AP - 087

AGWMR

08/10/2009

AP-087

E.C. HILL "B" ATB @ WELL # 24 ANNUAL GROUNDWATER SAMPLING REPORT

LOCATED IN LEA COUNTY, NEW MEXICO

Prepared for:

GLENN SPRINGS HOLDINGS (A wholly owned subsidiary of Occidental Petroleum)

Prepared by:

Tetra Tech 1910 N. Big Spring St. Midland, Texas 79705 (432) 682-4559 Fax (432) 682-3946

Tetra Tech Project No. 115-6402944 AUGUST 10, 2009

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TETRA TECH

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August 10, 2009

Mr. Glenn von Gonten New Mexico Energy, Minerals, & Natural Resources Oil Conservation Division, Environmental Bureau 1220 S. St. Francis Drive Santa Fe, New Mexico 87504

Re: October 2008 to June 2009 Annual Groundwater Sampling Report for the OXY USA, Inc., E.C. Hill Abandoned Tank Battery (ATB) at Well #24, Located in Section 34, Township 23 South, Range 37 East, Lea County, New Mexico. NMOCD AP-87

Mr. Von Gonten:

This report details the results of the quarterly sampling events, which began in the third quarter of 2008, performed at the OXY USA, Inc. (OXY) E. C. Hill Abandoned Tank Battery (ATB) at Well #24 (Site). The site is located approximately 12 miles south of Eunice, Lea County, New Mexico. The facility was acquired by OXY USA, Inc. in March 2008. Prior to OXY acquiring the property, the facility was operated by Plains Exploration and Production, Pogo Producing Company, and Latigo Petroleum.

FACILITY BACKGROUND

As part of a due diligence assessment for Pogo Producing Company (Pogo), this site was inspected by Highlander Environmental Corp. Due to visual historic spills, Highlander supervised the installation of auger holes and soil borings at the site. The site location is shown on Figure 1.

As part of the investigation, two impacted areas were investigated east of the abandoned facility. A total of eight (8) auger holes were installed in an area measuring 75' x 25'. One auger hole was placed in the second impacted area measuring 12' x 12'. Chloride impact was not observed in any of the analyzed auger samples. TPH concentrations were defined below the RRAL in six of the nine auger holes. One borehole was installed near auger hole AH-2. Borehole BH-1 exhibited TPH concentrations above the RRAL to a depth of 60'-62' below ground surface (bgs). The sample from 70'-72' was below the RRAL.



Based on the analytical results, borehole (BH-1) was converted to a temporary 2-inch monitor well. Groundwater was encountered at approximately 82 feet below top of casing (TOC). On September 22 and 29, 2006 and October 4, 2006, Highlander purged and sampled the well per New Mexico Oil Conservation Division (NMOCD) guidelines for analysis of chlorides, TPH, and Chloride concentrations did not exceed New Mexico Water Quality BTEX. Control Commission (NMWQCC) standards, while hydrocarbon constituents (BTEX) were below the NMWQCC action levels and total TPH was 73.3 mg/L. The well was scheduled to be sampled on May 16, 2007, however, 2.68' of Phase Separated Hydrocarbons (PSH) was measured in the well. At that time, the well was completed as a permanent well. On July 25, 2007, the Director of the NMOCD, Environmental Bureau was notified in writing of groundwater impact at the above-referenced site in accordance with NM Rule 116. To complete delineation at the site, three additional monitor wells were installed at the site in September 2007. The monitor well locations are shown on Figure 2.

On July 8, 2008 a Stage 1 Abatement Plan was submitted by OXY to the NMOCD addressing the groundwater and soil impacts at the site. In the abatement plan an additional recovery well was proposed within the vicinity of monitor well MW-1. In addition, OXY proposed to excavate the hydrocarbon impacted soils in the southern end of the facility to a depth of 4.0' bgs and place an impermeable infiltration barrier to prevent further vertical migration of hydrocarbons within the soil. As of this report, no response has been received from the NMOCD on the Stage 1 Abatement Plan.

Gauging and Monitor Well Sampling

On October 23, 2008, December 12, 2008, March 12, 2009, and June 22, 2009, Tetra Tech, Inc was onsite to gauge all monitor wells. During these sampling events, Phase Separated Hydrocarbon (PSH) was measured in monitor well MW-1, which was subsequently not sampled. The PSH thickness in MW-1 ranged from 2.99' to 3.06' throughout the sampling period. PSH thickness maps for the four gauging events are included as Figures 7 through 10. Utilizing the water level elevation calculations, groundwater gradient maps were generated for the four sampling events. The hydraulic gradient indicates an east to southeasterly direction. Potentiometric surface maps for the four sampling events are included as Figures 3 through 6. Gauging data is summarized in Table 1.

During the four sampling events, each of the wells without PSH was purged utilizing a submersible pump and sampled for BTEX and chlorides. In addition, the monitor wells without PSH were also sampled for major anions/cations during the October sampling event. The samples were properly preserved and under proper chain-of-custody control were submitted to Trace

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Analysis Inc. of Lubbock, Texas, ALS Laboratory Group, and Accutest of Houston, Texas for analysis of BTEX by EPA Method SW8021B, major anions/cations by EPA Methods SM2320B, S6010B, SM4500H, SM2540C, and chlorides by EPA Method 300.0. Analytical results indicate that BTEX was not detected at or above detection limits for all sampled monitor wells for the four sampling events. Chlorides ranged from 108 mg/L in monitor well MW-4 to 315 mg/L in monitor well MW-2. Chlorides slightly exceeded the NMWQCC standards of 250 mg/L in monitor well MW-2 throughout the sampling period. The analyses are shown in Table 2 and 3. The hydrocarbon concentration maps for the four sampling events are shown as Figures 11 through 14, while chloride isopleth maps are shown as Figures 15 through 18. Copies of the laboratory analyses are enclosed in Appendix A.

CONCLUSTIONS

- 1. During the four sampling events, Phase separated hydrocarbons (PSH) were measured in monitor well MW-1. The PSH thickness in MW-1 ranged from 2.99' to 3.06' throughout the three sampling events.
- 2. The groundwater gradient for the four sampling events is to the east/southeast.
- 3. The monitor wells were gauged and sampled on October 23, 2008, December 12, 2008, March 12, 2009, and June 22, 2009. The samples were preserved and delivered to Trace Analysis, Inc. of Lubbock, Texas, ALS Laboratory Group and/or Accutest of Houston, Texas under proper chain-of-custody control. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by method SW8021B, major anions/cations by EPA Methods SM2320B, S6010B, SM4500H, SM2540C, and chlorides by method 300.0, within their specified holding times.
- 4. Analytical results indicate that BTEX was not detected at or above detection limits for all sampled monitor wells for the four sampling events.
- 5. Chlorides ranged from 108 mg/L in monitor well MW-4 to 315 mg/L in monitor well MW-2. Chlorides slightly exceeded the NMWQCC standards of 250 mg/L in monitor well MW-2 throughout the sampling period.
- 6. A Stage 1 Abatement Plan was submitted to the NMOCD on July 8, 2008. As of this report, no response has been received from the NMOCD.



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RECOMMENDATIONS

- 1. Quarterly groundwater monitoring and gauging will be continued throughout the year.
- 2. A PSH Recovery system will be installed in monitor well MW-1

If you have any question or comments concerning the assessment or the activities performed at the Site, please call me at (432) 682-4559.

Respectfully submitted, Tetra Tech, Inc.

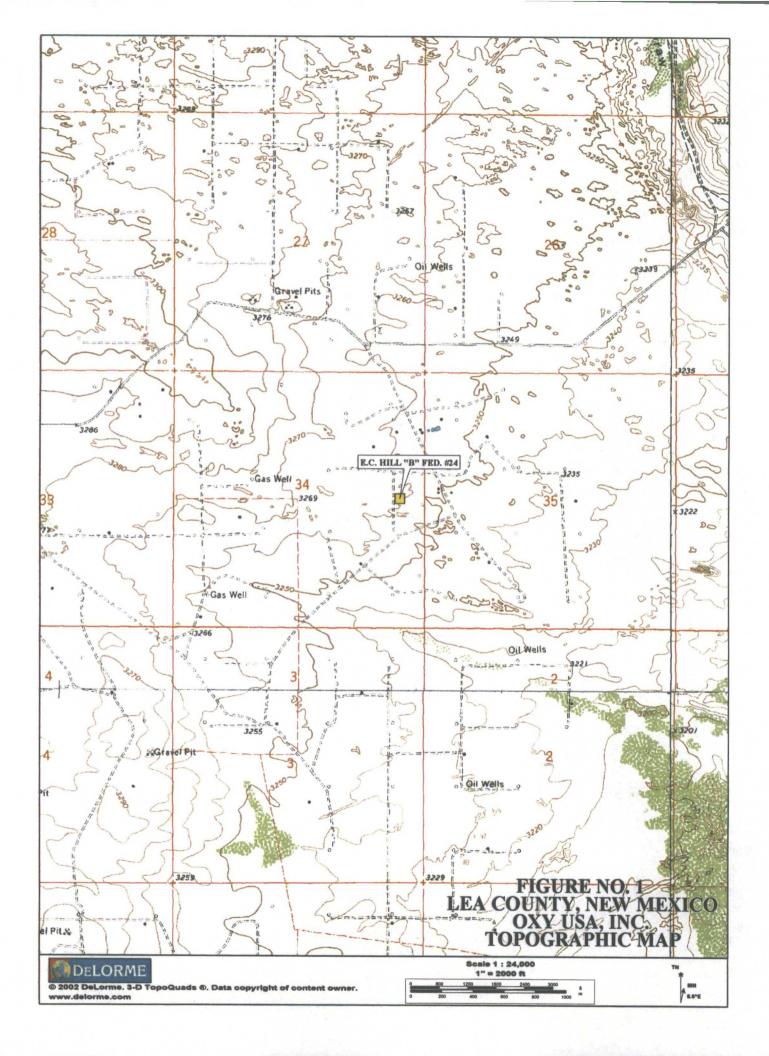
Jeffrey Kindley, P.G. Senior Environmental Geologist

