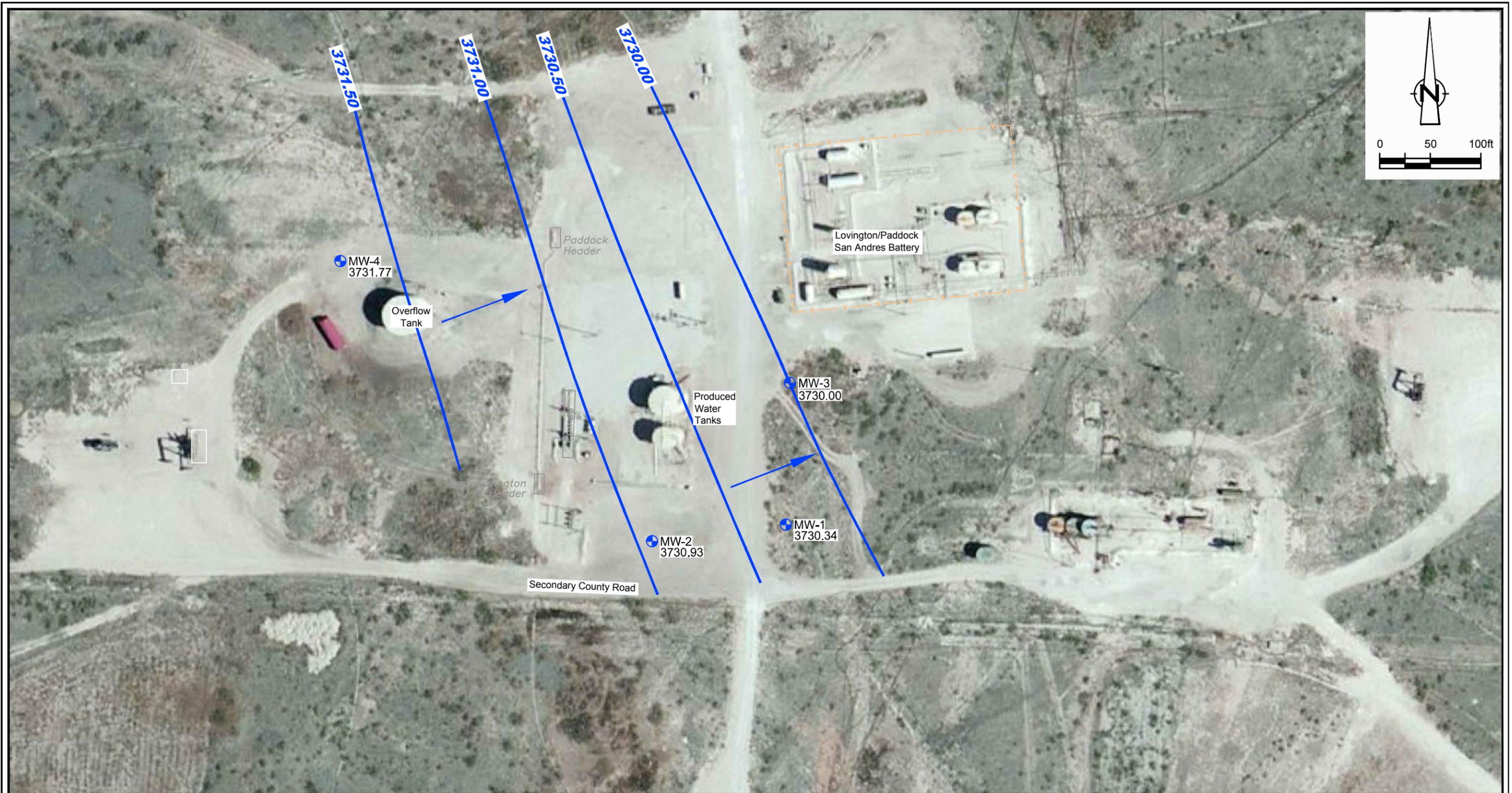
**NOTE:**

GROUNDWATER GRADIENT = 0.0042



figure 3

MAP OF THE POTENTIOMETRIC SURFACE-MARCH 1, 2011  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1-T17S-R36E, LEA COUNTY, NM  
*Chevron Environmental Management Company, Houston, Texas*



**LEGEND**

- 3732.01 ELEVATION OF POTENTIOMETRIC SURFACE
- 3731-** CONTOUR OF ELEVATION (INTERVAL - 0.50 FT)
- GROUNDWATER FLOW DIRECTION
- MONITORING WELL LOCATION

**NOTE:**

GROUNDWATER GRADIENT = 0.0048



figure 4  
 MAP OF THE POTENTIOMETRIC SURFACE-APRIL 13, 2011  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1-T17S-R36E, LEA COUNTY, NM  
 Chevron Environmental Management Company, Houston, Texas



**LEGEND**

- 3732.01 ELEVATION OF POTENTIOMETRIC SURFACE
- 3731-** CONTOUR OF ELEVATION (INTERVAL - 0.50 FT)
- GROUNDWATER FLOW DIRECTION
- +** MONITORING WELL LOCATION

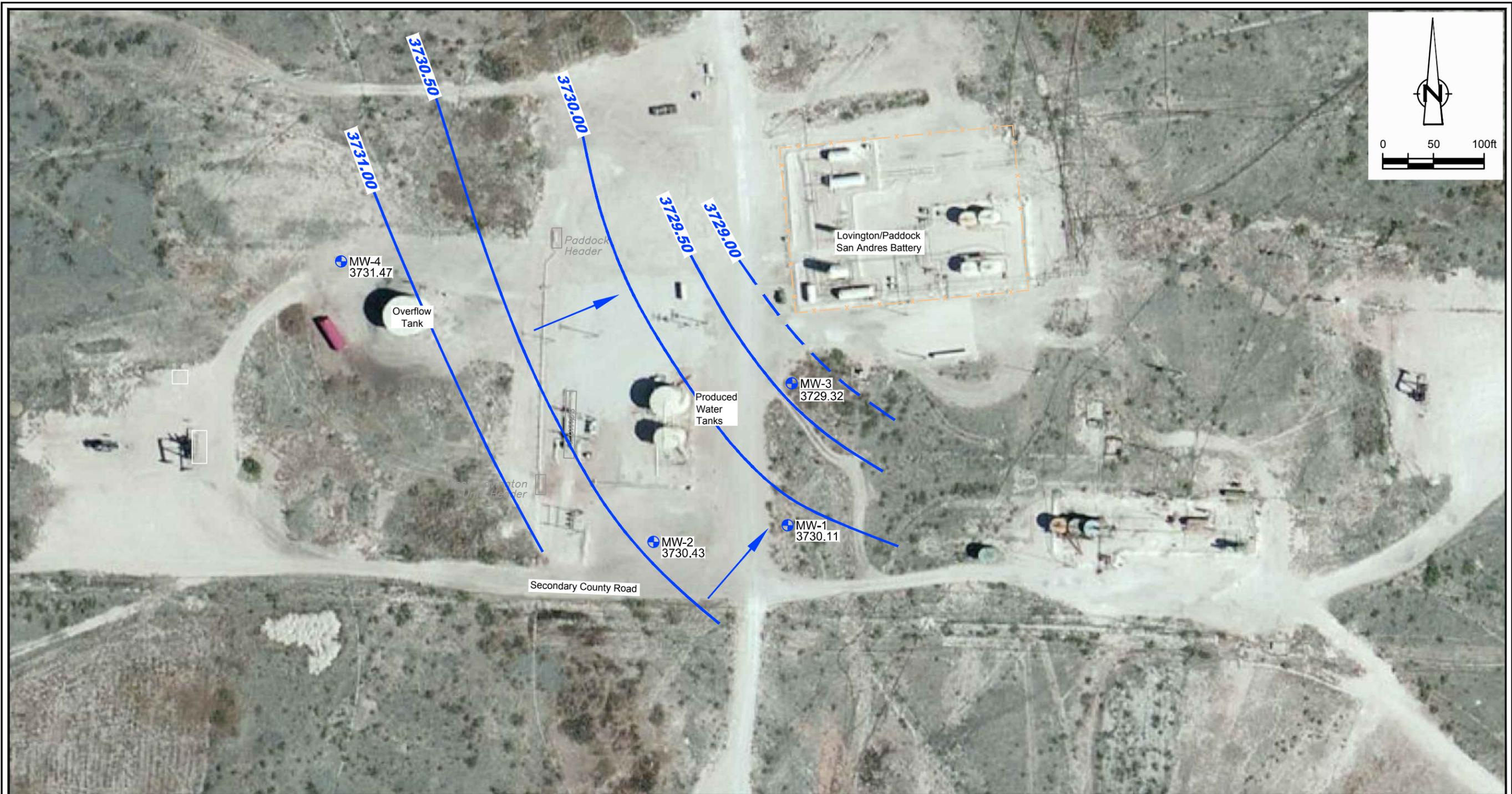
**NOTE:**

GROUNDWATER GRADIENT = 0.0048



figure 5

MAP OF THE POTENTIOMETRIC SURFACE-JULY 15, 2011  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1-T17S-R36E, LEA COUNTY, NM  
 Chevron Environmental Management Company, Houston, Texas