cc: Rick Passmore –Glenn Spring Holdings



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FIGURES





PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD		
EVA BLINEBRY FED. #14		
	Ρ	EVA BLINEBRY FED. #14
		-
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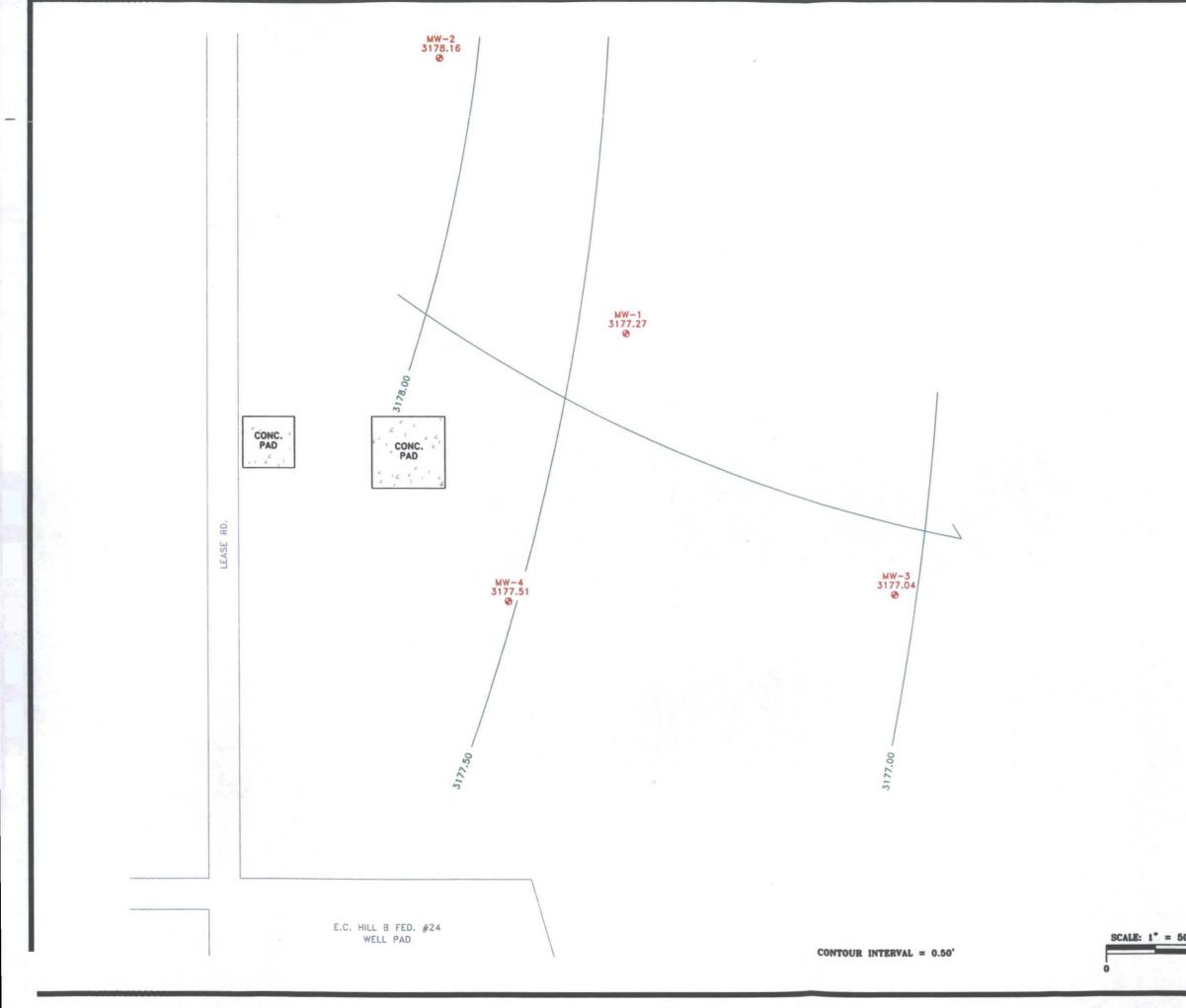
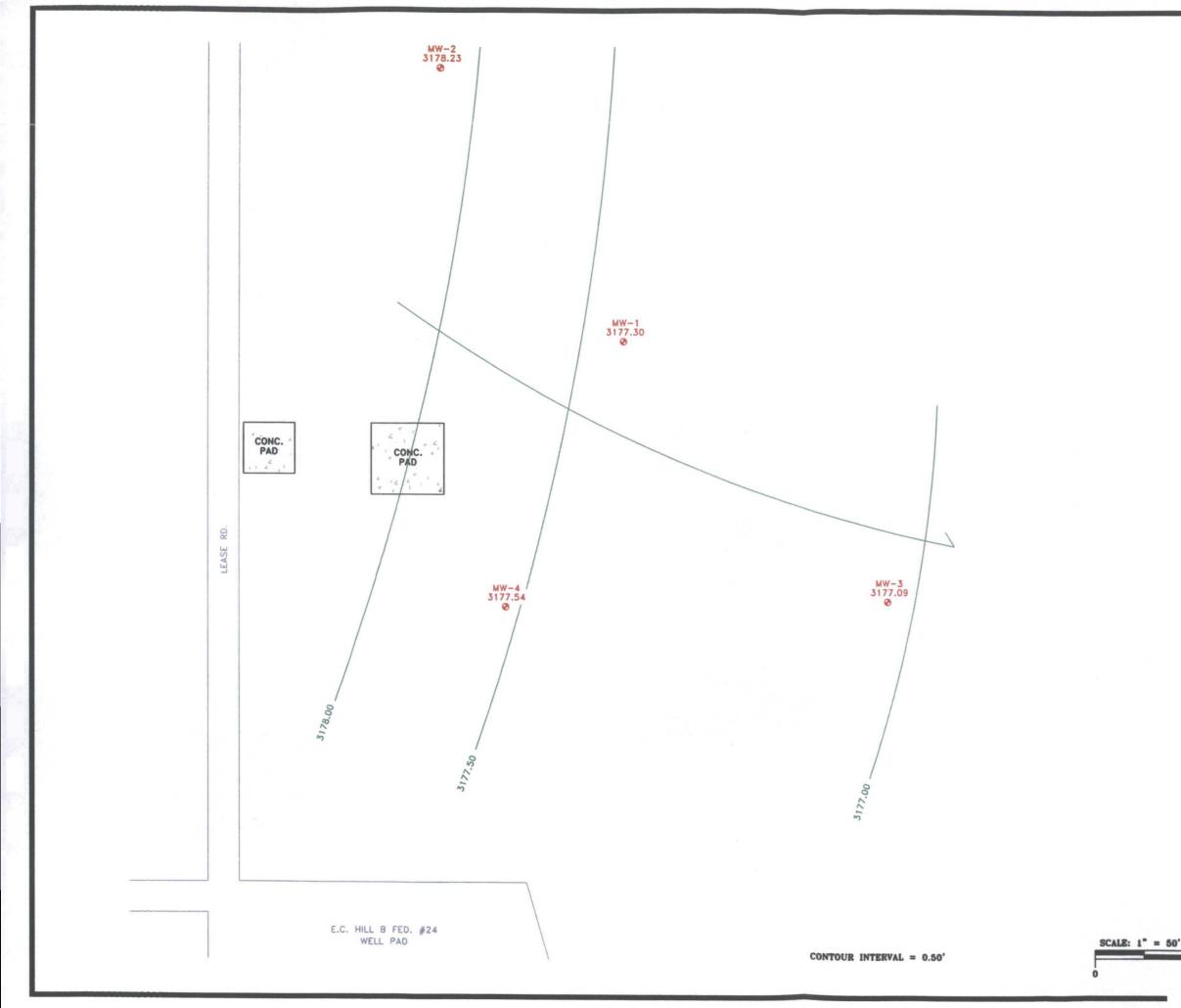
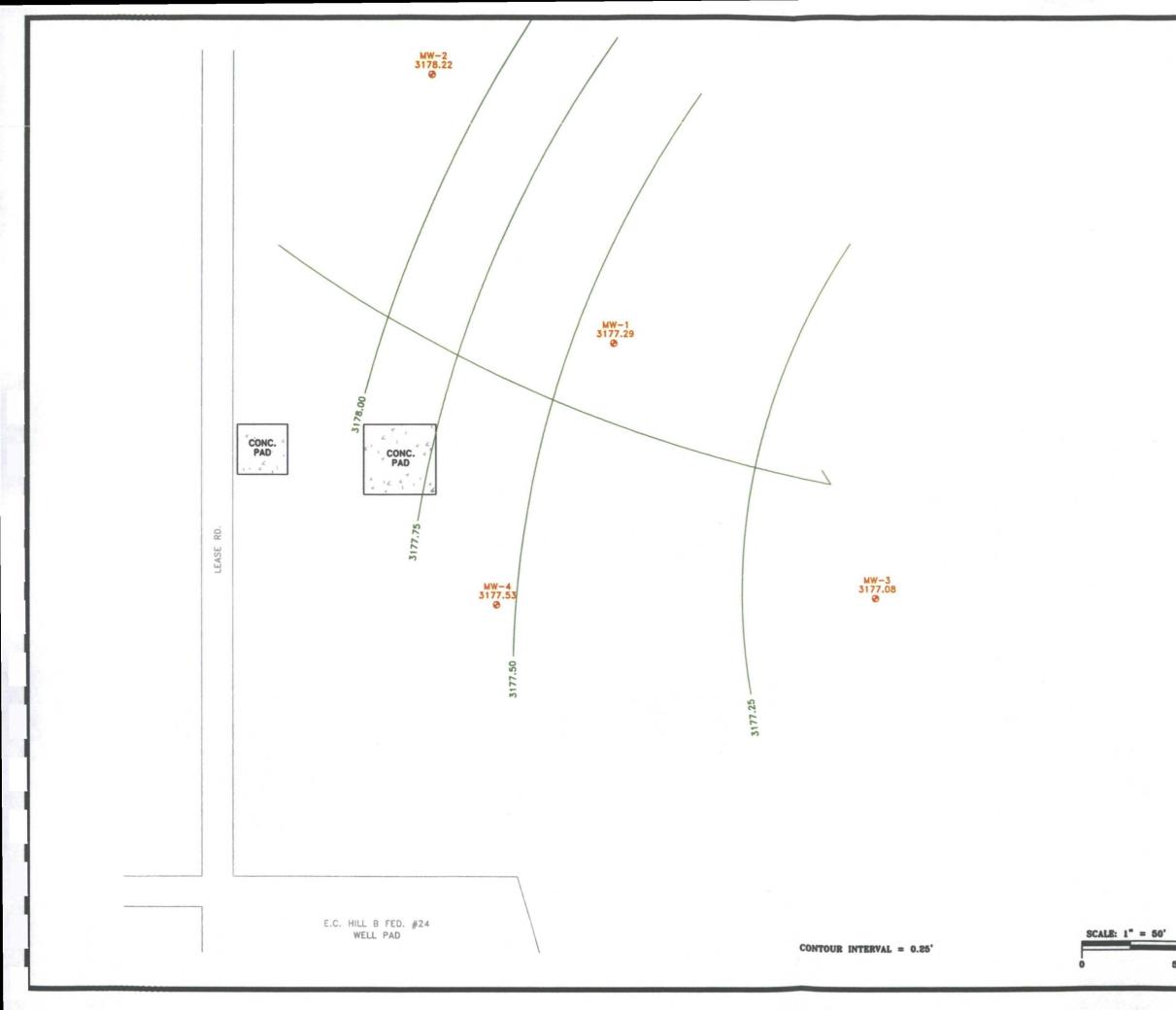


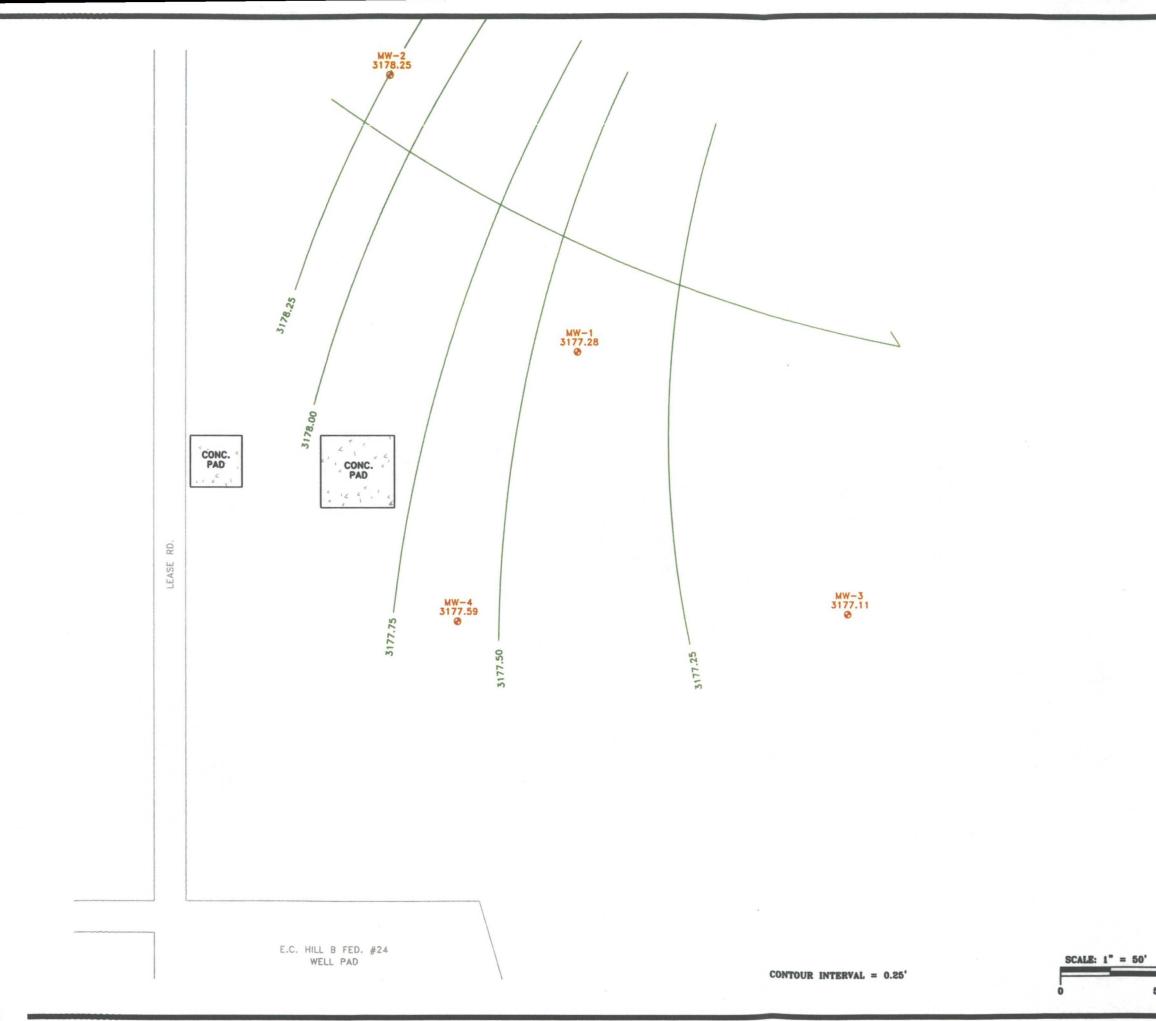
	FIGURE NO. 3 LEA COUNTY, NEW MEX OXY USA, INC. E.C. HILL ATB • WELL	
4		
	PLAINS EVA BLINEBR' FED. #14 P & A WELL P	



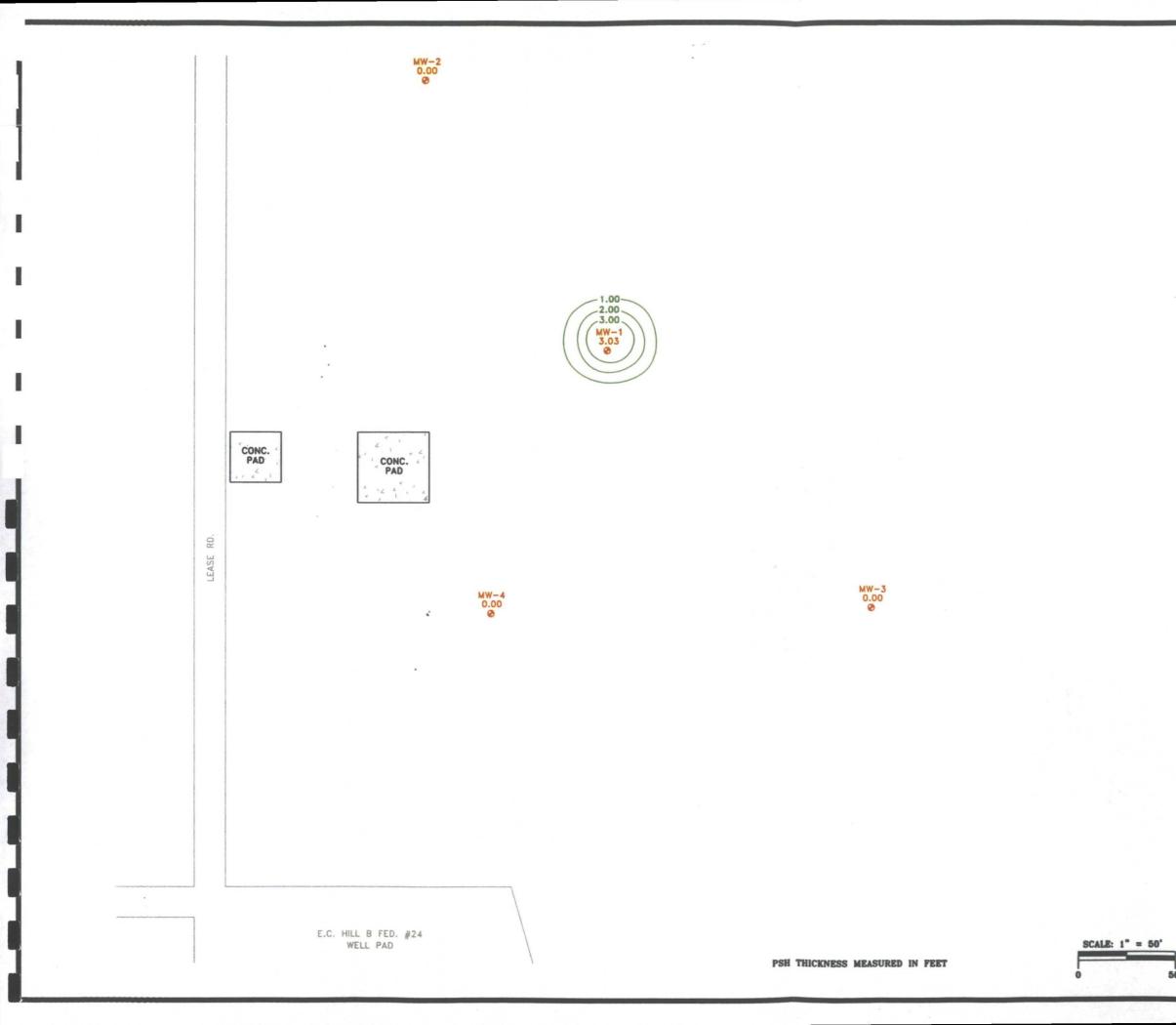
0HC 6H: JJ FRC 14 1001 2044 STE WE	GAUGED ON 12/12/08 TETRA TECH, INC. MIDLAND, TEXAS
648E 3/5/09	LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24 GROUNDWATER GRADIENT MAP GAUGED ON 12/12/08
	FIGURE NO. 4
	P & A WELL PAD
	PLAINS EVA BLINEBRY FED. #14



PLANS EVA BLINEBRY FED. #14 P & A WELL PAD	7/15/09	GROUNDWATER GRADIENT MAP GAUGED ON 3/12/09
FIGURE NO. 5	Last.	
EVA BLINEBRY FED. #14		LEA COUNTY, NEW MEXICO
EVA BLINEBRY FED. #14		
EVA BLINEBRY		P & A WELL PAD
		EVA BLINEBRY
-8-		
-8-		
-3-		
		-0-



0.	exte: 7/15/09	FIGURE NO. 6 LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24 GROUNDWATER GRADIENT MAP GAUGED ON 6/22/09
		PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD



045: 3/5/09 086. 91: JJ	FIGURE NO. 7 LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24 PSH THICKNESS MAP GAUGED ON 10/23/08 TETRA TECH, INC. MIDLAND, TEXAS
	PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD
	•

₩₩-2 0.00 @ 1.00-MW-1 2.99 @ CONC. PAD CONC. PAD 4 11 RD. LEASE ₩₩-3 0.00 M₩-4 0.00 @ E.C. HILL 8 FED. #24 WELL PAD SCALE: 1" = 50' PSH THICKNESS MEASURED IN FEET

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	PLAINS EVA BLINEBRY FED. ∯14 P & A WELL PAD
	FIGURE NO. 8 LEA COUNTY, NEW MEXICO OXY USA, INC.
BARE: 3/5/09	OXY USA, INC. E.C. HILL ATB • WELL #24 PSH THICKNESS MAP GAUGED ON 12/12/08
3/5/09 DWG. BY: JJ FRE:	GAUGED ON 12/12/08 TETRA TECH, INC. MIDLAND, TEXAS

MW-2 0.00 € 1.00-3.00 MW-1 3.04 Ø CONC. PAD 6 CONC. PAD · 2 . 12 4 RD. LEASE MW-3 0.00 € M₩-4 0.00 E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH THICKNESS MEASURED IN FEET

	PLAINS EVA BLINEBRY FED. #14 & A WELL PAD
DXY B.C. HILL	URE NO. 9 TY, NEW MEXICO USA, INC. ATB @ WELL #24 HICKNESS MAP ON 3/12/09

MW-2 0.00 € 1.00 2.00 3.00 MW-1 3.06 @ CONC. PAD CONC. PAD 4 < 12 4 RD. LEASE MW-3 0.00 € ₩₩-4 0.00 E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH THICKNESS MEASURED IN FEET

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			PLAINS
			EVA BLINEBRY FED. #14 P & A WELL PAD
		L	
		Г	FIGURE NO. 10
		LEA C	COUNTY, NEW MEXICO KY USA, INC. IILL ATB • WELL #24
	Date: 7/15/09		H THICKNESS MAP
	PHE: JJ		UGED ON 6/22/09 TETRA TECH, INC. MIDLAND, TEXAS
	SIT W		MIDLAND, TEXAS

MW-2 B <0.001 BTEX <0.001 @ MW-1 PSH CONC. PAD 2 CONC. PAD < 14 4 LEASE RD. MW-3 B <0.001 BTEX <0.001 Ø MW-4 B <0.001 BTEX <0.001 ₽ ٦ I J E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH = PHASE SEPARATED HYDROCARBON RESULTS IN mg/L 0

	PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD
	FIGURE NO. 11
	LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24
DATE: 3/5/09 DHD. BY:	HYDROCARBON CONCENTRATION MAP SAMPLED ON 10/23/08
SU PRE INV 2844	TETRA TECH, INC. MIDLAND, TEXAS

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MW-2 B <0.005 BTEX <0.005 Ø MW-1 PSH × , CONC. PAD CONC. PAD < 12 2 LEASE RD. MW-3 B <0.005 BTEX <0.005 Ø MW-4 B <0.005 BTEX <0.005 ₽ E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH = PHASE SEPARATED HYDROCARBON RESULTS IN mg/L 0

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		PLAINS
		EVA BLINEBRY FED. #14 P & A WELL PAD
		FIGURE NO. 12
		LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24
7	DATE: 3/5/09	HYDROCARBON CONCENTRATION MAP SAMPLED ON 12/12/08
50'	DWC. BY: JJ FR.C: HE\DUT\2044	TETRA TECH, INC. MIDLAND, TEXAS

MW-2 B <0.001 BTEX <0.003 I MW-1 PSH < , CONC. PAD L CONC. 10 12 2 LEASE RD. MW-3 B <0.001 BTEX <0.003 MW-4 B <0.001 BTEX <0.003 ⊕ 1 E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH = PHASE SEPARATED HYDROCARBON RESULTS IN mg/L

		PI	LAINS	
	EV,	A	BLINEB	RY
	1	FED). #14	
Ρ	&	A	WELL	PAD

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	FIGURE NO. 13
	LEA COUNTY, NEW MEXICO
	OXY USA, INC. E.C. HILL ATB • WELL #24
DATE: 7/5/09	HYDROCARBON CONCENTRATION MAP SAMPLED ON 6/22/09
JJ PILC: 16\007\2944	TETRA TECH, INC. MIDLAND, TEXAS



		PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD
		F & A WELL FAU
		FIGURE NO. 14 LEA COUNTY, NEW MEXICO
		OXY USA, INC. E.C. HILL ATB • WELL #24
) .	9416 3/5/09 946. 97: JJ	CHLORIDE ISOPLETH MAP SAMPLED ON 10/23/08
8	STE MAR	TETRA TECH, INC. MIDLAND, TEXAS

<250 M₩-2 270 MW-1 PSH < 4 CONC. PAD CONC. PAD 4 I 12. 4 LEASE RD. MW-3 120 愛 M₩-4 108 @ E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH = PHASE SEPARATED HYDROCARBON RESULTS IN mg/L

		PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD
50'	BARE: 3/5/09 DHE: 01: JJ: JRE: 01:	FIGURE NO. 15 LEA COUNTY, NEW MEXICO OXY USA, INC. E.C. HILL ATB • WELL #24 CHLORIDE ISOPLETH MAP SAMPLED ON 12/12/08 TETRA TECH, INC. MIDLAND, TEXAS



				-®- -
			-	
				PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD
				FIGURE NO. 16 OUNTY, NEW MEXICO (Y USA, INC. ILL ATB • WELL #24
]		MBE: 7/15/09 MGL 87: JJ		RIDE ISOPLETH MAP PLED ON 3/12/09
50'	1	33 NLE: e\0x7\2944	7	TETRA TECH, INC. MIDLAND, TEXAS

<250 MW-2 254 € 1 MW-1 PSH CONC. PAD 4 CONC. PAD 1 LEASE RD. MW-3 115 愛 MW-4 109 @ E.C. HILL B FED. #24 WELL PAD SCALE: 1" = 50' PSH = PHASE SEPARATED HYDROCARBON RESULTS IN mg/L

PLAINS EVA BLINEBRY FED. #14 P & A WELL PAD

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	FIGURE NO. 17
	LEA COUNTY, NEW MEXICO
	OXY USA, INC. E.C. HILL ATB • WELL #24
PARE: 7/15/09	CHLORIDE ISOPLETH MAP SAMPLED ON 6/22/09
OWG. BY:	
PRE: 1410071,2944	TETRA TECH, INC. MIDLAND, TEXAS

TABLES

Table 1 OXY USA, Inc. E.C. Hill 'B' ATB at Well #24 Summary of Groundwater Elevations and PSH Thickness Lea County, New Mexico

Well/ Borehole ID	Dàte Measurement	Top of Casing Elevation, feet AMSL	Total Well Depth (in ft)	Product (ft) (TOC)	Water level (ft) (TOC)	PSH Thickness (ft)	Groundwater Elevation (ft)
MW-1	10/23/08	3260.03	98	82.00	85.03	3.03	3177.27
	12/12/08			81.98	84.97	2.99	3177.30
	03/12/09			81.98	85.02	3.04	3177.29
· · · · · ·	06/22/09			81.99	85.05	3.06	3177.28
MW-2	10/23/08	3265.85	95	-	87.69	0	3178.16
	12/12/08			· _	87.62	0	3178.23
	03/12/09			-	87.63	0	3178.22
·	06/22/09				87.60	0	3178.25
MW-3	10/23/08	3257.76	93	-	80.72	0	3177.04
	12/12/08			-	80.67	0	3177.09
	03/12/09			-	80.68	0	3177.08
· · · · · · · · · · · · · · · · · · ·	06/22/09			-	79.65	0	3178.11
MW-4	10/23/08	3260.41	93	-	82.90	0	3177.51
	12/12/08			-	82.87	0	3177.54
	03/12/09			-	82.88	0	3177.53
	06/22/09			-	82.82	0	3177.59

(-) No data (TOC) Top of casing
 (MW-1) Groundwater elevation corrected using 0.75 specific gravity

Table 2

OXY USA, Inc. E.C. Hill 'B' ATB at Well #24 Summary of Analysis of Groundwater Samples Lea County, New Mexico

Sample	Sample	PSH			Ethyl-		Total		TPH 8015M		
ID -	Date	🗧 Thickness 👋	Benzene	Toluene	benzene	Xylene	BTEX	GRO	DRO	Total	Chloride
		(ft)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
MW-1	09/22/06	-	<0.001	<0.001	0.031	0.0669	0.0979	-	-	-	138
	09/29/06	-	0.0012	<0.001	0.0143	0.0386	0.0541	-	-	-	111
· ·	10/04/06	-	<0.001	<0.001	0.0175	0.097	0.1145	12.0	61.7	73.7	119
8.	11/14/07	2.68	-	-	-	-	-	-	-	-	-
	10/23/08	3.03	-	-	-	-	-	-	-	-	
	12/12/08	2.99	-	-	-	-	-	-	-	-	
	03/12/09	3.04	-	-	· -	-	-	-	-	-	
	06/22/09	3.06	· -	-	-	-	-	-	-	-	-
MW-2	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	267
	12/12/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	270
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	315
	06/22/09	-	<0.001	< 0.001	<0.001	< 0.003	< 0.003	-			254
MW-3	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001		-	-	119
	12/12/08	-	<0.005	<0.005	< 0.005	<0.015	<0.015	-	-	-	120
	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	120
	06/22/09	<u>-</u>	<0.001	<0.001	<0.001	<0.003	< 0.003	-		-	115
MW-4	10/23/08	-	<0.001	<0.001	<0.001	<0.001	<0.001	_	-	-	109
	12/12/08	-	<0.005	<0.005	<0.005	<0.015	<0.015	-	-	-	108
	03/12/09	-	<0.001	<0.001	<0.001	< 0.003	< 0.003	-	-	-	. 111