**LEGEND**

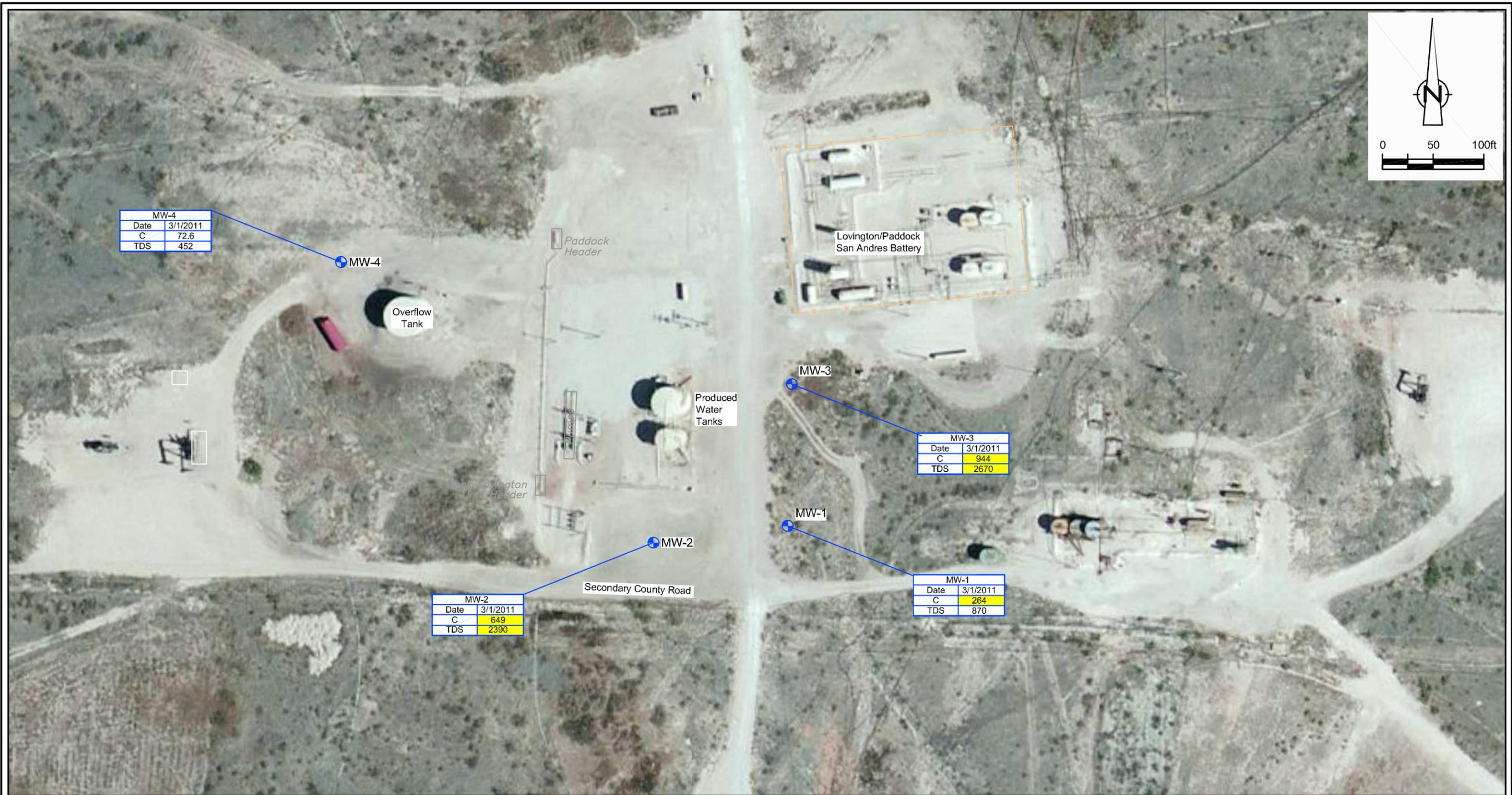
- 3732.01 ELEVATION OF POTENTIOMETRIC SURFACE
- 3731-** CONTOUR OF ELEVATION (INTERVAL - 0.50 FT)
- GROUNDWATER FLOW DIRECTION
- +** MONITORING WELL LOCATION

**NOTE:**

GROUNDWATER GRADIENT = 0.0059



figure 6  
 MAP OF THE POTENTIOMETRIC SURFACE-DECEMBER 22, 2011  
 LOVINGTON UNIT WATER PLANT  
 SECTION 1-T17S-R36E, LEA COUNTY, NM  
 Chevron Environmental Management Company, Houston, Texas



MW-4	
Date	3/1/2011
C	72.6
TDS	452

MW-3	
Date	3/1/2011
C	944
TDS	2670

MW-2	
Date	3/1/2011
C	649
TDS	2390

MW-1	
Date	3/1/2011
C	264
TDS	870

**LEGEND**

-  MONITORING WELL LOCATION
- C CONCENTRATION OF DISSOLVED CHLORIDE (mg/L)
- TDS CONCENTRATION OF TOTAL DISSOLVED SOLIDS (mg/L)

NOTE: CONCENTRATIONS SHADED IN YELLOW EXCEED CORRESPONDING STANDARD OR GUIDELINE.

figure 7

**DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS - MARCH 1, 2011**  
**LOVINGTON UNIT WATER PLANT**  
**SECTION 1-T17S-R36E, LEA COUNTY, NM**  
*Chevron Environmental Management Company, Houston, Texas*





**LEGEND**

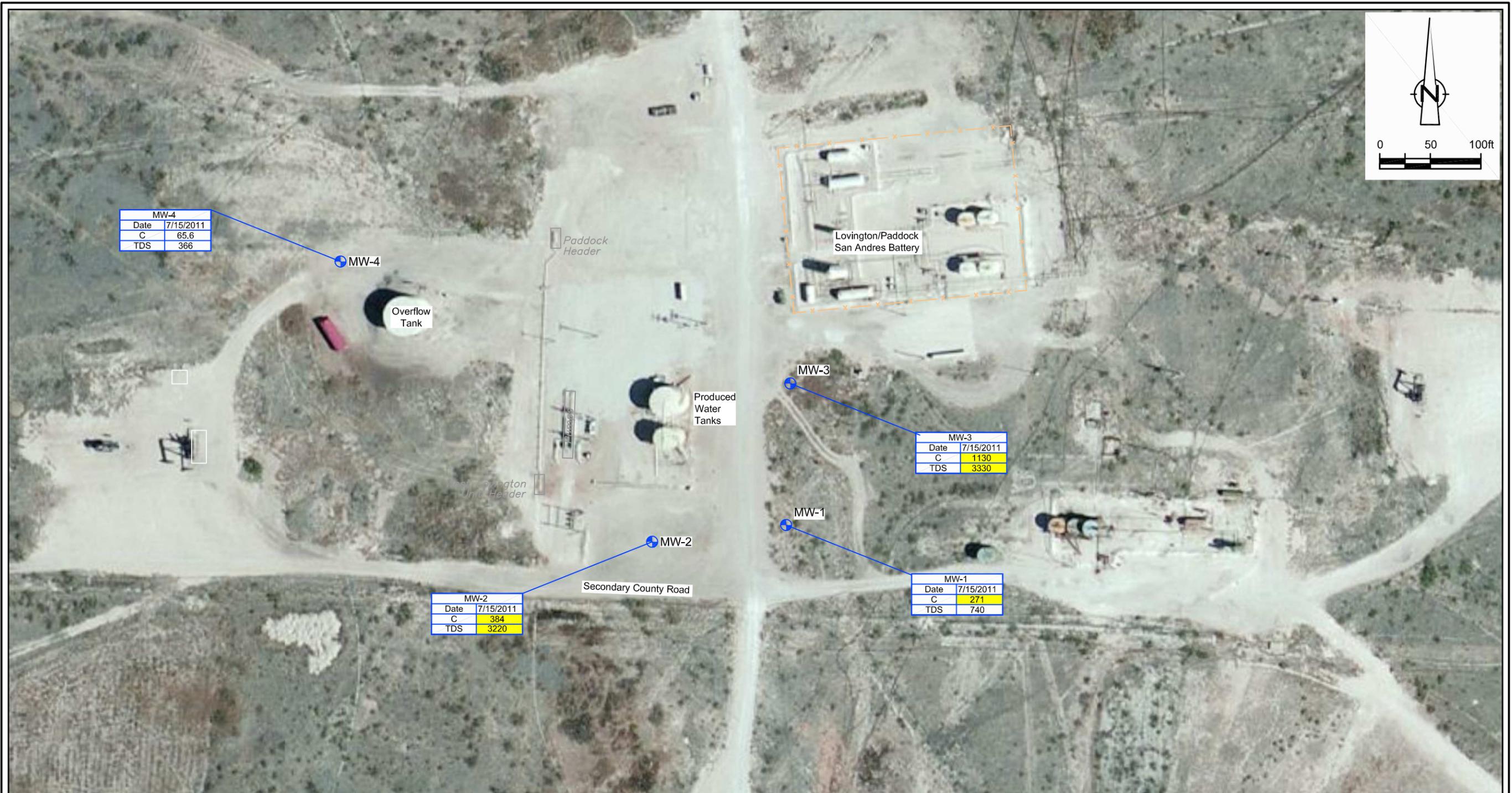
-  MONITORING WELL LOCATION
- C CONCENTRATION OF DISSOLVED CHLORIDE (mg/L)
- TDS CONCENTRATION OF TOTAL DISSOLVED SOLIDS (mg/L)

NOTE: CONCENTRATIONS SHADED IN YELLOW EXCEED CORRESPONDING STANDARD OR GUIDELINE.

figure 8

**DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS - APRIL 13, 2011**  
**LOVINGTON UNIT WATER PLANT**  
**SECTION 1-T17S-R36E, LEA COUNTY, NM**  
*Chevron Environmental Management Company, Houston, Texas*





**LEGEND**

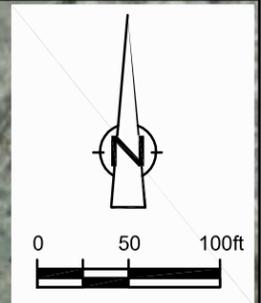
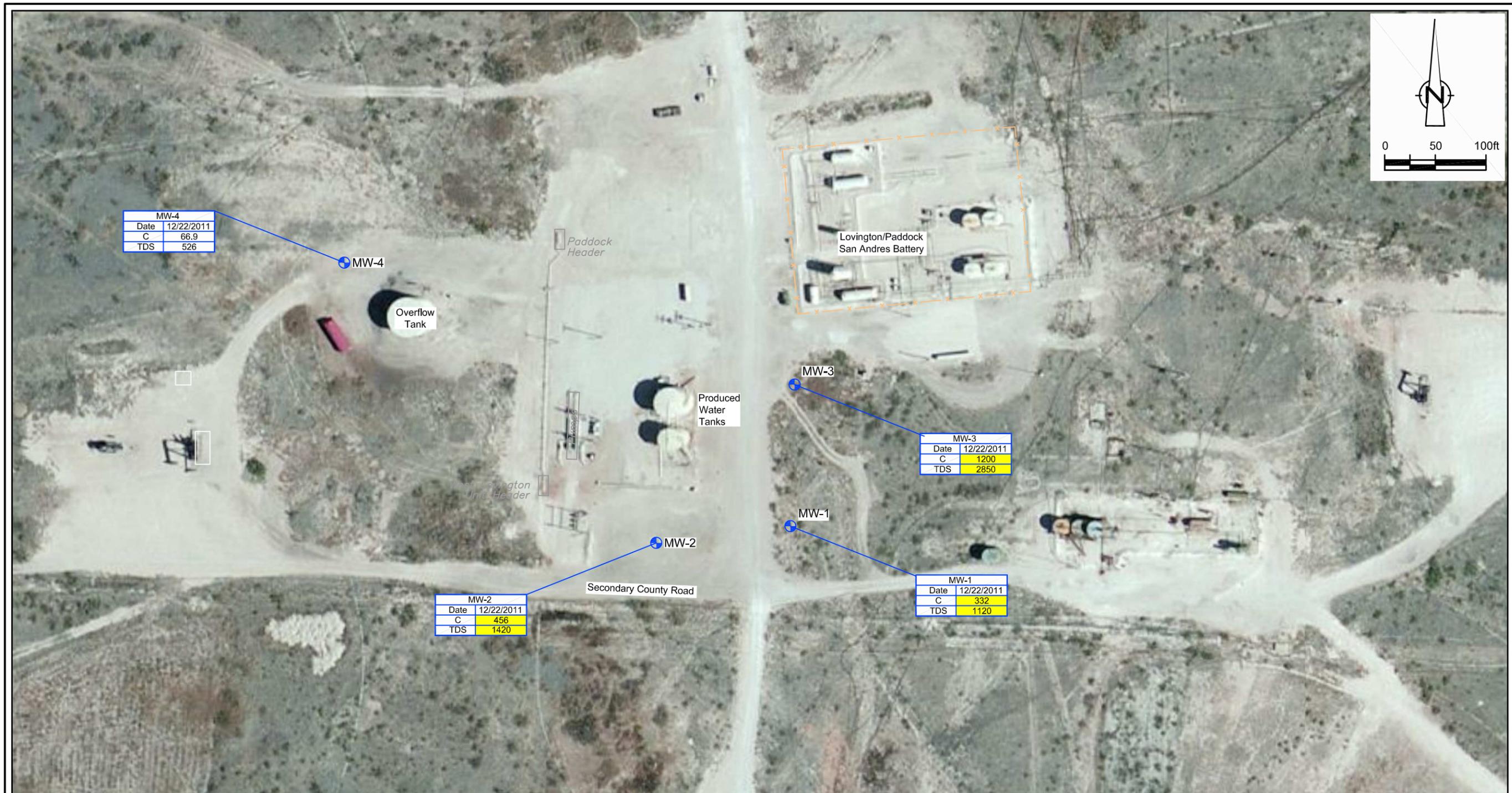
-  MONITORING WELL LOCATION
- C CONCENTRATION OF DISSOLVED CHLORIDE (mg/L)
- TDS CONCENTRATION OF TOTAL DISSOLVED SOLIDS (mg/L)