Table 2 OXY USA, Inc. E.C. Hill 'B' ATB at Well #24 Summary of Analysis of Groundwater Samples Lea County, New Mexico

Sample	Sample	PSH			Ethyl-		Total	<u> </u>	TPH 8015M		
ĮD	Date.	Thickness (ft)	Benzene (mg/l)	Toluene (mg/l)	benzene (mg/l)	Xylene (mg/l)	BTEX (mg/l)	GRO (mg/l)	DRO (mg/l)	Total (mg/l)	Chloride (mg/l)
MW-4	06/22/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	110
Dup	03/12/09	-	<0.001	<0.001	<0.001	<0.003	<0.003	-	-	-	111
Dup	06/22/09	<u> </u>	<0.001	< 0.001	<0.001	<0.003	<0.003	-	* 	-	109

(-) Not Analyzed NM - Not measured

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APPENDIX A LABORATORY ANALYTICAL

Lubbock, Texas 79424 800•378•1296 FAX 806 • 794 • 1298 6701 Aberdeen Avenue, Suite 9 806 • 794 • 1296 200 East Sunset Road, Suite E El Paso, Texas 79922 888 • 588 • 3443 915 • 585 • 3443 FAX 915+585+4944 5002 Basin Street, Suite A1 Midland, Texas 79703 432 • 689 • 6301 FAX 432 • 689 • 6313 6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817 • 201 • 5260 E-Mail: lab@traceanalysis.com Certifications HUB: 1752439743100-86536 **WBENC:** 237019 DBE: VN 20657 NCTRCA WFWB38444Y0909

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317

El Paso: T104704221-08-TX LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Tim Reed Tetra Tech 1910 N. Big Spring Street Midland, TX, 79705

Report Date: November 5, 2008

Work Order: 8102415

Project Location: Lea Co. **Project Name:** OXY/E.C. Hill B ATB @ Well #24 115-6402944 **Project Number:**

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

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
177256	MW-2	water	2008-10-23	12:10	2008-10-24
177257	MW-3	water	2008-10-23	12:00	2008-10-24
177258	MW-4	water	2008-10-23	12:20	2008-10-24

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

This report consists of a total of 30 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael april

Dr. Blair Leftwich, Director

Standard Flags

 \mathbf{B} - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project OXY/E.C. Hill B ATB @ Well #24 were received by TraceAnalysis, Inc. on 2008-10-24 and assigned to work order 8102415. Samples for work order 8102415 were received intact without headspace and at a temperature of 3.0 deg. C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
Alkalinity	SM 2320B
BTEX	S 8021B
Ca, Dissolved	S 6010B
Chloride (IC)	E 300.0
Hardness	S 6010B
K, Dissolved	S.6010B
Mg, Dissolved	S 6010B
Na, Dissolved	S 6010B
pH	SM 4500-H+
SO4 (IC)	E 300.0
TDS	SM 2540C

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8102415 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Report Date: November 5, 2008 115-6402944

Work Order: 8102415 OXY/E.C. Hill B ATB @ Well #24

Page Number: 4 of 30 Lea Co.

Analytical Report

Sample: 177256 - MW-2

Laboratory:	Midland					
Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	53708		Date Analyzed:	2008-10-28	Analyzed By:	AR
Prep Batch:	45973		Sample Preparation:	2008-10-28	Prepared By:	AR
			RL		·	
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hydroxide A	lkalinity		<1.00	mg/L as CaCo3	1	1.00

	 1000410	011100	Dirduion	1010
Hydroxide Alkalinity	<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity	<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity	158	mg/L as CaCo3	1	4.00
Total Alkalinity	 158	mg/L as CaCo3	1	4.00

Sample: 177256 - MW-2

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX 53630 45915			Analytical M Date Analyz Sample Prej	zed:	S 8021B 2008-10-25 2008-10-24		Prep Meth Analyzed I Prepared I	By: AG
				R	ե				
Parameter	\mathbf{Fl}	ag		Resul	t	Units		Dilution	\mathbf{RL}
Benzene				< 0.0010	0	mg/L		1	0.00100
Toluene				<0.0010	0	mg/L		1	0.00100
Ethylbenzene	<u>)</u>			< 0.0010	0	mg/L		1	0.00100
Xylene				<0.0010	0	mg/L		1	0.00100
							Spike	Percent	Recovery
Surrogate		E	Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			0.0931	mg/L	1	0.100	93	77.8 - 121.1
4-Bromofluor	obenzene (4-BFB)		0.0764	mg/L	1	0.100	76	40.1 - 136

Sample: 177256 - MW-2

Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock Ca, Dissolved 53920 46006		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2008-10-31 2008-10-30	Prep Method: Analyzed By: Prepared By:	TP
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Ca	lcium		179	mg/L	1	1.00

Analysis: Cl QC Batch: 53 Prep Batch: 45 Parameter Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53	lidland hloride (IC) 3710 5929 Flag 56 - MW-2 ubbock lardness 3920 6006	Flag	RL Result	Units mg/L S 6010B 2008-10-31 2008-10-30 Units	Prep Method Analyzed By Prepared By Dilution 10 Prep Method Analyzed By Prepared By Dilution	: AR : AR
Analysis: Cl QC Batch: 53 Prep Batch: 45 Parameter Chloride Sample: 17725 Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	hloride (IC) 3710 5929 Flag 56 - MW-2 ubbock lardness 3920 6006	Flag	Date Analyzed: Sample Preparation: RL Result 267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	2008-10-28 2008-10-27 Units mg/L S 6010B 2008-10-31 2008-10-30 Units	Analyzed By Prepared By 10 Prep Methoo Analyzed By Prepared By	: AR : AR
QC Batch: 53 Prep Batch: 45 Parameter Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	3710 5929 Flag 56 - MW-2 ubbock lardness 3920 6006	Flag	Date Analyzed: Sample Preparation: RL Result 267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	2008-10-28 2008-10-27 Units mg/L S 6010B 2008-10-31 2008-10-30 Units	Analyzed By Prepared By 10 Prep Methoo Analyzed By Prepared By	: AR : AR
Prep Batch: 45 Parameter Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	5929 Flag 56 - MW-2 ubbock lardness 3920 6006	Flag	Sample Preparation: RL Result 267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	2008-10-27 Units mg/L S 6010B 2008-10-31 2008-10-30 Units	Prepared By Dilution 10 Prep Methoo Analyzed By Prepared By	: AR <u>RL</u> 0.500 d: N/A : TP : KV
Parameter Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	Flag 56 - MW-2 ubbock Iardness 3920 6006	Flag	RL Result 267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	Units mg/L S 6010B 2008-10-31 2008-10-30 Units	Dilution 10 Prep Method Analyzed By Prepared By	RL 0.500 d: N/A : TP : KV
Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	56 - MW-2 ubbock Iardness 3920 6006	Flag	Result 267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	mg/L S 6010B 2008-10-31 2008-10-30 Units	10 Prep Methoo Analyzed By Prepared By	0.500 d: N/A :: TP :: KV
Chloride Sample: 1772: Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	56 - MW-2 ubbock Iardness 3920 6006	Flag	267 Analytical Method: Date Analyzed: Sample Preparation: RL Result	mg/L S 6010B 2008-10-31 2008-10-30 Units	10 Prep Methoo Analyzed By Prepared By	0.500 d: N/A :: TP :: KV
Sample: 17725 Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	ubbock Iardness 3920 6006 I	Flag	Analytical Method: Date Analyzed: Sample Preparation: RL Result	S 6010B 2008-10-31 2008-10-30 Units	Prep Methoo Analyzed By Prepared By	d: N/A :: TP : KV
Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	ubbock Iardness 3920 6006 I	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By Prepared By	TP KV
Laboratory: Lu Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	ubbock Iardness 3920 6006 I	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By Prepared By	TP KV
Analysis: H QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	lardness 3920 6006 I	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By Prepared By	TP KV
QC Batch: 53 Prep Batch: 46 Parameter Hardness (by IC	3920 6006 I	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By Prepared By	TP KV
Prep Batch: 46 Parameter Hardness (by IC	6006 I	Flag	Sample Preparation: RL Result	2008-10-30 Units	Prepared By	: KV
Hardness (by IC		Flag	Result		Dilution	
Hardness (by IC		Flag			Dilution	
<u></u>	CP)		579			RL
<u></u>	·			mg eq CaCO3/L	1	0.00
QC Batch: 53	 C, Dissolved 3920 6006 		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2008-10-31 2008-10-30	Analyzed By:	S 3005A TP KV
TTep Bauen.	0000		RL	2000-10-00	r reparca by,	IX V
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Potas	ssium		5.61	mg/L	1	1.00
Sample: 1772						
v	ubbock					
	Ag, Dissolved		Analytical Method:	S 6010B	-	S 3005A
•	3920		Date Analyzed:	2008-10-31		TP
Prep Batch: 4	6006		Sample Preparation:	2008-10-30	Prepared By:	KV
Parameter		Flag	RL Result	Units	Dilution	\mathbf{RL}
Dissolved Magn			<u>32.1</u>	mg/L		1.00
DISSOIVED WIAGH		<u></u>		IIIK/ L	, 1	1.00
					· · ·	

Report Date: 115-6402944	: November 5	5, 2008		er: 8102415 ATB @ Well #24	Page Number	r: 6 of 30 Lea Co.
Sample: 17	7256 - MW	-2			· · · · · · · · · · · · · · · · · · ·	
Laboratory:						
Analysis:	Na, Dissolve	ed	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	53920		Date Analyzed:	2008-10-31		TP
Prep Batch:	46006		Sample Preparation	: 2008-10-30		KV
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Dissolved Soc	lium		88.7	mg/L	1	1.00
•						
Sample: 17	7256 - MW	-2		• •		
Tabanatanu	Midland					
Laboratory:			Amelatical Mathed	CM AFOO IL	Dian Matha	
Analysis:	pH Facoo		Analytical Method:	SM 4500-H+	Prep Metho	
QC Batch:	53609		Date Analyzed:	2008-10-24	Analyzed B	
Prep Batch:	45899		Sample Preparation:	2008-10-24	Prepared B	y: AR
			\mathbf{RL}	4		
Parameter		Flag	Result	Units	Dilution	RL
pH			7.74	s.u.	1	0.00
Sample: 17		7-2				
Laboratory:	Midland					
Analysis:	SO4 (IC)		Analytical Method:	E 300.0	Prep Metho	,
QC Batch:	53710		Date Analyzed:	2008-10-28	Analyzed B	
Prep Batch:	45929		Sample Preparation	: 2008-10-27	Prepared B	y: AR
D ·			RL	TT •.		
Parameter		Flag	Result	Units	Dilution	RL
Sulfate			263	mg/L	10	0.500
Sample: 17 Laboratory: Analysis: QC Batch: Prep Batch:	Midland TDS 53827	7-2	Analytical Method: Date Analyzed: Sample Preparation	SM 2540C 2008-10-31 : 2008-10-29	Prep Metho Analyzed B Prepared B	y: AR
-						
			RL			
Parameter Total Dissolv		Flag		Units mg/L	Dilution2	RL 10.0

QC Batch:53708DiaPrep Batch:45973SaParameterFlagHydroxide AlkalinityCarbonate AlkalinityBicarbonate AlkalinityBicarbonate AlkalinityTotal AlkalinitySample:177257 - MW-3Laboratory:MidlandAnalysis:BTEXQC Batch:53630ParameterFlagBenzeneSample:TolueneSample:EthylbenzeneSurrogateTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedAQC Batch:53920DD	Work Order: 8102415 OXY/E.C. Hill B ATB @ Well #24			Page Number: 7 of 30 Lea Co.		
Analysis:AlkalinityAnQC Batch:53708DiaPrep Batch:45973SaParameterFlagHydroxide AlkalinityGarbonate AlkalinityBicarbonate AlkalinityBicarbonate AlkalinityTotal AlkalinityTotal AlkalinitySample:177257 - MW-3Laboratory:MidlandAnalysis:BTEXParameterFlagPerep Batch:45915SamParameterParameterFlagBenzeneSamTolueneSample:EthylbenzeneSurrogateXyleneFlagSample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedAQC Batch:Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedAQC Batch:53920D						
QC Batch:53708DiaPrep Batch:45973SaParameterFlagHydroxide AlkalinityCarbonate AlkalinityBicarbonate AlkalinityTotal AlkalinityTotal AlkalinitySample:177257 - MW-3Laboratory:MidlandAnalysis:BTEXQC Batch:53630DatePrep Batch:45915SamParameterFlagBenzeneSamTolueneSamEthylbenzeneSurrogateTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedAQC Batch:53920DD				D		
Prep Batch: 45973 Sa Parameter Flag Hydroxide Alkalinity Garbonate Alkalinity Bicarbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Laboratory: Midland Analysis: BTEX QC Batch: 53630 Parameter Flag Perep Batch: 45915 Sample: Trifluorotoluene Ethylbenzene Surrogate Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved QC Batch: 53920	Analytical Method:	SM 2320B		Prep Me		
Parameter Flag Hydroxide Alkalinity Garbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Total Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX QC Batch: 53630 Prep Batch: 45915 Sameter Flag Parameter Flag Benzene Propulation Toluene Surrogate Surrogate Flag Surrogate Flag Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920	Date Analyzed: Sample Preparation:	2008-10-28 2008-10-28		Analyze Prepare		
Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX QC Batch: 53630 Prep Batch: 45915 Sam Parameter Flag Benzene Toluene Ethylbenzene Xylene Surrogate Flag Frifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920	sample i reparadon.	2000-10-20		riepare	u by: An .	
Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX QC Batch: 53630 Prep Batch: 45915 Sample: Parameter Flag Benzene Toluene Ethylbenzene Xylene Surrogate Flag Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch:	\mathbf{RL}					
Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX Anal QC Batch: 53630 Date Prep Batch: 45915 Sam Parameter Flag Benzene Flag Benzene Surrogate Flag R Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	Result	U	nits	Dilution	\mathbf{RL}	
Bicarbonate Alkalinity Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX Anal QC Batch: 53630 Date Prep Batch: 45915 Sam Parameter Flag Benzene Flag Benzene Xylene Surrogate Flag R Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	<1.00	mg/L as Ca		1	1.00	
Total Alkalinity Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX Anal QC Batch: 53630 Date Prep Batch: 45915 Sam Parameter Flag Benzene Toluene Ethylbenzene Surrogate Yelene Flag Surrogate Flag Surrogate Flag Surrogate Flag Surrogate Flag Surrogate Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920	<1.00	mg/L as Ca		1	1.00	
Sample: 177257 - MW-3 Laboratory: Midland Analysis: BTEX Anal QC Batch: 53630 Date Prep Batch: 45915 Sam Parameter Flag Benzene Toluene Ethylbenzene Xylene Surrogate Flag R Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	217	mg/L as Ca		1	4.00	
Laboratory: Midland Analysis: BTEX Anal QC Batch: 53630 Date Prep Batch: 45915 Sam Parameter Flag Benzene Toluene Ethylbenzene Xylene Surrogate Flag R Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	217	mg/L as Ca	Co3	1	4.00	
Analysis:BTEXAnalQC Batch:53630DatePrep Batch:45915SamParameterFlagBenzene						
QC Batch:53630DatePrep Batch:45915SamParameterFlagBenzeneTolueneEthylbenzeneSurrogateXyleneFlagSurrogateFlagTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedQC Batch:53920D						
Prep Batch:45915SamParameterFlagBenzeneTolueneTolueneEthylbenzeneXyleneSurrogateSurrogateFlagRTrifluorotoluene (TFT)004-Bromofluorobenzene (4-BFB)0Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedQC Batch:53920D	•	S 8021B		Prep Metho		
ParameterFlagBenzeneTolueneTolueneEthylbenzeneXyleneXyleneSurrogateFlagTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample:177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedQC Batch:53920D		2008-10-25		Analyzed B		
Benzene Toluene Toluene Ethylbenzene Xylene Surrogate Surrogate Flag Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved QC Batch: 53920	nple Preparation:	2008-10-24		Prepared B	by: AG	
Benzene Toluene Toluene Ethylbenzene Xylene Surrogate Surrogate Flag Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved QC Batch: 53920	RL					
Toluene Ethylbenzene Ethylbenzene Xylene Surrogate Flag Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved QC Batch: 53920	Result	Units	1	Dilution	RL	
Ethylbenzene Xylene Surrogate Flag Trifluorotoluene (TFT) 0 4-Bromofluorobenzene (4-BFB) 0 Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved QC Batch: 53920	<0.00100	mg/L		1	0.00100	
XyleneSurrogateFlagRTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample: 177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedQC Batch:53920D	<0.00100 <0.00100	mg/L mg/I		1 1	0.00100 0.00100	
SurrogateFlagRTrifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample: 177257 - MW-3Laboratory:LubbockAnalysis:Ca, DissolvedAQC Batch:53920D	<0.00100	mg/L mg/L		1	0.00100	
Trifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample: 177257 - MW-3Laboratory: LubbockAnalysis: Ca, DissolvedAQC Batch: 53920D	<0.00100	IIIg/L		_	0.00100	
Trifluorotoluene (TFT)04-Bromofluorobenzene (4-BFB)0Sample: 177257 - MW-3Laboratory: LubbockAnalysis: Ca, DissolvedAQC Batch: 53920D			Spike	Percent	Recovery	
4-Bromofluorobenzene (4-BFB)0Sample: 177257 - MW-3Laboratory: LubbockAnalysis: Ca, DissolvedQC Batch: 53920D	Result Units	Dilution	Amount	Recovery	Limits	
Sample: 177257 - MW-3 Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	0.0917 mg/L	1	0.100	92	77.8 - 121.1	
Laboratory: Lubbock Analysis: Ca, Dissolved A QC Batch: 53920 D	0.0727 mg/L	1	0.100	73	40.1 - 136	
Analysis:Ca, DissolvedAQC Batch:53920D						
Analysis:Ca, DissolvedAQC Batch:53920D						
QC Batch: 53920 D	Analytical Method:	S 6010B		Prep Meth	od: S 3005A	
	Date Analyzed:	2008-10-31		Analyzed E		
Prep Batch: 46006 S	Sample Preparation			Prepared E		
	DT					
Parameter Flag	${f RL}$ Result	Units		Dilution	\mathbf{RL}	
Dissolved Calcium	136	mg/L		<u></u>	RL 1.00	

	November 5, 20		Work Order OXY/E.C. Hill B	:: 8102415 ATB @ Well #24	Page Numbe	er: 8 of 30 Lea Co
Sample: 17	7257 - MW-3					
Laboratory:	Midland					
Analysis:	Chloride (IC)		Analytical Method:	E 300.0	Prep Metho	od: N/A
QC Batch:	53710		Date Analyzed:	2008-10-28	Analyzed B	
Prep Batch:	45929		Sample Preparation	n: 2008-10-27	Prepared B	y: AR
			RL			
Parameter	Fla	Ig	Result	Units	Dilution	RI
Chloride			119	mg/L	10	0.500
Sample: 17	7257 - MW-3					
Laboratory:	Lubbock					
Analysis:	Hardness		Analytical Method:	S 6010B	Prep Metho	
QC Batch:	53920		Date Analyzed:	2008-10-31	Analyzed B	
Prep Batch:	46006		Sample Preparation:	2008-10-30	Prepared B	y: KV
_			RL			
Parameter		Flag	Result	Units	Dilution	<u>R</u>
Hardness (by	(ICP)		419	mg eq CaCO3/L	1	0.0
					•	
Laboratory: Analysis: QC Batch:	7257 - MW-3 Lubbock K, Dissolved 53920 46006		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2008-10-31 2008-10-30	Prep Method: Analyzed By: Prepared By:	S 3005/ TP KV
Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock K, Dissolved 53920	Plaz	Date Analyzed: Sample Preparation: RL	2008-10-31 2008-10-30	Analyzed By: Prepared By:	TP KV
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Lubbock K, Dissolved 53920 46006	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By: Prepared By: Dilution	KV RI
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po	Lubbock K, Dissolved 53920 46006	Flag	Date Analyzed: Sample Preparation: RL	2008-10-31 2008-10-30	Analyzed By: Prepared By:	TP KV
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po Sample: 17	Lubbock K, Dissolved 53920 46006 otassium	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-31 2008-10-30 Units	Analyzed By: Prepared By: Dilution	TP KV R
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po Sample: 17 Laboratory:	Lubbock K, Dissolved 53920 46006 vtassium 77257 - MW-3 Lubbock	Flag	Date Analyzed: Sample Preparation: RL Result 5.02	2008-10-31 2008-10-30 Units mg/L	Analyzed By: Prepared By: Dilution 1	TP KV
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po Sample: 17 Laboratory: Analysis:	Lubbock K, Dissolved 53920 46006 vtassium 7257 - MW-3 Lubbock Mg, Dissolved	Flag	Date Analyzed: Sample Preparation: RL Result 5.02 Analytical Method:	2008-10-31 2008-10-30 Units mg/L S 6010B	Analyzed By: Prepared By: Dilution 1 Prep Method:	TP KV R 1.0 S 3005
Laboratory: Analysis: QC Batch: Prep Batch: <u>Parameter</u> Dissolved Po Sample: 17 Laboratory: Analysis: QC Batch:	Lubbock K, Dissolved 53920 46006 vtassium 77257 - MW-3 Lubbock Mg, Dissolved 53920	Flag	Date Analyzed: Sample Preparation: RL Result 5.02 Analytical Method: Date Analyzed:	2008-10-31 2008-10-30 Units mg/L S 6010B 2008-10-31	Analyzed By: Prepared By: Dilution 1 Prep Method: Analyzed By:	TP KV R 1.0 5 3005 TP
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po Sample: 17 Laboratory: Analysis: QC Batch:	Lubbock K, Dissolved 53920 46006 vtassium 77257 - MW-3 Lubbock Mg, Dissolved 53920	Flag	Date Analyzed: Sample Preparation: RL Result 5.02 Analytical Method: Date Analyzed: Sample Preparation:	2008-10-31 2008-10-30 Units mg/L S 6010B 2008-10-31	Analyzed By: Prepared By: Dilution 1 Prep Method:	TP KV R 1.0 S 3005
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Dissolved Po Sample: 17 Laboratory: Analysis:	Lubbock K, Dissolved 53920 46006 vtassium 77257 - MW-3 Lubbock Mg, Dissolved 53920	Flag	Date Analyzed: Sample Preparation: RL Result 5.02 Analytical Method: Date Analyzed:	2008-10-31 2008-10-30 Units mg/L S 6010B 2008-10-31	Analyzed By: Prepared By: Dilution 1 Prep Method: Analyzed By:	TP KV R. 1.0 S 3005. TP

115-6402944	: November 5	, 2008		er: 8102415 ATB @ Well #24	Page Number: I	9 of 30 Lea Co.
Sample: 17	7257 - MW-	.3				
Laboratory: Analysis: QC Batch: Prep Batch:	Na, Dissolve 53920	.d	Analytical Method: Date Analyzed: Sample Preparation	S 6010B 2008-10-31 2008-10-30	Prep Method: S Analyzed By: T Prepared By: K	
	10000		RL		- toparoa = j · · · -	
Parameter		Flag	Result	Units	Dilution	RL
Dissolved So	dium		88.3	mg/L	1	1.00
Laboratory: Analysis: QC Batch: Prep Batch:	рН 53609		Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-H+ 2008-10-24 2008-10-24	Prep Method: Analyzed By: Prepared By:	AR
Parameter		Flag	RL Result	Units	Dilution	RL
pH		1 100	7.76	s.u.	1	0.00
Sample: 17	7257 - MW	-3				
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	SO4 (IC) 53710	Flag	Analytical Method: Date Analyzed: Sample Preparation RL Result	Units	Prep Method Analyzed By: Prepared By: Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch:	SO4 (IC) 53710	Flag	Date Analyzed: Sample Preparation RL	2008-10-28 : 2008-10-27	Analyzed By: Prepared By:	AR AR
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate	SO4 (IC) 53710 45929 77257 - MW Midland TDS 53827		Date Analyzed: Sample Preparation RL Result	2008-10-28 : 2008-10-27 Units mg/L SM 2540C 2008-10-31	Analyzed By: Prepared By: Dilution	AR AR <u>RL</u> 0.500 : N/A : AR
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate Sample: 12 Laboratory: Analysis: QC Batch:	SO4 (IC) 53710 45929 77257 - MW Midland TDS 53827		Date Analyzed: Sample Preparation RL Result 226 Analytical Method: Date Analyzed: Sample Preparation RL	2008-10-28 2008-10-27 Units mg/L SM 2540C 2008-10-31	Analyzed By: Prepared By: Dilution 10 Prep Method Analyzed By	AR AR <u>RL</u> 0.500 : N/A : AR