NOTE: CONCENTRATIONS SHADED IN YELLOW EXCEED CORRESPONDING STANDARD OR GUIDELINE.

figure 9

**DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS - JULY 15, 2011**  
**LOVINGTON UNIT WATER PLANT**  
**SECTION 1-T17S-R36E, LEA COUNTY, NM**  
*Chevron Environmental Management Company, Houston, Texas*





**LEGEND**

- MONITORING WELL LOCATION
- C CONCENTRATION OF DISSOLVED CHLORIDE (mg/L)
- TDS CONCENTRATION OF TOTAL DISSOLVED SOLIDS (mg/L)

NOTE: CONCENTRATIONS SHADED IN YELLOW EXCEED CORRESPONDING STANDARD OR GUIDELINE.

figure 10

**DISTRIBUTION OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS - DECEMBER 22, 2011**  
**LOVINGTON UNIT WATER PLANT**  
**SECTION 1-T17S-R36E, LEA COUNTY, NM**  
*Chevron Environmental Management Company, Houston, Texas*



# **TABLES**

TABLE I

**CUMULATIVE SUMMARY OF FLUID LEVEL MEASUREMENTS  
LOVINGTON UNIT WATER PLANT  
SECTION 1-T17S-R36E, LEA COUNTY, NM**

<i>Well ID</i>	<i>Date of Measurement</i>	<i>Elevation of TOC</i>	<i>Depth to Water (fbtoc)</i>	<i>Elevation of Potentiometric Surface (famsl)</i>	<i>Total Depth (fbtoc)</i>
MW-1	1/19/2010	3832.74	100.31	3732.43	
MW-1	2/25/2010	3832.74	100.41	3732.33	
MW-1	3/1/2011	3832.74	102.20	3730.54	114.8
MW-1	4/13/2011	3832.74	102.40	3730.34	114.8
MW-1	7/15/2011	3832.74	102.58	3730.16	
MW-1	12/22/2011	3832.74	102.63	3730.11	
MW-2	1/19/2010	3830.96	98.10	3732.86	
MW-2	2/25/2010	3830.96	98.17	3732.79	
MW-2	3/1/2011	3830.96	99.89	3731.07	114.42
MW-2	4/13/2011	3830.96	100.03	3730.93	114.42
MW-2	7/15/2011	3830.96	100.41	3730.55	
MW-2	12/22/2011	3830.96	100.53	3730.43	
MW-3	1/19/2010	3834.30	101.96	3732.34	
MW-3	2/25/2010	3834.30	102.10	3732.20	
MW-3	3/1/2011	3834.30	103.94	3730.36	115.2
MW-3	4/13/2011	3834.30	104.30	3730.00	114.9
MW-3	7/15/2011	3834.30	104.76	3729.54	
MW-3	12/22/2011	3834.30	104.98	3729.32	
MW-4	1/19/2010	3831.95	98.23	3733.72	
MW-4	2/25/2010	3831.95	98.28	3733.67	
MW-4	3/1/2011	3831.95	99.94	3732.01	114.52
MW-4	4/13/2011	3831.95	100.18	3731.77	114.6
MW-4	7/15/2011	3831.95	100.45	3731.50	
MW-4	12/22/2011	3831.95	100.48	3731.47	
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. TOC - top of casing</li> <li>2. famsl - feet above mean sea Level</li> <li>3. fbtoc - feet below top of casing</li> </ol>					

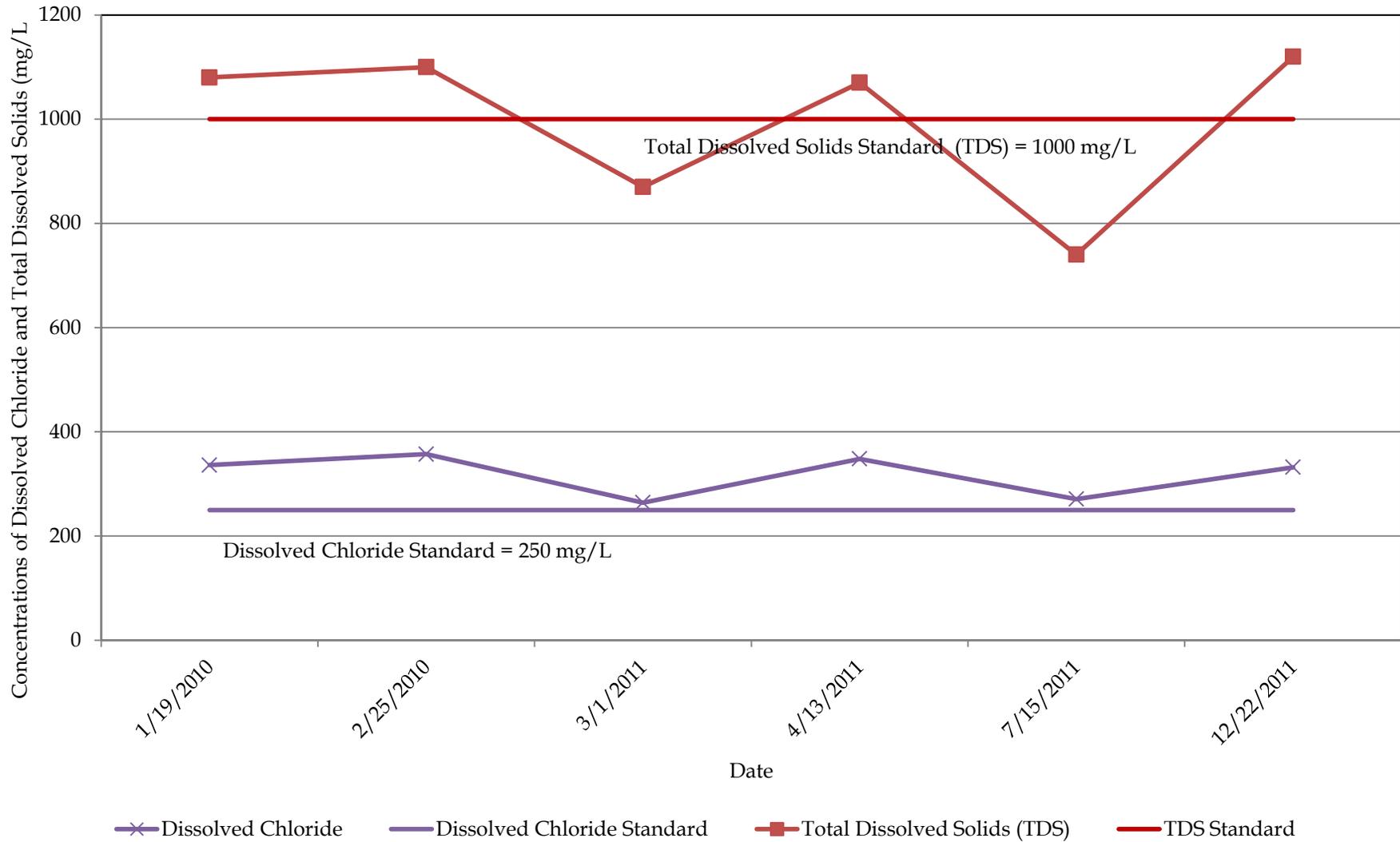
TABLE II

**CUMULATIVE SUMMARY OF ANALYTICAL RESULTS OF DISSOLVED CHLORIDE AND TOTAL DISSOLVED SOLIDS IN GROUNDWATER  
LOVINGTON UNIT WATER PLANT  
SECTION 1-T17S-R36E, LEA COUNTY, NM**