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Report Date: November 5, 2008 115-6402944	<u></u>	Work Order: 8102415 OXY/E.C. Hill B ATB @ Well #24		Page Nu	mber: 10 of 30 Lea Co.		
Sample: 177258 - MW-4							
Laboratory: Midland				~ ~ ~ ~ ~ ~ ~			
Analysis: Alkalinity		Analytical		SM 2320B			lethod: N/A
QC Batch: 53708		Date Analy		2008-10-28 : 2008-10-28		Analyz Daese er	
Prep Batch: 45973		Sample Pre	eparation	: 2008-10-28		Prepar	ed By: AR
		RI					
Parameter	Flag	Result		U	nits	Dilution	\mathbf{RL}
Hydroxide Alkalinity		<1.00)	mg/L as Ca	Co3	1	1.00
Carbonate Alkalinity		<1.00)	mg/L as Ca	Co3	1	1.00
Bicarbonate Alkalinity		168	3	mg/L as Ca	.Co3	1	4.00
Total Alkalinity		168	8	mg/L as Ca	.Co3	1	4.00
		•					
Sample: 177258 - MW-4							
Laboratory: Midland							
Analysis: BTEX		Analytical M	ethod	S 8021B	,	Prep Meth	nod: S 5030B
QC Batch: 53630		Date Analyze		2008-10-25		Analyzed	
Prep Batch: 45915		Sample Prepa		2008-10-24		Prepared	
-						•	•
Parameter Flag	_	RL		IIta		Dilution	рт
Parameter Flag Benzene	5	Result <0.00100		Units mg/L		Dilution 1	RL 0.00100
Toluene		<0.00100		mg/L		1	0.00100
Ethylbenzene		< 0.00100		mg/L		1	0.00100
Xylene		<0.00100		mg/L		1	0.00100
Aylene		<u></u>		mg/ 11		<u> </u>	0.00100
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0913	mg/L	. 1	0.100	91	77.8 - 121.1
4-Bromofluorobenzene (4-BFB)	<u> </u>	0.0758	_mg/L	1	0.100	76	40.1 - 136
Sample: 177258 - MW-4							
Laboratory: Lubbock							
Analysis: Ca, Dissolved		Analytical	Method:	S 6010B		Prep Met	hod: S 3005A
QC Batch: 53921		Date Anal	yzed:	2008-10-31		Analyzed	By: TP
Prep Batch: 46006		Sample Pr	eparation	n: 2008-10-30		Prepared	By: KV
			RL				
Parameter	Flag	Res		Units		Dilution	\mathbf{RL}
Dissolved Calcium		1	19	mg/L		1	1.00

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Report Date: November 5, 2008 115-6402944		Work Order: E.C. Hill B A	8102415 TB @ Well #24	Page Number: 1	11 of 30 Lea Co.
Sample: 177258 - MW-4	:				
Laboratory: Midland		•			
Analysis: Chloride (IC)		ical Method:	E 300.0	Prep Method:	•
QC Batch: 53710		nalyzed:	2008-10-28	Analyzed By:	
Prep Batch: 45929	Sample	e Preparation	: 2008-10-27	Prepared By:	AR
	RL				
Parameter Flag	Result		Units	Dilution	\mathbf{RL}
Chloride	109		mg/L	. 10	$0.50\bar{0}$
Sample: 177258 - MW-4				,	
Laboratory: Lubbock					
Analysis: Hardness	Analytic	al Method:	S 6010B	Prep Method	: N/A
QC Batch: 53921	Date An	alyzed:	2008-10-31	Analyzed By:	TP
Prep Batch: 46006	Sample I	Preparation:	2008-10-30	Prepared By:	KV
	RI				
Parameter Fla			Units	Dilution	\mathbf{RL}
Hardness (by ICP)	381		mg eq CaCO3/L	1	0.00
Sample: 177258 - MW-4					
Laboratory: Lubbock					
Analysis: K, Dissolved	Analytic	al Method:	S 6010B	Prep Method: S	5 3005A
QC Batch: 53921	Date An	alyzed:	2008-10-31	-	ГР
Prep Batch: 46006	Sample I	Preparation:	2008-10-30	Prepared By: H	ΧV
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Potassium		4.95	mg/L	1	1.00
Sample: 177258 - MW-4					
Laboratory: Lubbock					
Analysis: Mg, Dissolved	•	cal Method:	S 6010B	-	S 3005A
QC Batch: 53921	Date A		2008-10-31		ГР
Prep Batch: 46006	Sample	Preparation:	2008-10-30	Prepared By:	KV
		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Magnesium		20.4	mg/L	1	1.00

	: November	5, 2008	Work Order OXY/E.C. Hill B	:: 8102415 ATB @ Well #24	Page Number:	12 of 30 Lea Co.
Sample: 17	7258 - MW	7-4				
Laboratory: Analysis: QC Batch: Prep Batch:	Lubbock Na, Dissolv 53921 46006	ved	Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2008-10-31 2008-10-30	Analyzed By: 7	5 3005A FP KV
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Dissolved So	dium		92.1	mg/L	1	1.00
QC Batch: Prep Batch:	53609 45899		Date Analyzed: Sample Preparation: RL	2008-10-24 2008-10-24	Analyzed By Prepared By	
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
pH			7.84	s.u.	1	0.00
Sample: 17 Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate	Midland SO4 (IC) 53710	V-4 Flag	Analytical Method: Date Analyzed: Sample Preparation: RL Result 264	E 300.0 2008-10-28 2008-10-27 Units mg/L	Prep Method Analyzed By Prepared By Dilution 10	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter	Midland SO4 (IC) 53710		Date Analyzed: Sample Preparation: RL Result	2008-10-28 2008-10-27 Units	Analyzed By Prepared By Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate Sample: 17	Midland SO4 (IC) 53710 45929 77258 - MV	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-28 2008-10-27 Units	Analyzed By Prepared By Dilution	AR AR RL
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate	Midland SO4 (IC) 53710 45929 77258 - MV Midland TDS 53827	Flag	Date Analyzed: Sample Preparation: RL Result	2008-10-28 2008-10-27 Units mg/L SM 2540C 2008-10-31	Analyzed By Prepared By Dilution	: AR : AR <u>RL</u> 0.500 d: N/A
Laboratory: Analysis: QC Batch: Prep Batch: Parameter Sulfate Sample: 17 Laboratory: Analysis: QC Batch:	Midland SO4 (IC) 53710 45929 77258 - MV Midland TDS 53827	Flag V-4	Date Analyzed: Sample Preparation: RL Result 264 Analytical Method: Date Analyzed:	2008-10-28 2008-10-27 Units mg/L SM 2540C 2008-10-31	Analyzed By Prepared By Dilution 10 Prep Methoo Analyzed By	: AR : AR <u>RL</u> 0.500 d: N/A

Work Order: 8102415 OXY/E.C. Hill B ATB @ Well #24

Page Number: 13 of 30 Lea Co.

Method Blank (1) QC Batch: 53630

QC Batch: Prep Batch:	Date Analyzed: QC Preparation:	Analyzed By: Prepared By:	

			М	DL			
Parameter	Flag		Re	sult	Un	its	\mathbf{RL}
Benzene			<0.000	300	mg	;/L	0.001
Toluene			<0.000200 mg/L		/L	0.001	
Ethylbenzene	thylbenzene		< 0.000500			mg/L	
Xylene			<0.000	400	mg	/L	0.001
			• .		Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0902	mg/L	1	0.100	90	77.2 - 129.1
4-Bromofluorobenzene (4-BFB)		0.0851	mg/L	1	0.100	85	69.1 - 122.3

Method Blank (1) QC Batch: 53708

QC Batch: Prep Batch:	-		e Analyzed: Preparation:	2008-10-28 2008-10-28		Analyzed By: Prepared By:	
Parameter		Flag	-	ADL esult	Units		\mathbf{RL}

Parameter	riag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1)	QC Batch: 53710				
QC Batch: 53710 Prep Batch: 45929		Date Analyzed:2008-10-28QC Preparation:2008-10-27		Analyzed By: Prepared By:	
4		MDL			
Parameter	Flag	Result	Units		\mathbf{RL}

ranameter	riag	nesun	Onus	nı
Chloride		1.16	mg/L	0.5
			· · · · · · · · · · · · · · · · · · ·	

Method Blank (1)		QC Batch: 53710			
QC Batch:	53710		Date Analyzed:	2008-10-28	
Prep Batch:	45929		QC Preparation:	2008-10-27	

Analyzed By: AR Prepared By: AR

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Report Date: Novembe 115-6402944	r 5, 2008		der: 8102415 B ATB @ Well #24	Р	age Number: 14	of 30 a Co.
	<u> </u>				·	
			IDL			DT
Parameter Sulfate	Flag	Re <0.0	sult	Units mg/L	. 	RL 0.5
	·					
Method Blank (1)	QC Batch: 53827					
QC Batch: 53827 Prep Batch: 45981		Date Analyzed: QC Preparation:	2008-10-31 2008-10-29		Analyzed By: Prepared By:	
			MDL		- •	
Parameter	Fla	ng	Result	Units		RL
Total Dissolved Solids		· · · · · · · · · · · · · · · · · · ·	<5.00	mg/L		10
Method Blank (1)	QC Batch: 53920					
• •		Data Analanal	2002 10 21		A	ШD
QC Batch: 53920 Prep Batch: 46006		Date Analyzed: QC Preparation:	2008-10-31 2008-10-30		Analyzed By: Prepared By:	TP KV
.			MDL	••		
Parameter Dissolved Calcium	Flag		Result <0.175	Units mg/L	······································	
Dissorved Calcium			<0.173	mg/ L	<u></u>	
	QC Batch: 53920					
Method Blank (1)		Date Analyzed:	2008-10-31		Analyzed By:	TP
		•			Prepared By:	KV
QC Batch: 53920		QC Preparation:	2008-10-30		T repared by.	
QC Batch: 53920 Prep Batch: 46006		QC Preparation:	2008-10-30 MDL	** -:	I lepated by.	N -
QC Batch: 53920 Prep Batch: 46006 Parameter	Flag	QC Preparation:	2008-10-30 MDL Result	Units mg/I	Trepared by.	
QC Batch: 53920	Fla	QC Preparation:	2008-10-30 MDL	Units mg/L		RL 1
QC Batch: 53920 Prep Batch: 46006 Parameter	Flag QC Batch: 53920	QC Preparation:	2008-10-30 MDL Result			
QC Batch: 53920 Prep Batch: 46006 Parameter Dissolved Potassium Method Blank (1) QC Batch: 53920		QC Preparation:	2008-10-30 MDL Result <0.327 2008-10-31		Analyzed By:	1 TP
QC Batch: 53920 Prep Batch: 46006 Parameter Dissolved Potassium Method Blank (1) QC Batch: 53920		QC Preparation:	2008-10-30 MDL Result <0.327 2008-10-31			1 TP
QC Batch: 53920 Prep Batch: 46006 Parameter Dissolved Potassium Method Blank (1) QC Batch: 53920		QC Preparation: 3 Date Analyzed: QC Preparation:	2008-10-30 MDL Result <0.327 2008-10-31		Analyzed By:	TP

Report Date: Novembe 115-6402944	r 5, 2008		der: 8102415 B ATB @ Well #24	P	age Number: 15 Le	of 30 ea Co
Method Blank (1)	QC Batch: 53920		·			
QC Batch: 53920 Prep Batch: 46006		Date Analyzed: QC Preparation:	2008-10-31 2008-10-30		Analyzed By: Prepared By:	TP KV
Donomotor	Flor		MDL Boundt			זמ
Parameter Dissolved Sodium	Flag		Result	Units mg/L		$\frac{\text{RL}}{1}$
		······································			<u> </u>	
Method Blank (1)	QC Batch: 53921					
QC Batch: 53921		Date Analyzed:	2008-10-31		Analyzed By:	TP
Prep Batch: 46006		QC Preparation:	2008-10-30		Prepared By:	KV
			MDL			
Parameter	Flag	<u> </u>	Result	Units	• • • • • • • • • • • • • • • • • • •	RI
Dissolved Calcium			<0.175	mg/L		1
Method Blank (1)	QC Batch: 53921					
QC Batch: 53921		Date Analyzed:	2008-10-31		Analyzed By:	TP
Prep Batch: 46006		QC Preparation:	2008-10-30		Prepared By:	KV
			MDL			
Parameter	Flag		Result	Units		RI
			20 907			1
		<u> </u>	<0.327	mg/L		1
		······································		IIIg/L	<u>.</u>	1
Dissolved Potassium Method Blank (1)	QC Batch: 53921	· · · · · · · · · · · · · · · · · · ·		ing/L	<u></u>	1
Dissolved Potassium Method Blank (1)	QC Batch: 53921	Date Analyzed:	2008-10-31	ing/L	Analyzed By:	
Dissolved Potassium Method Blank (1)	QC Batch: 53921	Date Analyzed: QC Preparation:	2008-10-31		Analyzed By: Prepared By:	TP
Dissolved Potassium Method Blank (1) QC Batch: 53921	QC Batch: 53921	•	2008-10-31			TP
Dissolved Potassium Method Blank (1) QC Batch: 53921	QC Batch: 53921 Fla	QC Preparation:	2008-10- 31 2008-10- 3 0	Units mg/L		TP

Date Analyzed: 2008-10-31 QC Preparation: 2008-10-30

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Analyzed By: TP Prepared By: KV