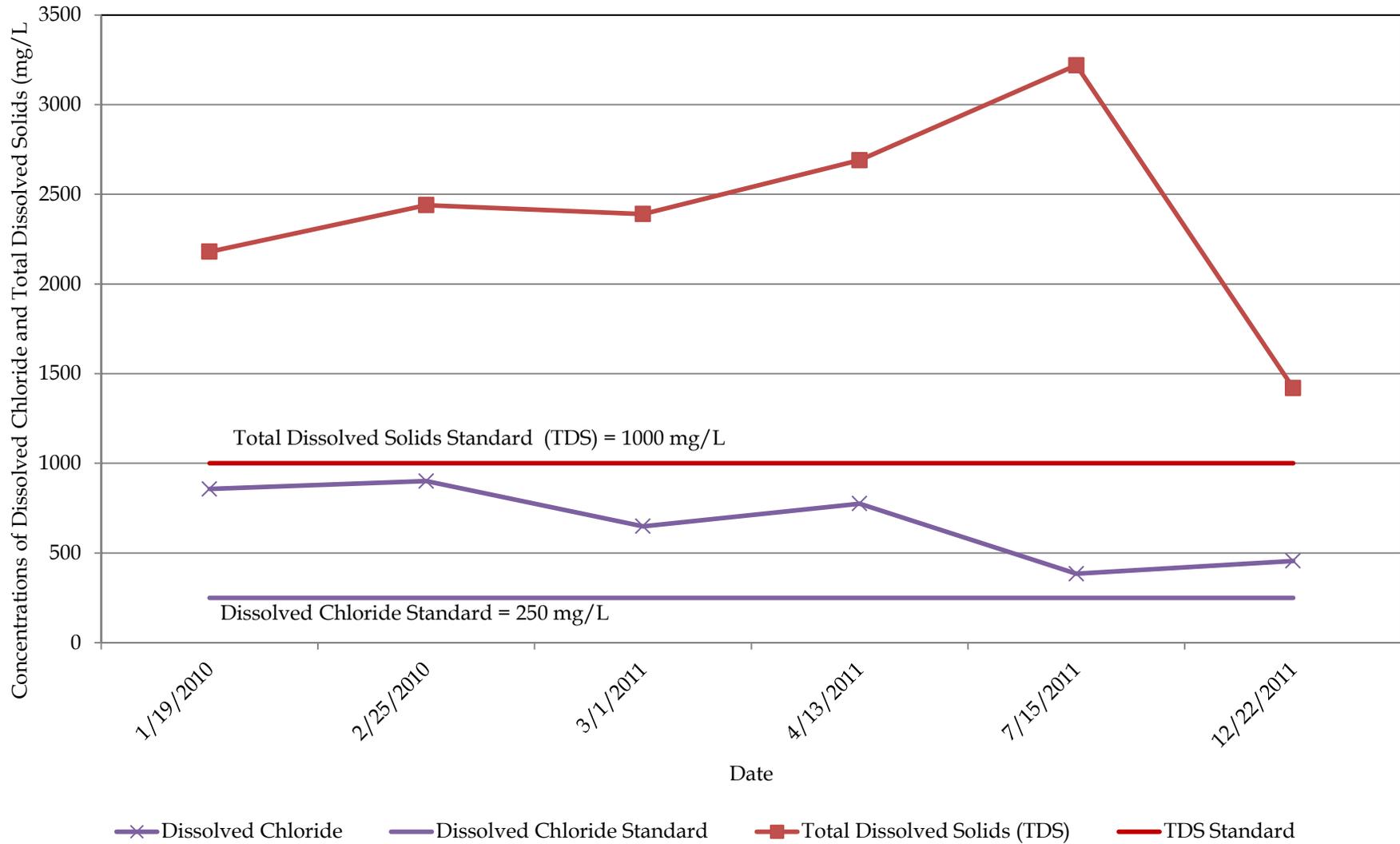
Monitor Well ID	Date of Sample	Depth of Sample (fbtoc)	Chloride (mg/L by USEPA 300.0)	Total Dissolved Solids (mg/L by 2450C)
			<i>NMWQCC Groundwater Standard</i>	
			250	1,000
MW-1	1/19/2010		336	1080
MW-1	2/25/2010		357	1100
MW-1	3/1/2011		264	870
MW-1	4/13/2011	114.8	348	1070
MW-1	7/15/2011	114.8	271	740
MW-1	12/22/2011	114	332	1120
MW-2	1/19/2010		857	2180
MW-2	2/25/2010		901	2440
MW-2	3/1/2011		649	2390
MW-2	4/13/2011	114.42	775	2690
MW-2	7/15/2011	114.41	384	3220
MW-2	12/22/2011	114	456	1420
MW-3	1/19/2010		734	1920
MW-3	2/25/2010		763	2130
MW-3	3/1/2011		944	2670
MW-3	4/13/2011	113	1050	4180
MW-3	7/15/2011	112.76	1130	3330
MW-3	12/22/2011	110	1200	2850
MW-4	1/19/2010		212	622
MW-4	2/25/2010		110	586
MW-4	3/1/2011		72.6	452
MW-4	4/13/2011	105	69.8	446
MW-4	7/15/2011	110.45	65.6	366
MW-4	12/22/2011	110	66.9	526
Dup #1 (MW-2)	1/19/2010		912	2150
Dup-1	3/1/2011		627	2400
Dup-1 (MW-3)	4/13/2011		1070	3650
Dup-1 (MW-3)	7/15/2011		1120	3480
Dup-1 (MW-1)	12/22/2011		339	1010
Notes: 1. fbtoc - feet below top of casing 2. NMWQCC - New Mexico Water Quality Control Commission Groundwater Standard 3. mg/L - milligrams per liter 4. USEPA - United States Environmental Protection Agency 5. Cells shaded yellow indicate concentrations exceeding NMWQCC Groundwater Standard				

# **APPENDIX A**

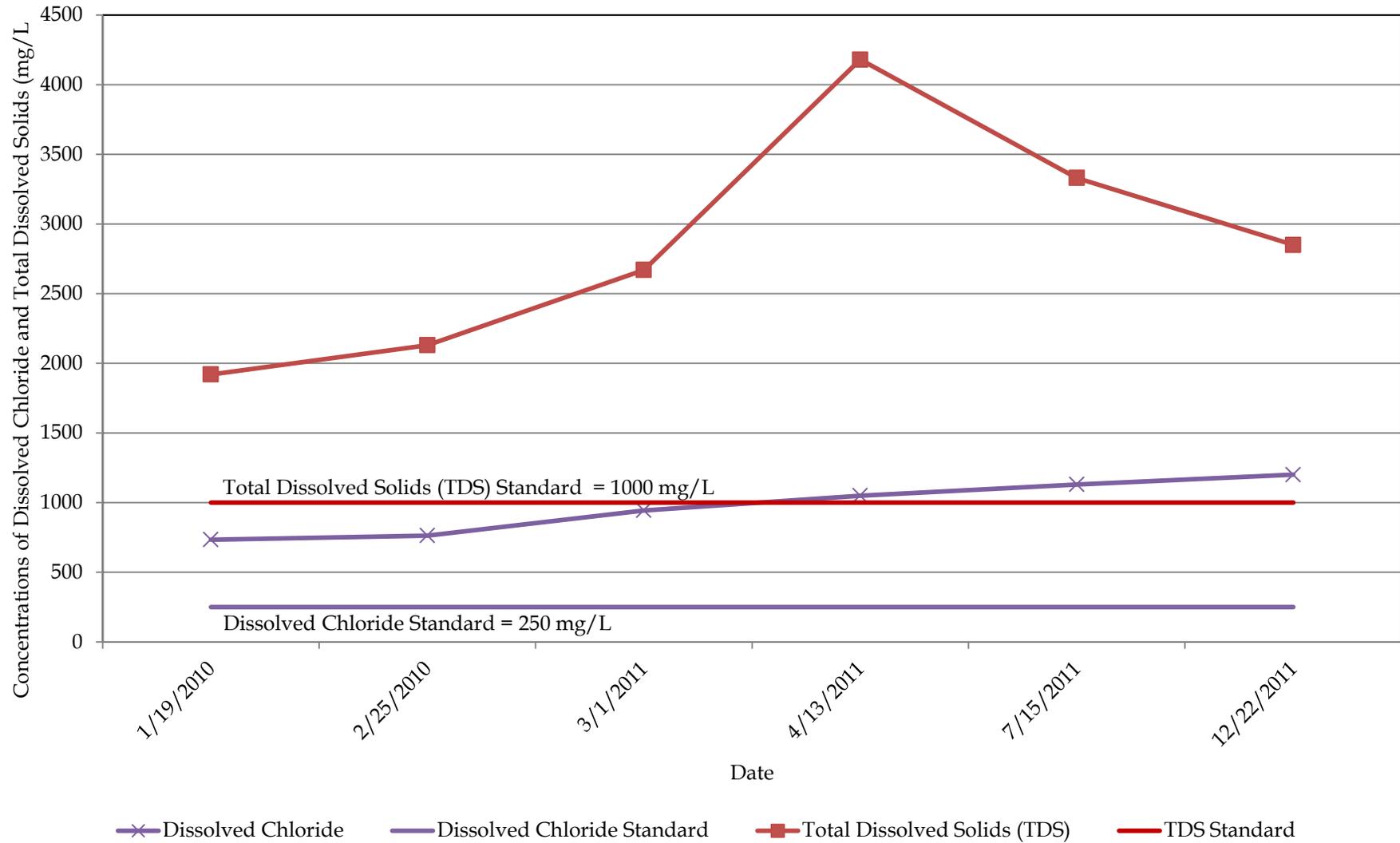
Chevron Environmental Management Company  
Lovington Unit Water Plant  
Section 1-T17S-R36E, Lea County, NM  
Dissolved Chloride and Total Dissolved Solids in Groundwater  
MW-1



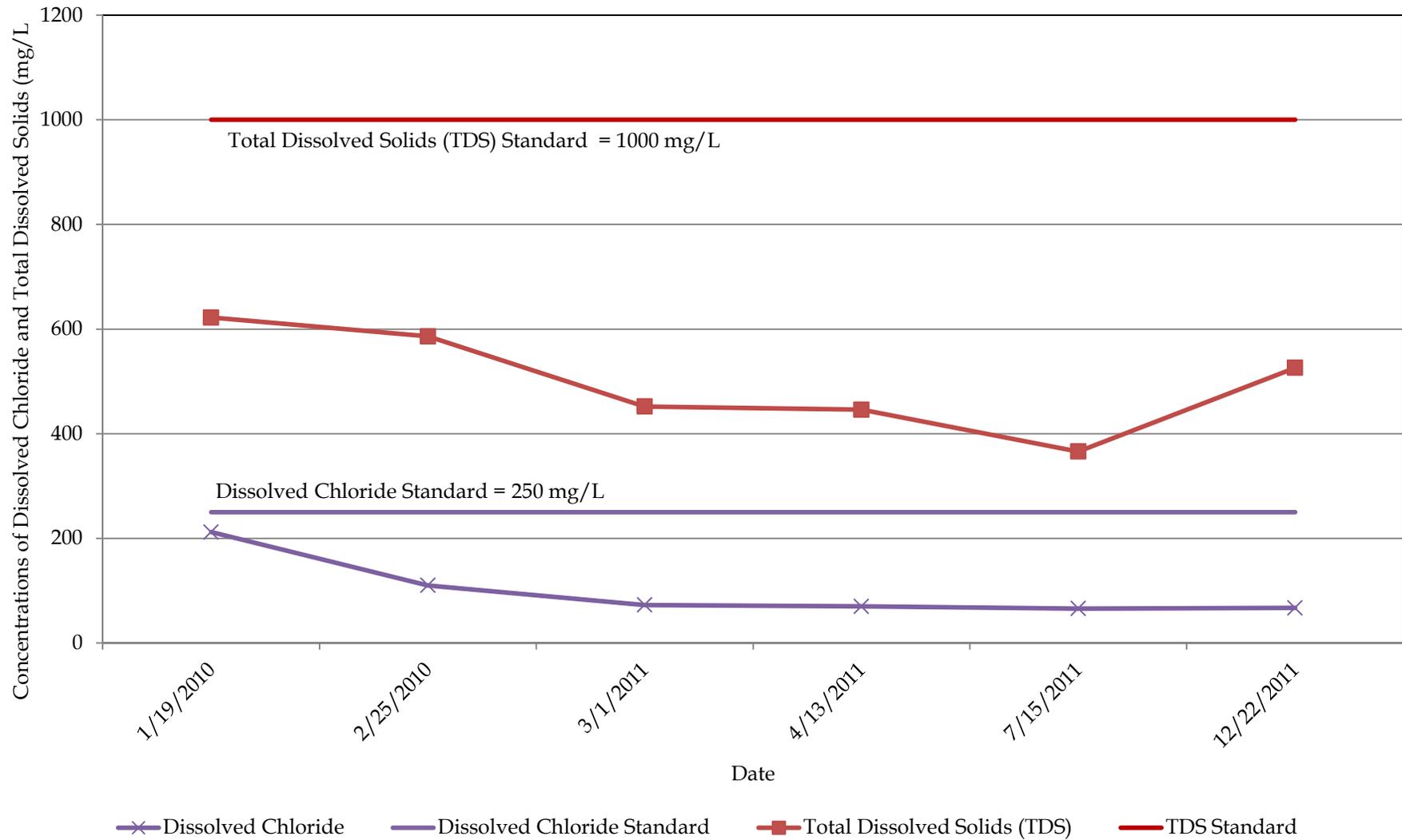
Chevron Environmental Management Company  
Lovington Unit Water Plant  
Section 1-T17S-R36E, Lea County, NM  
Dissolved Chloride and Total Dissolved Solids in Groundwater  
MW-2



Chevron Environmental Management Company  
Lovington Unit Water Plant  
Section 1-T17S-R36E, Lea County, NM  
Dissolved Chloride and Total Dissolved Solids in Groundwater  
MW-3



Chevron Environmental Management Company  
Lovington Unit Water Plant  
Section 1-T17S-R36E, Lea County, NM  
Dissolved Chloride and Total Dissolved Solids in Groundwater  
MW-4



# **APPENDIX B**



10-Mar-2011

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

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

Re: Lovington Water Plant

Work Order: **1103105**

Dear Patricia,

ALS Environmental received 5 samples on 03-Mar-2011 08:30 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 12.

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

Sincerely,

A handwritten signature in black ink that reads "R. Kevin Given".

Electronically approved by: Glenda H. Ramos

R. Kevin Given  
Project Manager



Certificate No: TX: T104704231-10-3

ADDRESS 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

DOV#T UR X S#K VD /#F R US##Sduw#k i#kh#DOV#Dde r#udwru|#T urxs#D #F dp eeh#Eurwkhuv#Dp w#hg#F rp sdq|

Environmental ALS

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**Work Order:** 1103105

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1103105-01	MW-1 030111	Water		3/1/2011 14:32	3/3/2011 08:30	<input type="checkbox"/>
1103105-02	MW-2 030111	Water		3/1/2011 15:58	3/3/2011 08:30	<input type="checkbox"/>
1103105-03	MW-3 030111	Water		3/1/2011 15:21	3/3/2011 08:30	<input type="checkbox"/>
1103105-04	MW-4 030111	Water		3/1/2011 13:11	3/3/2011 08:30	<input type="checkbox"/>
1103105-05	Dup-1	Water		3/1/2011	3/3/2011 08:30	<input type="checkbox"/>

**ALS Environmental**

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**Sample ID:** MW-1 030111  
**Collection Date:** 3/1/2011 02:32 PM

**Work Order:** 1103105  
**Lab ID:** 1103105-01  
**Matrix:** WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			Method: <b>E300</b>			Analyst: <b>TDW</b>	
Chloride	264		10.0	25.0	mg/L	50	3/9/2011 19:19
Surr: Selenate (surr)	107			85-115	%REC	50	3/9/2011 19:19
<b>TOTAL DISSOLVED SOLIDS</b>			Method: <b>M2540C</b>			Analyst: <b>JKP</b>	
Total Dissolved Solids (Residue, Filterable)	870		5.0	10.0	mg/L	1	3/7/2011 13:00

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

**ALS Environmental**

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**Sample ID:** MW-2 030111  
**Collection Date:** 3/1/2011 03:58 PM

**Work Order:** 1103105  
**Lab ID:** 1103105-02  
**Matrix:** WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			Method: E300			Analyst: TDW	
Chloride	649		10.0	25.0	mg/L	50	3/9/2011 19:40
Surr: Selenate (surr)	106			85-115	%REC	50	3/9/2011 19:40
<b>TOTAL DISSOLVED SOLIDS</b>			Method: M2540C			Analyst: JKP	
Total Dissolved Solids (Residue, Filterable)	2,390		5.0	10.0	mg/L	1	3/7/2011 13:00

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

**ALS Environmental**

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**Sample ID:** MW-3 030111  
**Collection Date:** 3/1/2011 03:21 PM

**Work Order:** 1103105  
**Lab ID:** 1103105-03  
**Matrix:** WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			Method: E300			Analyst: TDW	
Chloride	944		20.0	50.0	mg/L	100	3/9/2011 20:01
Surr: Selenate (surr)	106			85-115	%REC	100	3/9/2011 20:01
<b>TOTAL DISSOLVED SOLIDS</b>			Method: M2540C			Analyst: JKP	
Total Dissolved Solids (Residue, Filterable)	2,670		5.0	10.0	mg/L	1	3/7/2011 13:00

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

# ALS Environmental

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates

**Project:** Lovington Water Plant

**Sample ID:** MW-4 030111

**Collection Date:** 3/1/2011 01:11 PM

**Work Order:** 1103105

**Lab ID:** 1103105-04

**Matrix:** WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			Method: <b>E300</b>			Analyst: <b>TDW</b>	
Chloride	72.6		0.200	0.500	mg/L	1	3/9/2011 20:22
Surr: Selenate (surr)	114			85-115	%REC	1	3/9/2011 20:22
<b>TOTAL DISSOLVED SOLIDS</b>			Method: <b>M2540C</b>			Analyst: <b>JKP</b>	
Total Dissolved Solids (Residue, Filterable)	452		5.0	10.0	mg/L	1	3/7/2011 13:00

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

**ALS Environmental**

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**Sample ID:** Dup-1  
**Collection Date:** 3/1/2011

**Work Order:** 1103105  
**Lab ID:** 1103105-05  
**Matrix:** WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			Method: <b>E300</b>			Analyst: <b>TDW</b>	
Chloride	627		10.0	25.0	mg/L	50	3/9/2011 22:08
Surr: Selenate (surr)	106			85-115	%REC	50	3/9/2011 22:08
<b>TOTAL DISSOLVED SOLIDS</b>			Method: <b>M2540C</b>			Analyst: <b>JKP</b>	
Total Dissolved Solids (Residue, Filterable)	2,400		5.0	10.0	mg/L	1	3/7/2011 13:00

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

ALS Environmental

Date: 10-Mar-11

**Client:** Conestoga-Rovers & Associates  
**Work Order:** 1103105  
**Project:** Lovington Water Plant

**QC BATCH REPORT**

Batch ID: **R106442** Instrument ID **Balance1** Method: **M2540C**

<b>MBLK</b>	Sample ID: <b>BLANK-R106442</b>			Units: <b>mg/L</b>			Analysis Date: <b>3/7/2011 01:00 PM</b>			
Client ID:	Run ID: <b>_110307A</b>			SeqNo: <b>2303010</b>			Prep Date: DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	ND	10								

<b>LCS</b>	Sample ID: <b>LCS-R106442</b>			Units: <b>mg/L</b>			Analysis Date: <b>3/7/2011 01:00 PM</b>			
Client ID:	Run ID: <b>_110307A</b>			SeqNo: <b>2303011</b>			Prep Date: DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1080	10	1000	0	108	85-115	0			

<b>DUP</b>	Sample ID: <b>1103002-19EDUP</b>			Units: <b>mg/L</b>			Analysis Date: <b>3/7/2011 01:00 PM</b>			
Client ID:	Run ID: <b>_110307A</b>			SeqNo: <b>2302990</b>			Prep Date: DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	382	10	0	0	0	0-0	378	1.05	20	

<b>DUP</b>	Sample ID: <b>1103110-07BDUP</b>			Units: <b>mg/L</b>			Analysis Date: <b>3/7/2011 01:00 PM</b>			
Client ID:	Run ID: <b>_110307A</b>			SeqNo: <b>2303002</b>			Prep Date: DF: <b>1</b>			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	462	10	0	0	0	0-0	458	0.87	20	

**The following samples were analyzed in this batch:**

1103105-01A	1103105-02A	1103105-03A
1103105-04A	1103105-05A	

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

**Client:** Conestoga-Rovers & Associates  
**Work Order:** 1103105  
**Project:** Lovington Water Plant

## QC BATCH REPORT

Batch ID: **R106611**      Instrument ID **ICS3000**      Method: **E300**

MBLK		Sample ID: <b>WBLKW1-030911-R106611</b>				Units: <b>mg/L</b>		Analysis Date: <b>3/9/2011 05:54 PM</b>		
Client ID:		Run ID: <b>ICS3000_110309B</b>				SeqNo: <b>2307261</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	ND	0.50								
<i>Surr: Selenate (surr)</i>	5.141	0.10	5	0	103	85-115	0			

LCS		Sample ID: <b>WLCSW1-030911-R106611</b>				Units: <b>mg/L</b>		Analysis Date: <b>3/9/2011 06:15 PM</b>		
Client ID:		Run ID: <b>ICS3000_110309B</b>				SeqNo: <b>2307262</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.72	0.50	20	0	98.6	90-110	0			
<i>Surr: Selenate (surr)</i>	5.211	0.10	5	0	104	85-115	0			

LCSD		Sample ID: <b>WLCSW1-030911-R106611</b>				Units: <b>mg/L</b>		Analysis Date: <b>3/9/2011 06:37 PM</b>		
Client ID:		Run ID: <b>ICS3000_110309B</b>				SeqNo: <b>2307263</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.65	0.50	20	0	98.2	90-110	19.72	0.376	20	
<i>Surr: Selenate (surr)</i>	5.179	0.10	5	0	104	85-115	5.211	0.616	20	