QC Batch: 53921 Prep Batch: 46006

Report Date: November 115-6402944	5, 2008		ler: 8102415 B ATB @ Well #24		Page Number: 16 L	6 of 30 ea Co.
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	MDL			
Parameter	Flag		Result	Units		RL
Dissolved Sodium			<0.244	mg/L		1
Duplicates (1) Dupli	icated Sample: 17725	R		-		
QC Batch: 53609 Prep Batch: 45899	-	Date Analyzed: QC Preparation:	2008-10-24 2008-10-24		Analyzed By: Prepared By:	
Param	Duplicate Result	Sample Result	Units I	Dilution	RPD	RPD Limit
pH	7.86	7.84	s.u.	1	0	1.5
		Date Analyzed: QC Preparation:	2008-10-28 2008-10-28		Analyzed By: Prepared By:	
Prep Batch: 45973 Param Hydroxide Alkalinity	Duplicate Result <1.00	QC Preparation: e Sample Result <1.00	2008-10-28 Units mg/L as CaCo3		Prepared By: RPD 0	AR RPD Limit 20
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity	Duplicate Result	QC Preparation: e Sample Result	2008-10-28 Units	1 1 1 1	Prepared By: RPD	AR RPD Limit
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity	Duplicate Result <1.00 <1.00 175	QC Preparation: e Sample Result <1.00 <1.00 168 168	Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3	1 1 1 1	Prepared By: <u>RPD</u> 0 0 4	AR RPD Limit 20 20 20 20
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity	Duplicate Result <1.00 <1.00 175 175	QC Preparation: e Sample Result <1.00 <1.00 168 168	2008-10-28 Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3	1 1 1 1	Prepared By: <u>RPD</u> 0 0 4	AR RPD Limit 20 20 20 20 20 20 20
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Duplicates (1) Dupl QC Batch: 53827 Prep Batch: 45981 Param	Duplicate Result <1.00 <1.00 175 175 licated Sample: 17725 Duplic Resu	QC Preparation: e Sample Result <1.00 <1.00 168 168 168 58 Date Analyzed: QC Preparation: cate Sample att Result	2008-10-28 Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 2008-10-31 2008-10-29 e	1 1 1 1	Prepared By: <u>RPD</u> 0 0 4 4 4 Analyzed By:	AR RPD Limit 20 20 20 20 20 20 20 20 20 20
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Duplicates (1) Dupl QC Batch: 53827 Prep Batch: 45981	Duplicate Result <1.00 <1.00 175 175 licated Sample: 17725 Duplic	QC Preparation: e Sample Result <1.00 <1.00 168 168 168 58 Date Analyzed: QC Preparation: cate Sample att Result	2008-10-28 Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 2008-10-31 2008-10-29 e	8 1 8 1 8 1 8 1	Prepared By: RPD 0 0 4 4 4 Analyzed By: Prepared By:	AR RPD Limit 20 20 20 20 20 20 RPD
Prep Batch: 45973 Param Hydroxide Alkalinity Carbonate Alkalinity Bicarbonate Alkalinity Total Alkalinity Duplicates (1) Dupl QC Batch: 53827 Prep Batch: 45981 Param	Duplicate Result <1.00 <1.00 175 175 licated Sample: 17725 Duplic Resu	QC Preparation: e Sample Result <1.00 <1.00 168 168 168 58 Date Analyzed: QC Preparation: cate Sample att Result	Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3 2008-10-31 2008-10-29 e t Units	Dilution	Prepared By: <u>RPD</u> 0 4 4 4 Analyzed By: Prepared By: RPD	AR RPD Limit 20 20 20 20 20 20 20 20 20 20

Report Date: November 5, 2008 115-6402944		ox		Corder: 81 Hill B ATB					Page Nu		17 of 30 Lea Co.
control spikes continued											
						oike	Mat				Rec.
Param	Resu	ılt	Units	Dil.	Am	ount	Res	ult	Rec.	L	imit
	LC	s			Sr	oike	Mat	rix		F	Rec.
Param	Rest		Units	Dil.	-	ount	Res		Rec.		imit
Benzene	0.10		mg/L	1		100	< 0.0		103		119.7
Foluene	0.10		mg/L	1		100	< 0.0		103		- 118.2
Ethylbenzene	0.10		mg/L	1		100	< 0.0		104		- 118.6
Xylene	0.29		mg/L	1		300	<0.0		99		- 117.8
Percent recovery is based on the sp	ike result.	RPD	is based	on the spil	ke and	d spike d	uplicat	e result			
	LCSD			Spike	Ν	latrix		R	lec.		RPD
Param	Result	Unit	s Dil.	Amount	F	lesult	Rec.		imit	RPD	Limit
Benzene	0.0971	mg/l	L 1	0.100		0.00110	97	84 -	119.7	6	20
Toluene	0.0978			0.100		0.00100	98		- 118.2	5	20
Ethylbenzene	0.0987	mg/l		0.100	<().00100	99	84.4	- 118.6	5	20
Kylene	0.283	mg/l	L 1	0.300	<().00290	94	84.8	- 117.8	4	20
Surrogate Trifluorotoluene (TFT)	LC Rest 0.09	ult	LCSD Result 0.0913	Units mg/L	Dil.	Spil Amo 0.10	unt	LCS Rec. 94	LCSD Rec. 91	I	Rec. Limit - 128.3
4-Bromofluorobenzene (4-BFB)	0.08	76	0.0869	mg/L	1	0.10	00	88	87		- 126.3
Laboratory Control Spike (LC QC Batch: 53710 Prep Batch: 45929		QC	e Analyze Preparati			7	,	Matrix	Prep	yzed By ared By	7: AR
QC Batch: 53710 Prep Batch: 45929	L	QC /CS	Preparati	ion: 2008-		7 Spike		Matrix Result	Prep	ared By	r: AR Rec.
QC Batch: 53710 Prep Batch: 45929 Param	L Re	QC CS esult	Preparati Units	ion: 2008- s Dil.		7 Spike Amount		Result	Prep	ared By	r: AR Rec. Limit
QC Batch: 53710 Prep Batch: 45929 Param Chloride	L Re	QC CS esult 1.9	Preparati Units mg/I	ion: 2008- s Dil.	-10-27	Spike Amount 12.5	;	Result 1.16	Prep Rec 95	ared By	r: AR Rec.
QC Batch: 53710 Prep Batch: 45929 Param Chloride Percent recovery is based on the sp	L Re	QC CS esult 1.9 . RPD	Preparati Units mg/I) is based	ion: 2008- s Dil. L 1 on the spi	-10-27 ke an	Spike Amount 12.5	luplica	Result 1.16 te resul	Prep Rec 95	ared By	r: AR Rec. Limit
QC Batch: 53710 Prep Batch: 45929 Param Chloride Percent recovery is based on the sp Param	L Re Dike result LCSD Result	QC ACS esult 1.9 . RPD Ur	Preparati Units mg/I) is based nits Di	ion: 2008- s Dil. L 1 on the spi Spik il. Amou	ke an ke an	Spike Amount 12.5 d spike d Matrix Result	luplica	Result 1.16 te resul c.	Prep Rec 95 t. Rec. Limit	ared By	Rec. Limit 90 - 110
QC Batch: 53710 Prep Batch: 45929 Param Chloride Percent recovery is based on the sp Param	L Re 1 pike result LCSD	QC ACS esult 1.9 . RPD Ur	Preparati Units mg/I) is based	ion: 2008- s Dil. L 1 on the spi Spik il. Amou	ke an ke an	7 Spike Amount 12.5 d spike d Matrix	luplica	Result 1.16 te resul c.	Prep Rec 95 t. Rec.	ared By	Rec. <u>Limit</u> <u>90 - 110</u> RPD
QC Batch: 53710 Prep Batch: 45929 Param Chloride Percent recovery is based on the sp Param Chloride	L Re 1 Dike result LCSD Result 11.8	QC CS esult 1.9 . RPD Ur mg	Preparati Units mg/I) is based nits Di g/L 1	ion: 2008- s Dil. L 1 on the spi Spik il. Amou	ke an ke an te unt 5	Spike Amount 12.5 Id spike of Matrix Result 1.16	luplica Re 94	Result 1.16 te resul c. 1 90	Prep Rec 95 t. Rec. Limit 0 - 110	ared By	Rec. <u>Limit</u> <u>90 - 110</u> RPD
QC Batch: 53710	L Re 1 Dike result LCSD Result 11.8 pike result	QC CS esult 1.9 . RPD Ur mg	Preparati Units mg/I) is based nits Di g/L 1	ion: 2008- s Dil. L 1 on the spi Spik il. Amou	ke an ke an te unt 5	Spike Amount 12.5 Id spike of Matrix Result 1.16	luplica Re 94	Result 1.16 te resul c. 1 90	Prep Rec 95 t. Rec. Limit 0 - 110	ared By	Rec. <u>Limit</u> <u>90 - 110</u> RPD
QC Batch: 53710 Prep Batch: 45929 Param Chloride Percent recovery is based on the sp Param Chloride Percent recovery is based on the sp	L Re 1 Dike result LCSD Result 11.8 pike result	QC CS esult 1.9 . RPI Ur mg	Preparati Units mg/I) is based nits Di g/L 1	ion: 2008- s Dil. L 1 on the spi Spik il. Amou 12.4 l on the spi	ke an ke an te unt 5	Spike Amount 12.5 Id spike of Matrix Result 1.16 Id spike of	luplica Re 94	Result 1.16 te resul c. 1 90	Prep Rec 95 t. Rec. Limit 0 - 110 It.	ared By	r: AR Rec. Limit 90 - 110 RPD Limit

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Report Date: November 5, 2008		01111		der: 81024			Page	Number:	
115-6402944		OXY/	E.C. Hill	B ATB @	Well #24				Lea Co.
	LCS	,			C-:1-0	Mak			Dee
Param	Resul		Units	Dil.	Spike Amount	Mat: Resi		Rec.	Rec. Limit
Sulfate	12.8		mg/L	1	12.5	< 0.0			90 - 110
ercent recovery is based on the spi	ike result. F			he spike a	nd spike duj	olicate re	sult.	. <u></u> . <u></u> .	
	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate	12.7	mg/L	1	12.5	< 0.0320	102	90 - 110	1	
Percent recovery is based on the spi	ike result. I		pased on t	the spike a	nd spike du	olicate re	esult.		
aboratory Control Spike (LCS	5-1)								
QC Batch: 53920]	Date Ar	alyzed:	2008-10-3	31		A	nalyzed B	y: TP
Prep Batch: 46006			paration:	2008-10-3	30			repared B	•
	LCS	q			0.11				
		U U			Spike	Mat	rix		Rec.
	Resu	ılt	Units	Dil.	Amount	Res	ult	Rec.	Limit
		ılt	Units mg/L	Dil.	-		ult	Rec. 106	
Dissolved Calcium	Resu 52.8	ılt 8	mg/L	1	Amount 50.0	Res <0.	ult 175	·	Limit
Dissolved Calcium	Resu 52.8	ılt 8	mg/L	1	Amount 50.0	Res <0.	ult 175	·	Limit
issolved Calcium ercent recovery is based on the sp eram	Resu 52.8 ike result. I LCSD Result	ılt 8 RPD is [•] Units	mg/L	1 the spike a Spike Amount	Amount 50.0 Ind spike du Matrix Result	Res <0. plicate r Rec.	ult 175 esult. Rec. Limit	106 RPD	Limit 85 - 115
Dissolved Calcium Percent recovery is based on the sp Param	Resu 52.8 ike result. I LCSD	ılt 8 RPD is ⁻	mg/L based on	1 the spike a Spike	Amount 50.0 Ind spike du Matrix	Res <0. plicate r	ult 175 esult. Rec.	106 RPD	Limit 85 - 115 RPD
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium	Resu 52.8 ike result. I LCSD Result 45.5	ılt 8 RPD is ⁻ Units mg/L	mg/L based on Dil. 1	1 the spike a Spike Amount 50.0	Amount 50.0 Ind spike du Matrix Result <0.175	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115	106 RPD	Limit 85 - 115 RPD Limit
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I	ılt 8 RPD is ⁻ Units mg/L	mg/L based on Dil. 1	1 the spike a Spike Amount 50.0	Amount 50.0 Ind spike du Matrix Result <0.175	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115	106 RPD	Limit 85 - 115 RPD Limit
Param Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I	ılt 8 RPD is ⁻ Units mg/L	mg/L based on Dil. 1	1 the spike a Spike Amount 50.0	Amount 50.0 Ind spike du Matrix Result <0.175	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115	106 RPD	Limit 85 - 115 RPD Limit
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC)	Resu 52.0 ike result. I LCSD Result 45.5 ike result. I S-1)	ılt 8 RPD is Units mg/L RPD is	mg/L based on Dil. 1 based on	1 the spike a Spike Amount 50.0 the spike a	Amount 50.0 and spike du Matrix Result <0.175 and spike du	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115 esult.	106 RPD 15	Limit 85 - 115 RPD Limit 20
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC QC Batch: 53920	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1)	Ilt 8 RPD is Units mg/L RPD is Date Ar	mg/L based on Dil. 1 based on	1 the spike a Spike Amount 50.0 the spike a 2008-10-	Amount 50.0 and spike du Matrix Result <0.175 and spike du	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115 esult.	106 RPD	Limit 85 - 115 RPD Limit 20
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC QC Batch: 53920	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1)	Ilt 8 RPD is Units mg/L RPD is Date Ar	mg/L based on Dil. 1 based on nalyzed:	1 the spike a Spike Amount 50.0 the spike a 2008-10-	Amount 50.0 and spike du Matrix Result <0.175 and spike du	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115 esult.	106 RPD 15 nalyzed F	Limit 85 - 115 RPD Limit 20
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC QC Batch: 53920	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1)	Ilt 8 RPD is mg/L RPD is Date Ar QC Pre	mg/L based on Dil. 1 based on nalyzed:	1 the spike a Spike Amount 50.0 the spike a 2008-10-	Amount 50.0 and spike du Matrix Result <0.175 and spike du 31 30	Res <0. plicate r <u>Rec.</u> 91	ult 175 esult. Rec. Limit 85 - 115 esult. A P	106 RPD 15 nalyzed F	Limit 85 - 115 RPD Limit 20
issolved Calcium ercent recovery is based on the sp aram vissolved Calcium ercent recovery is based on the sp aboratory Control Spike (LC 2C Batch: 53920 rep Batch: 46006	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1)	Ilt 8 RPD is <u>Units</u> mg/L RPD is Date Ar QC Pre	mg/L based on Dil. 1 based on nalyzed:	1 the spike a Spike Amount 50.0 the spike a 2008-10-	Amount 50.0 and spike du Matrix Result <0.175 and spike du	Res <0. plicate r <u>Rec.</u> 91 plicate r	ult 175 esult. Rec. Limit 85 - 115 esult. A P trix	106 RPD 15 nalyzed F	Limit 85 - 115 RPD Limit 20 By: TP by: KV
issolved Calcium ercent recovery is based on the sp aram bissolved Calcium ercent recovery is based on the sp aboratory Control Spike (LC 2C Batch: 53920 Prep Batch: 46006	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1)	Ilt 8 RPD is <u>Units</u> <u>mg/L</u> RPD is Date An QC Pre S ult	mg/L based on 1 based on nalyzed: paration:	1 the spike a Spike Amount 50.0 the spike a 2008-10- 2008-10-	Amount 50.0 and spike du Matrix Result <0.175 and spike du 31 30 Spike	Res <0. plicate r 91 plicate r Ma Res	ult 175 esult. Rec. Limit 85 - 115 esult. A P trix	106 RPD 15 nalyzed F repared F	Limit 85 - 115 RPD Limit 20 By: TP By: KV Rec.
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Daboratory Control Spike (LC QC Batch: 53920 Prep Batch: 46006 Param Dissolved Potassium	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1) LC Resu 50.	Ilt 8 RPD is Units mg/L RPD is Date An QC Pre S ult 9	mg/L based on 1 based on halyzed: paration: Units mg/L	1 the spike a Spike Amount 50.0 the spike a 2008-10- 2008-10- Dil. 1	Amount 50.0 Ind spike du Matrix Result <0.175 Ind spike du 31 30 Spike Amount 50.0	Res <0. plicate r 91 plicate r Ma Res <0.	ult 175 esult. Rec. Limit 85 - 115 esult. A P trix sult 327	106 RPD 15 nalyzed F repared F Rec.	Limit 85 - 115 RPD Limit 20 By: TP By: KV Rec. Limit
Pissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Paboratory Control Spike (LC Paboratory Control Spike (LC Param Param Dissolved Potassium	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1) LC Resu 50. sike result.	Ilt 8 RPD is Units mg/L RPD is Date An QC Pre S ult 9	mg/L based on 1 based on halyzed: paration: Units mg/L	1 the spike a Spike Amount 50.0 the spike a 2008-10- 2008-10- Dil. 1 the spike a	Amount 50.0 Ind spike du Matrix Result <0.175 Ind spike du 31 30 Spike Amount 50.0 Ind spike du	Res <0. plicate r 91 plicate r Ma Res <0.	ult 175 esult. Rec. Limit 85 - 115 esult. A P trix sult 327 esult.	106 RPD 15 nalyzed F repared F Rec.	Limit 85 - 115 RPD Limit 20 By: TP By: KV Rec. Limit 85 - 115
Dissolved Calcium Percent recovery is based on the sp Param Dissolved Calcium Percent recovery is based on the sp Laboratory Control Spike (LC QC Batch: 53920	Resu 52.8 ike result. I LCSD Result 45.5 ike result. I S-1) LC Resu 50.	Ilt 8 RPD is Units mg/L RPD is Date An QC Pre S ult 9	mg/L based on 1 based on halyzed: paration: Units mg/L	1 the spike a Spike Amount 50.0 the spike a 2008-10- 2008-10- Dil. 1	Amount 50.0 Ind spike du Matrix Result <0.175 Ind spike du 31 30 Spike Amount 50.0	Res <0. plicate r 91 plicate r Ma Res <0.	ult 175 esult. Rec. Limit 85 - 115 esult. A P trix sult 327	106 RPD 15 nalyzed F repared F Rec.	Limit 85 - 115 RPD Limit 20 By: TP By: KV Rec. Limit