MS		Sample ID: <b>1103105-04AMS</b>				Units: <b>mg/L</b>		Analysis Date: <b>3/9/2011 08:43 PM</b>		
Client ID: <b>MW-4 030111</b>		Run ID: <b>ICS3000_110309B</b>				SeqNo: <b>2307268</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	81.45	0.50	10	72.62	88.3	80-120	0			O
<i>Surr: Selenate (surr)</i>	5.145	0.10	5	0	103	85-115	0			

MSD		Sample ID: <b>1103105-04AMSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>3/9/2011 09:04 PM</b>		
Client ID: <b>MW-4 030111</b>		Run ID: <b>ICS3000_110309B</b>				SeqNo: <b>2307269</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	81.28	0.50	10	72.62	86.6	80-120	81.45	0.204	20	O
<i>Surr: Selenate (surr)</i>	5.168	0.10	5	0	103	85-115	5.145	0.446	20	

**The following samples were analyzed in this batch:**

1103105-01A	1103105-02A	1103105-03A
1103105-04A	1103105-05A	

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

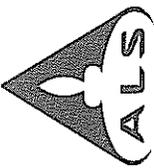
**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Water Plant  
**WorkOrder:** 1103105

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	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

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter



**ALS Laboratory Group**  
 10450 Stanciff Rd., Suite 210  
 Houston, Texas 77099  
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 Fax. +1 281 530 5887

**Chain of Custody Form**

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

Page 1 of 1

Customer Information				Project Information				ALS Project Manager: <u>NOBIS</u>																	
ALS Work Order #: <u>110315</u>				Parameter/Method Request for Analysis				Ariens (905€) CI																	
Purchase Order	Project Name	Project Number	Project Manager	A	B	C	D	E	F	G	H	I	J	Lovington Water Plant											
Work Order	Project Name	Project Number	Project Manager	TDS																					
Company Name	Project Name	Project Number	Project Manager	Conestoga-Rovers & Associates																					
Send Report To	Project Name	Project Number	Project Manager	Patricia Lynch																					
Address	Project Name	Project Number	Project Manager	6320 Rothway, Suite 100																					
City/State/Zip	Project Name	Project Number	Project Manager	Houston, TX 77040																					
Phone	Project Name	Project Number	Project Manager	(713) 734-3090																					
Fax	Project Name	Project Number	Project Manager	(713) 734-3391																					
e-Mail Address	Project Name	Project Number	Project Manager																						
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold								
1	MW-1 030111	03-01-11	1432	W	N/A	1	X	X																	
2	MW-2 030111	03-01-11	1558	W	N/A	1	X	X																	
3	MW-3 030111	03-01-11	1521	W	N/A	1	X	X																	
4	MW-4 030111	03-01-11	1311	W	N/A	1	X	X																	
5	DUP-1	03-01-11	---	W	N/A	1	X	X																	
6																									
7																									
8																									
9																									
10																									
Samples Please Print & Sign Relinquished by: <u>TRIMBURA</u> Date: <u>03-02-11</u> Time: <u>1550</u> Relinquished by: <u>[Signature]</u> Date: <u>03-02-11</u> Time: <u>1550</u>				Shipment Method Received by: <u>[Signature]</u> Date: <u>3/3/11</u> Time: <u>08:30</u> Checked by (Laboratory): <u>[Signature]</u>				Required Turnaround Time: (Check Box) <input checked="" type="checkbox"/> 5 WK Days <input type="checkbox"/> 10 WK Days <input type="checkbox"/> 15 WK Days <input type="checkbox"/> 20 WK Days <input type="checkbox"/> 24 Hour Other: <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 5 Day TAT.																	
Logged by (Laboratory): Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>3</sub> 7-Other 8-4°C 9-5035				Cooler ID: <u>5035</u> Cooler Temp: <u>8-4°C</u> QC Package: (Check One Box Below) <input checked="" type="checkbox"/> Level II Std QC <input type="checkbox"/> Level III Std QC <input type="checkbox"/> Level IV SW846/CLP <input type="checkbox"/> Other / EDD				Notes: <u>5 Day TAT.</u>																	

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.

Sample Receipt Checklist

Client Name: CRA-HOU

Date/Time Received: 03-Mar-11 08:30

Work Order: 1103105

Received by: SAY

Checklist completed by Parash M. Ciga 03-Mar-11
eSignature Date

Reviewed by: R. Kevin Given 04-Mar-11
eSignature Date

Matrices: Water

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Temperature(s)/Thermometer(s): 1.2C 002

Cooler(s)/Kit(s): 3746

Water - VOA vials have zero headspace? Yes [ ] No [ ] No VOA vials submitted [checked]

Water - pH acceptable upon receipt? Yes [checked] No [ ] N/A [ ]

pH adjusted? Yes [ ] No [checked] N/A [ ]

pH adjusted by: [ ]

Login Notes:

-----

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments: [ ]

CorrectiveAction: [ ]



30-Apr-2011

John Schnable  
Conestoga-Rovers & Associates  
6320 Rothway, Suite 100  
Houston, TX 77040

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

Re: Lovington Unit Water Plant

Work Order: **1104503**

Dear John,

ALS Environmental received 5 samples on 15-Apr-2011 08:40 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 15.

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

Sincerely,

A handwritten signature in blue ink that reads "R. Kevin Given".

Electronically approved by: R. Kevin Given

R. Kevin Given  
Project Manager



Certificate No: TX: T104704231-10-3

ADDRESS 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 | PHONE (281) 530-5656 | FAX (281) 530-5887

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental ALS

[www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

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**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Unit Water Plant  
**Work Order:** 1104503

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1104503-01	MW-1 041311	Water		4/13/2011 13:30	4/15/2011 08:40	<input type="checkbox"/>
1104503-02	MW-2 041311	Water		4/13/2011 13:58	4/15/2011 08:40	<input type="checkbox"/>
1104503-03	MW-4 041311	Water		4/13/2011 13:01	4/15/2011 08:40	<input type="checkbox"/>
1104503-04	MW-3 041311	Water		4/13/2011 14:31	4/15/2011 08:40	<input type="checkbox"/>
1104503-05	Dup-1	Water		4/13/2011	4/15/2011 08:40	<input type="checkbox"/>

**ALS Environmental**

Date: 30-Apr-11

**Client:** Conestoga-Rovers & Associates

**Project:** Lovington Unit Water Plant

**Work Order:** 1104503

**Sample ID:** MW-1 041311

**Lab ID:** 1104503-01

**Collection Date:** 4/13/2011 01:30 PM

**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			<b>E300</b>			Analyst: <b>TDW</b>
Chloride	348		5.00	mg/L	10	4/21/2011 10:33 PM
Surr: Selenate (surr)	97.6		85-115	%REC	10	4/21/2011 10:33 PM
<b>TOTAL DISSOLVED SOLIDS</b>			<b>M2540C</b>			Analyst: <b>JKP</b>
Total Dissolved Solids (Residue, Filterable)	1,070		10.0	mg/L	1	4/20/2011 09:11 AM

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

**ALS Environmental**

Date: 30-Apr-11

Client: Conestoga-Rovers &amp; Associates

Project: Lovington Unit Water Plant

Work Order: 1104503

Sample ID: MW-2 041311

Lab ID: 1104503-02

Collection Date: 4/13/2011 01:58 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			<b>E300</b>			Analyst: <b>TDW</b>
Chloride	775		5.00	mg/L	10	4/21/2011 10:54 PM
Surr: Selenate (surr)	97.8		85-115	%REC	10	4/21/2011 10:54 PM
<b>TOTAL DISSOLVED SOLIDS</b>			<b>M2540C</b>			Analyst: <b>JKP</b>
Total Dissolved Solids (Residue, Filterable)	2,690		10.0	mg/L	1	4/20/2011 09:11 AM

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

**ALS Environmental**

Date: 30-Apr-11

Client: Conestoga-Rovers &amp; Associates

Project: Lovington Unit Water Plant

Work Order: 1104503

Sample ID: MW-4 041311

Lab ID: 1104503-03

Collection Date: 4/13/2011 01:01 PM

Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			<b>E300</b>			Analyst: <b>TDW</b>
Chloride	69.8		0.500	mg/L	1	4/21/2011 11:16 PM
Surr: Selenate (surr)	99.2		85-115	%REC	1	4/21/2011 11:16 PM
<b>TOTAL DISSOLVED SOLIDS</b>			<b>M2540C</b>			Analyst: <b>JKP</b>
Total Dissolved Solids (Residue, Filterable)	446		10.0	mg/L	1	4/20/2011 09:11 AM

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

**ALS Environmental**

Date: 30-Apr-11

**Client:** Conestoga-Rovers & Associates

**Project:** Lovington Unit Water Plant

**Work Order:** 1104503

**Sample ID:** MW-3 041311

**Lab ID:** 1104503-04

**Collection Date:** 4/13/2011 02:31 PM

**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			<b>E300</b>			Analyst: <b>TDW</b>
Chloride	1,050		50.0	mg/L	100	4/21/2011 11:37 PM
Surr: Selenate (surr)	98.2		85-115	%REC	100	4/21/2011 11:37 PM
<b>TOTAL DISSOLVED SOLIDS</b>			<b>M2540C</b>			Analyst: <b>JKP</b>
Total Dissolved Solids (Residue, Filterable)	4,180		10.0	mg/L	1	4/20/2011 09:11 AM

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

**ALS Environmental**

Date: 30-Apr-11

**Client:** Conestoga-Rovers & Associates

**Project:** Lovington Unit Water Plant

**Work Order:** 1104503

**Sample ID:** Dup-1

**Lab ID:** 1104503-05

**Collection Date:** 4/13/2011

**Matrix:** WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>ANIONS</b>			<b>E300</b>			Analyst: <b>TDW</b>
Chloride	1,070		50.0	mg/L	100	4/21/2011 11:58 PM
Surr: Selenate (surr)	98.5		85-115	%REC	100	4/21/2011 11:58 PM
<b>TOTAL DISSOLVED SOLIDS</b>			<b>M2540C</b>			Analyst: <b>JKP</b>
Total Dissolved Solids (Residue, Filterable)	3,650		10.0	mg/L	1	4/19/2011 09:10 AM

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

ALS Environmental

Date: 22-Apr-11

**Client:** Conestoga-Rovers & Associates  
**Work Order:** 1104503  
**Project:** Lovington Unit Water Plant

**QC BATCH REPORT**

Batch ID: **R108596** Instrument ID **Balance1** Method: **M2540C**

<b>MBLK</b>	Sample ID: <b>BLANK-R108596</b>						Units: <b>mg/L</b>	Analysis Date: <b>4/19/2011 09:10 AM</b>			
Client ID:	Run ID: <b>BALANCE1_110419F</b>				SeqNo: <b>2354628</b>	Prep Date:	DF: <b>1</b>				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Total Dissolved Solids (Residue, Fil	U	10									

<b>LCS</b>	Sample ID: <b>LCS-R108596</b>						Units: <b>mg/L</b>	Analysis Date: <b>4/19/2011 09:10 AM</b>			
Client ID:	Run ID: <b>BALANCE1_110419F</b>				SeqNo: <b>2354630</b>	Prep Date:	DF: <b>1</b>				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Total Dissolved Solids (Residue, Fil	1074	10	1000	0	107	85-115	0				

<b>DUP</b>	Sample ID: <b>1104440-70EDUP</b>						Units: <b>mg/L</b>	Analysis Date: <b>4/19/2011 09:10 AM</b>			
Client ID:	Run ID: <b>BALANCE1_110419F</b>				SeqNo: <b>2354617</b>	Prep Date:	DF: <b>1</b>				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Total Dissolved Solids (Residue, Fil	1644	10	0	0	0	0-0	1664	1.21	20		

The following samples were analyzed in this batch: 1104503-05A

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

**Client:** Conestoga-Rovers & Associates  
**Work Order:** 1104503  
**Project:** Lovington Unit Water Plant

## QC BATCH REPORT

Batch ID: **R108638**      Instrument ID **BALANCE1**      Method: **M2540C**

**MBLK**      Sample ID: **BLANK-R108638**      Units: **mg/L**      Analysis Date: **4/20/2011 09:11 AM**

Client ID:      Run ID: **BALANCE1\_110420E**      SeqNo: **2355824**      Prep Date:      DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	U	10								

**LCS**      Sample ID: **LCS-R108638**      Units: **mg/L**      Analysis Date: **4/20/2011 09:11 AM**

Client ID:      Run ID: **BALANCE1\_110420E**      SeqNo: **2355825**      Prep Date:      DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	1066	10	1000	0	107	85-115	0			

**DUP**      Sample ID: **1104440-72EDUP**      Units: **mg/L**      Analysis Date: **4/20/2011 09:11 AM**

Client ID:      Run ID: **BALANCE1\_110420E**      SeqNo: **2355786**      Prep Date:      DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	2770	10	0	0	0	0-0	2766	0.145	20	

**DUP**      Sample ID: **1104520-08EDUP**      Units: **mg/L**      Analysis Date: **4/20/2011 09:11 AM**

Client ID:      Run ID: **BALANCE1\_110420E**      SeqNo: **2355822**      Prep Date:      DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	2020	10	0	0	0	0-0	2022	0.099	20	

**The following samples were analyzed in this batch:**

1104503-01A	1104503-02A	1104503-03A
1104503-04A		

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

Client: Conestoga-Rovers & Associates  
 Work Order: 1104503  
 Project: Lovington Unit Water Plant

# QC BATCH REPORT

Batch ID: **R108670** Instrument ID **ICS3000** Method: **E300**

MBLK		Sample ID: <b>WBLKW1-042111-R108670</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 01:04 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2356296</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.50								
<i>Surr: Selenate (surr)</i>	4.765	0.10	5	0	95.3	85-115	0			

LCS		Sample ID: <b>WLCSDW1-042111-R108670</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 01:46 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2356297</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.41	0.50	20	0	107	90-110	0			
<i>Surr: Selenate (surr)</i>	4.633	0.10	5	0	92.7	85-115	0			

LCSD		Sample ID: <b>WLCSDW1-042111-R108670</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 02:07 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2356298</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.36	0.50	20	0	107	90-110	21.41	0.267	20	
<i>Surr: Selenate (surr)</i>	4.757	0.10	5	0	95.1	85-115	4.633	2.64	20	

MS		Sample ID: <b>1104465-01AMS</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 04:14 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2356364</b>		Prep Date:		DF: <b>50</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1654	25	500	1070	117	80-120	0			
<i>Surr: Selenate (surr)</i>	243	5.0	250	0	97.2	85-115	0			

MS		Sample ID: <b>1104502-03AMS</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 08:48 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2357087</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	115.2	0.50	10	106.5	87.8	80-120	0			EO
<i>Surr: Selenate (surr)</i>	5.02	0.10	5	0	100	85-115	0			

MSD		Sample ID: <b>1104465-01AMSD</b>			Units: <b>mg/L</b>			Analysis Date: <b>4/21/2011 04:35 PM</b>		
Client ID:		Run ID: <b>ICS3000_110421A</b>			SeqNo: <b>2356394</b>		Prep Date:		DF: <b>50</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1654	25	500	1070	117	80-120	1654	0.00453	20	
<i>Surr: Selenate (surr)</i>	243.4	5.0	250	0	97.4	85-115	243	0.183	20	

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

**Client:** Conestoga-Rovers & Associates  
**Work Order:** 1104503  
**Project:** Lovington Unit Water Plant

# QC BATCH REPORT

Batch ID: **R108670**      Instrument ID **ICS3000**      Method: **E300**

MSD		Sample ID: 1104502-03AMSD				Units: mg/L		Analysis Date: 4/21/2011 09:51 PM			
Client ID:		Run ID: ICS3000_110421A				SeqNo: 2357090		Prep Date:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Chloride	115.2	0.50	10	106.5	87.7	80-120	115.2	0.00868	20	EO	
<i>Surr: Selenate (surr)</i>	<i>5.027</i>	<i>0.10</i>	<i>5</i>	<i>0</i>	<i>101</i>	<i>85-115</i>	<i>5.02</i>	<i>0.139</i>	<i>20</i>		

The following samples were analyzed in this batch:

1104503-01A	1104503-02A	1104503-03A
1104503-04A	1104503-05A	

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

**Client:** Conestoga-Rovers & Associates  
**Project:** Lovington Unit Water Plant  
**WorkOrder:** 1104503

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	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

<u>Acronym</u>	<u>Description</u>
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

<u>Units Reported</u>	<u>Description</u>
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 1 of 1

COC ID: 34204

# 1104503

CRA-HOU: Conestoga-Rovers & Associates

Project: Lovington Unit Water Plant



ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Lovington Unit Water Plant	A	A
Work Order		Project Number	73016	B	TDS
Company Name	Conestoga-Rovers & Associates	Bill To Company	Conestoga-Rovers & Associates	C	
Send Report To	Patricia Lynch	Invoice Attn	Patricia Lynch	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) 734-3391	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	MW-1 041311	4-13-11	1300	W	N/A	1	X	X									
2	MW-2 041311	4-13-11	1358	W	N/A	1	X	X									
3	MW-4 041311	4-13-11	1301	W	N/A	1	X	X									
4	MW-3 041311	4-13-11	1431	W	N/A	1	X	X									
5	DUP-1	4-13-11	---	W	N/A	1	X	X									
6	TEMP	---	---														
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign: J. PRINERA 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: [Signature] Date: 4/14/11 Time: 1658 Received by: [Signature] Date: 4/15/11 Time: 0840 Notes: 5 Day TAT.

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by (Laboratory): \_\_\_\_\_ Cooler ID: 3567 Cooler Temp: \_\_\_\_\_ QC Package: (Check One Box Below)  Level II Std QC  TRRP Check Lis  Level III Std QC/Raw Data  TRRP Level IV  Level IV SW846/CLP  Other / EDD

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

Preservative Key: 1-HCl 2-HNO<sub>3</sub> 3-H<sub>2</sub>SO<sub>4</sub> 4-NaOH 5-Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> 6-NaHSO<sub>4</sub> 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.

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Sample Receipt Checklist

Client Name: **CRA-HOU**

Date/Time Received: **15-Apr-11 08:40**

Work Order: **1104503**

Received by: **PMG**

Checklist completed by David Hightower 15-Apr-11  
eSignature Date

Reviewed by: R. Kevin Given 19-Apr-11  
eSignature 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):

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:

1104503

 <b>ALS Environmental</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	<b>CUSTODY</b>		<b>AL</b>	Seal Broken By: <i>[Signature]</i>
	Date: <u>4-14-11</u>	Time: <u>7:00</u>	Date: <u>4/15/11</u>	
	Name: <u>J. P. [Signature]</u>	Company: <u>CTA</u>		

This notice can be removed to: Recipient's receipt.

Date: 4-14-11      FedEx Tracking Number: 875394691985  
 Sender's Name: J. P. [Signature]      Phone: 281 530 5656  
 Company: CTA  
 Address: 2735 S. Loop West      Dept./Floor/Suite/Room:  
1700 [Signature]      State: TX      ZIP: 77003  
 Our Internal Billing Reference: Contract 700 Unit 7

# Analytical Report 423397

for

## Conestoga Rovers & Associates

**Project Manager: John Schnable**

**Lovington Water Plant**

**073016**

**20-JUL-11**

Collected By: Client



**Celebrating 20 Years of commitment to excellence in Environmental Testing Services**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)

Xenco-Boca Raton (EPA Lab Code: FL01273):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)  
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



20-JUL-11

Project Manager: **John Schnable**  
**Conestoga Rovers & Associates**  
2135 S Loop 250 W  
Midland, TX 79703

Reference: XENCO Report No: **423397**  
**Lovington Water Plant**  
Project Address: Lovington, NM

**John Schnable:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 423397. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 423397 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

---

**Brent Barron, II**

Odessa Laboratory Manager

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

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## Sample Cross Reference 423397



**Conestoga Rovers & Associates, Midland, TX**

Lovington Water Plant

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
MW4 071511	W	Jul-15-11 13:15		423397-001
MW1 071511	W	Jul-15-11 13:55		423397-002
MW2 071511	W	Jul-15-11 14:20		423397-003
MW3 071511	W	Jul-15-11 14:45		423397-004
DUP1 071511	W	Jul-15-11 00:00		423397-005



## CASE NARRATIVE

*Client Name: Conestoga Rovers & Associates*

*Project Name: Lovington Water Plant*



*Project ID: 073016*  
*Work Order Number: 423397*

*Report Date: 20-JUL-11*  
*Date Received: 07/18/2011*

---

***Sample receipt non conformance and comments:***

*None*

---

***Sample receipt non conformance and comments per sample:***

*None*



# Certificate of Analysis Summary 423397

Conestoga Rovers & Associates, Midland, TX



Project Id: 073016

Contact: John Schnable

Project Name: Lovington Water Plant

Date Received in Lab: Mon Jul-18-11 10:57 am

Report Date: 20-JUL-11

Project Location: Lovington, NM

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	423397-001	423397-002	423397-003	423397-004	423397-005	
	<i>Field Id:</i>	MW4 071511	MW1 071511	MW2 071511	MW3 071511	DUP1 071511	
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	
	<i>Sampled:</i>	Jul-15-11 13:15	Jul-15-11 13:55	Jul-15-11 14:20	Jul-15-11 14:45	Jul-15-11 00:00	
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-19-11 16:24					
	<i>Units/RL:</i>	mg/L RL					
Chloride		65.6 5.00	271 5.00	384 5.00	1130 12.5	1120 12.5	
<b>TDS by SM2540C</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jul-18-11 14:00					
	<i>Units/RL:</i>	mg/L RL					
Total dissolved solids		366 5.00	740 5.00	3220 5.00	3330 5.00	3480 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

  
Brent Barron, II  
Odessa Laboratory Manager

# Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection
- PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation
- DL** Method Detection Limit
- NC** Non-Calculable
- + Outside XENCO's scope of NELAC Accreditation.

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(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	



# BS / BSD Recoveries



**Project Name: Lovington Water Plant**

**Work Order #: 423397**

**Analyst: BRB**

**Date Prepared: 07/19/2011**

**Project ID: 073016**

**Date Analyzed: 07/19/2011**

**Lab Batch ID: 864506**

**Sample: 864506-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>Anions by E300</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Chloride	<0.500	10.0	10.3	103	10.0	10.5	105	2	80-120	20	

**Analyst: WRU**

**Date Prepared: 07/18/2011**

**Date Analyzed: 07/18/2011**

**Lab Batch ID: 864571**

**Sample: 864571-1-BKS**

**Batch #: 1**

**Matrix: Water**

**Units: mg/L**

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>TDS by SM2540C</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Total dissolved solids	<5.00	1000	954	95	1000	966	97	1	80-120	30	

Relative Percent Difference RPD = 200\*(C-F)/(C+F)

Blank Spike Recovery [D] = 100\*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Lovington Water Plant

Work Order #: 423397

Lab Batch #: 864506

Project ID: 073016

Date Analyzed: 07/19/2011

Date Prepared: 07/19/2011

Analyst: BRB

QC- Sample ID: 423530-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
<b>Analytes</b>						
Chloride	626	500	1140	103	80-120	

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A)/B$   
 Relative Percent Difference [E] =  $200 \cdot (C-A)/(C+B)$   
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

# Sample Duplicate Recovery

**Project Name: Lovington Water Plant**

**Work Order #:** 423397

**Lab Batch #:** 864506

**Project ID:** 073016

**Date Analyzed:** 07/19/2011 16:24

**Date Prepared:** 07/19/2011

**Analyst:** BRB

**QC- Sample ID:** 423530-001 D

**Batch #:** 1

**Matrix:** Water

**Reporting Units:** mg/L

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

<b>Anions by E300</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Chloride	626	632	1	20	

**Lab Batch #:** 864571

**Date Analyzed:** 07/18/2011 14:00

**Date Prepared:** 07/18/2011

**Analyst:** WRU

**QC- Sample ID:** 423286-001 D

**Batch #:** 1

**Matrix:** Water

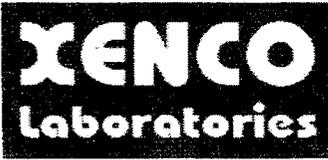
**Reporting Units:** mg/L

**SAMPLE / SAMPLE DUPLICATE RECOVERY**

<b>TDS by SM2540C</b>	<b>Parent Sample Result [A]</b>	<b>Sample Duplicate Result [B]</b>	<b>RPD</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analyte</b>					
Total dissolved solids	894	858	4	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit





**XENCO Laboratories**  
 Atlanta, Boca Raton, Corpus Christi, Dallas  
 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: CRA  
 Date/Time: 7-18-11 10:57  
 Lab ID #: 423397  
 Initials: XM

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	<u>N/A</u>	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	<u>Yes</u>	<u>No</u>	N/A	
17. VOC sample have zero head space?	Yes	No	<u>N/A</u>	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>.4</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis

# Analytical Report 434013

for

## Conestoga Rovers & Associates

**Project Manager: John Schnable**

**Lovington Water Plant**

**073016**

**03-JAN-12**

Collected By: Client



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Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



03-JAN-12

Project Manager: **John Schnable**  
**Conestoga Rovers & Associates**  
2135 S Loop 250 W  
Midland, TX 79703

Reference: XENCO Report No: **434013**  
**Lovington Water Plant**  
Project Address: Lea County, NM

**John Schnable:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 434013. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 434013 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

---

**Brent Barron II**

Odessa Laboratory Manager

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## Sample Cross Reference 434013



Conestoga Rovers & Associates, Midland, TX

Lovington Water Plant

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-4 122211	W	12-22-11 12:29		434013-001
MW-1 122211	W	12-22-11 12:38		434013-002
MW-2 122211	W	12-22-11 12:43		434013-003
MW-3 122211	W	12-22-11 13:05		434013-004
Dup-1 122211	W	12-22-11 00:00		434013-005



## CASE NARRATIVE

*Client Name: Conestoga Rovers & Associates*

*Project Name: Lovington Water Plant*



*Project ID: 073016*  
*Work Order Number: 434013*

*Report Date: 03-JAN-12*  
*Date Received: 12/23/2011*

---

***Sample receipt non conformances and comments:***

*None*

---

***Sample receipt non conformances and comments per sample:***

*None*

***Analytical non nonformances and comments:***

*Batch: LBA-877866 Anions by E300*  
*E300MI*

*Batch 877866, Chloride recovered above QC limits in the Matrix Spike.*  
*Samples affected are: 434013-001, -004, -003, -005, -002.*  
*The Laboratory Control Sample for Chloride is within laboratory Control Limits*



# Certificate of Analysis Summary 434013

Conestoga Rovers & Associates, Midland, TX



Project Id: 073016

Contact: John Schnable

Project Name: Lovington Water Plant

Date Received in Lab: Fri Dec-23-11 12:25 pm

Report Date: 03-JAN-12

Project Location: Lea County, NM

Project Manager: Brent Barron II

<i>Analysis Requested</i>	<i>Lab Id:</i>	434013-001	434013-002	434013-003	434013-004	434013-005	
	<i>Field Id:</i>	MW-4 122211	MW-1 122211	MW-2 122211	MW-3 122211	Dup-1 122211	
	<i>Depth:</i>						
	<i>Matrix:</i>	WATER	WATER	WATER	WATER	WATER	
	<i>Sampled:</i>	Dec-22-11 12:29	Dec-22-11 12:38	Dec-22-11 12:43	Dec-22-11 13:05	Dec-22-11 00:00	
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-24-11 01:07					
	<i>Units/RL:</i>	mg/L RL					
Chloride		66.9 10.0	332 25.0	456 25.0	1200 100	339 25.0	
<b>TDS by SM2540C SUB: E871002</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Dec-29-11 20:00	Dec-28-11 20:00	Dec-28-11 20:00	Dec-28-11 20:00	Dec-29-11 20:00	
	<i>Units/RL:</i>	mg/L RL					
Total dissolved solids		526 5.00	1120 5.00	1420 5.00	2850 5.00	1010 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron II  
Odessa Laboratory Manager

# Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.      ^ NELAC or State program does not offer Accreditation at this time.

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# BS / BSD Recoveries



## Project Name: Lovington Water Plant

Work Order #: 434013

Analyst: BRB

Date Prepared: 12/24/2011

Project ID: 073016

Date Analyzed: 12/24/2011

Lab Batch ID: 877866

Sample: 877866-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.500	10.0	10.6	106	10.0	11.0	110	4	80-120	20	

Analyst: MAB

Date Prepared: 12/28/2011

Date Analyzed: 12/28/2011

Lab Batch ID: 878177

Sample: 878177-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total dissolved solids	<5.00	1000	1030	103	1000	1040	104	1	80-120	30	

Analyst: MAB

Date Prepared: 12/29/2011

Date Analyzed: 12/29/2011

Lab Batch ID: 878233

Sample: 878233-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TDS by SM2540C	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total dissolved solids	<5.00	1000	1070	107	1000	972	97	10	80-120	30	

Relative Percent Difference RPD = 200\*|(C-F)/(C+F)|

Blank Spike Recovery [D] = 100\*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100\*(F)/[E]

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Lovington Water Plant

Work Order #: 434013

Lab Batch #: 877866

Date Analyzed: 12/24/2011

QC- Sample ID: 433957-001 S

Reporting Units: mg/L

Date Prepared: 12/24/2011

Batch #: 1

Project ID: 073016

Analyst: BRB

Matrix: Water

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
<b>Analytes</b>						
Chloride	238	100	363	125	80-120	X

Matrix Spike Percent Recovery [D] =  $100 \cdot (C-A)/B$   
 Relative Percent Difference [E] =  $200 \cdot (C-A)/(C+B)$   
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

# Sample Duplicate Recovery

**Project Name: Lovington Water Plant**

**Work Order #:** 434013

**Lab Batch #:** 877866

**Project ID:** 073016

**Date Analyzed:** 12/24/2011 01:07

**Date Prepared:** 12/24/2011

**Analyst:** BRB

**QC- Sample ID:** 433957-001 D

**Batch #:** 1

**Matrix:** Water

**Reporting Units:** mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	238	240	1	20	

**Lab Batch #:** 878177

**Date Analyzed:** 12/28/2011 20:00

**Date Prepared:** 12/28/2011

**Analyst:** MAB

**QC- Sample ID:** 433924-001 D

**Batch #:** 1

**Matrix:** Water

**Reporting Units:** mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2970	2740	8	30	

**Lab Batch #:** 878233

**Date Analyzed:** 12/29/2011 20:00

**Date Prepared:** 12/29/2011

**Analyst:** MAB

**QC- Sample ID:** 434182-003 D

**Batch #:** 1

**Matrix:** Ground Water

**Reporting Units:** mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	98.0	114	15	30	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
 All Results are based on MDL and validated for QC purposes.  
 BRL - Below Reporting Limit





**XENCO Laboratories**  
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 Houston, Miami, Odessa, Philadelphia  
 Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist  
 Document No.: SYS-SRC  
 Revision/Date: No. 01, 5/27/2010  
 Effective Date: 6/1/2010 Page 1 of 1

**Prelogin / Nonconformance Report - Sample Log-In**

Client: CRA  
 Date/Time: 12-23-11 12:25  
 Lab ID #: 434013  
 Initials: AE

**Sample Receipt Checklist**

1. Samples on ice?	Blue	<del>Water</del>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	Yes	No	<u>N/A</u>	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
7. Chain of custody signed when relinquished / received?	<u>Yes</u>	No		
8. Chain of custody agrees with sample label(s)?	<u>Yes</u>	No		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	Yes	No	<u>N/A</u>	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>1.0</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

**Nonconformance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that apply:
- Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
  - Initial and Backup Temperature confirm out of temperature conditions
  - Client understands and would like to proceed with analysis