QC Batch:	53920	Date Analyzed:	2008-10-31	Analyzed By:	\mathbf{TP}
Prep Batch:	46006	QC Preparation:	2008-10-30	Prepared By:	KV

7

115-6402944		OXY,		der: 81024 B ATB @ `			Page	Number:	19 of 30 Lea Co.		
-				2 /1	Spike	Mat			Rec.		
Param	Res		Units		Amount	Res			Limit		
Dissolved Magnesium	52.		mg/L	1	50.0	<0.		.04	85 - 115		
Percent recovery is based on the s	pike result.	RPD is	based on t	he spike ar	nd spike du	plicate re	esult.				
	LCSD			Spike	Matrix		Rec.		RPD		
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit		
Dissolved Magnesium	44.8	mg/L	1	50.0	<0.148	90	85 - 115	15	20		
Percent recovery is based on the s	pike result.	RPD is	based on t	he spike a	nd spike du	plicate r	esult.				
·	-			•	-	-					
Laboratory Control Spike (LC	CS-1)										
QC Batch: 53920		Date A	nalyzed:	2008-10-3	1		Ar	alvzed F	v: TP		
Prep Batch: 46006			eparation:	2008-10-3				-	•		
		u () 1 · · · ·	-puration.	2000 10 0			••	oporou 2	<i>j</i> . <i>1</i>		
	T	a			0.11				D		
Domono	LC		Units	D:1	Spike	Ma)	Rec.		
Param Dissolved Sodium	Res 51		mg/L	Dil.	Amount 50.0	Res			Limit 85 - 115		
Percent recovery is based on the s								RPD 15 alyzed E epared B Rec. 103 RPD 11	00-110		
reicent recovery is based on the s	pike result.	IU D 15	Dased OII	ine spike a	nu spike uu	pilcate i					
	LCSD			Spike	Matrix				RPD		
Param	Result	Units		Amount	Result	Rec.			Limit		
Dissolved Sodium	46.0	mg/L	<u> </u>	50.0	<0.244	92	85 - 115	11	20		
Percent recovery is based on the s		RPD is	hased on	the snike a	nd spike du	plicate r	esult.				
reference recovery is based on the e	spike result.	101 2 15	based on	uno spine u	_						
Laboratory Control Spike (L0		101 10 15	based on	uno opinio u	-			Rec. 104 8 it. Rec. 5 - 115 15 it. Analyzed By Prepared By Rec. 103 It. Rec. 103 1 It. Rec. Limit RPD 5 - 115 11 It. Analyzed By Prepared By Prepared By Solution (State) It. Rec. 103 1 It. Solution (State) Solution (State) Solution (State) Rec. 103 It. Solution (State) Rec. 11 It. Solution (State) Analyzed By Prepared By Prepared By Solution (State) Solution (State) Solution (State) Solution (State)			
Laboratory Control Spike (L0			nalyzed:	2008-10-3	31		Aı	104 t. Rec. 5 - 115 5 - 115 1t. Analyzed By Prepared By Rec. 103 lt. Rec. Limit RPD 5 - 115 11 lt. Analyzed B	By: TP		
Laboratory Control Spike (L0		Date A		2008-10-3	-			-	•		
Laboratory Control Spike (LO QC Batch: 53921		Date A	nalyzed:	2008-10-3	-			-	•		
Laboratory Control Spike (LO QC Batch: 53921	CS-1)	Date A QC Pro	nalyzed:	2008-10-3	30	Ма	Pı	-	By: KV		
Laboratory Control Spike (LO QC Batch: 53921		Date A QC Pro	nalyzed:	2008-10-3 2008-10-3	30 Spike		Pı trix	repared I	By: KV Rec.		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006	CS-1) L(Date A QC Pro CS Sult	nalyzed: eparation:	2008-10-3	30	Re	Pr trix sult	repared I	By: KV		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium	CS-1) L(<u>Res</u> 52	Date A QC Pro CS Sult	unalyzed: eparation: Units mg/L	2008-10-3 2008-10-3 Dil.	30 Spike Amount 50.0	Re: <0	Pr trix sult 1 175	repared I	By: KV Rec. Limit		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param	CS-1) L(Res 52 spike result.	Date A QC Pro CS Sult	unalyzed: eparation: Units mg/L	2008-10-3 2008-10-3 	Spike Amount 50.0 nd spike du	Re: <0	Pr trix sult 1 175 result.	repared I	By: KV Rec. Limit 85 - 115		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium Percent recovery is based on the s	CS-1) LC Res 52 spike result. LCSD	Date A QC Pro CS sult .8 RPD is	unalyzed: eparation: Units mg/L s based on	2008-10-3 2008-10-3 	30 Spike Amount 50.0 nd spike du Matrix	Re <0 plicate i	Pr trix sult 1 175 result. Rec.	Rec.	By: KV Rec. Limit 85 - 115 RPD		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium Percent recovery is based on the s Param	CS-1) L(Res 52 spike result. LCSD Result	Date A QC Pro CS sult .8 RPD is Units	unalyzed: eparation: <u>Units</u> mg/L s based on s Dil.	2008-10-3 2008-10-3 Dil. 1 the spike a Spike Amount	Spike Amount 50.0 nd spike du Matrix Result	Re <0 plicate 1 Rec.	Pr trix sult 1 175 result. Rec. Limit	Rec. Rec. RPD	3y: KV Rec. Limit 85 - 115 RPD Limit		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium Percent recovery is based on the s Param Dissolved Calcium	CS-1) L(Res 52 spike result. LCSD Result 45.5	Date A QC Pro CS sult 8 RPD is Units mg/I	Units mg/L based on Dil.	2008-10-3 2008-10-3 Dil. 1 the spike a Spike Amount 50.0	Spike Amount 50.0 Ind spike du Matrix Result <0.175	Re <0 uplicate n Rec. 91	Pr trix sult 1 175 result. Rec. Limit 85 - 115	Rec. Rec. RPD	By: KV Rec. Limit 85 - 115 RPD		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium Percent recovery is based on the s Param	CS-1) L(Res 52 spike result. LCSD Result 45.5	Date A QC Pro CS sult 8 RPD is Units mg/I	Units mg/L based on Dil.	2008-10-3 2008-10-3 Dil. 1 the spike a Spike Amount 50.0	Spike Amount 50.0 Ind spike du Matrix Result <0.175	Re <0 uplicate n Rec. 91	Pr trix sult 1 175 result. Rec. Limit 85 - 115	Rec. Rec. RPD	3y: KV Rec. Limit 85 - 115 RPD Limit		
Laboratory Control Spike (LO QC Batch: 53921 Prep Batch: 46006 Param Dissolved Calcium Percent recovery is based on the s Param Dissolved Calcium	CS-1) L(Res 52 spike result. LCSD Result 45.5	Date A QC Pro CS sult 8 RPD is Units mg/I	Units mg/L based on Dil.	2008-10-3 2008-10-3 Dil. 1 the spike a Spike Amount 50.0	Spike Amount 50.0 Ind spike du Matrix Result <0.175	Re <0 uplicate n Rec. 91	Pr trix sult 1 175 result. Rec. Limit 85 - 115	Rec. Rec. RPD	3y: KV Rec. Limit 85 - 115 RPD Limit		

QC Batch:	53921	Date Analyzed:	2008-10-31	Analyzed By:	TP
Prep Batch:	46006	QC Preparation:	2008-10-30	Prepared By:	KV

Dissolved Potassium Percent recovery is based on the Param Dissolved Potassium Percent recovery is based on the Laboratory Control Spike (I QC Batch: 53921 Prep Batch: 46006 Param Dissolved Magnesium Percent recovery is based on the Param Dissolved Magnesium		OXY/		der: 81024 B ATB @ 1			Page	Number:	20 of 30 Lea Co.
Param	LC: Resu	lt	Units	Dil.	Spike Amount	Mat Res	ult F	.ec.	Rec. Limit
Dissolved Potassium	50.9	9	mg/L	1	50.0	<0.	327 1	02	85 - 115
Percent recovery is based on the sp	ike result. I	RPD is	based on t	he spike a	nd spike du	plicate r	esult.		
	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Potassium	45.5	mg/L	1	50.0	< 0.327	<u>9</u> 1	85 - 115	11	20
Percent recovery is based on the sp		RPD is	based on t	the spike a	nd spike du	plicate r	esult.		
		Date A	nalyzed:	2008-10-3	51		Ат	alyzed E	y: TP
-			eparation:	2008-10-3				epared B	÷
	\mathbf{LC}				Spike		trix		Rec.
Param	Resu		Units	Dil.	Amount	Res		lec.	Limit
	52.		mg/L	1	50.0			104	85 - 115
Percent recovery is based on the sp	ike result.	RPD is	based on	the spike a	nd spike du	plicate r	esult.		
	LCSD			Spike	Matrix		Rec.		RPD
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Magnesium	44.8	mg/L	1	50.0	<0.148	90	85 - 115	15	20
Percent recovery is based on the sp Laboratory Control Spike (LC QC Batch: 53921 Prep Batch: 46006	S-1)	Date A	nalyzed:	the spike a 2008-10-3 2008-10-3	31	plicate r	Ä	nalyzed I repared I	•
				_	Spike		trix	_	Rec.
Param Disseland Codian	Res		Units	1	Amount			Rec.	Limit
Dissolved Sodium	51.		mg/L	1	50.0			103	85 - 11
Percent recovery is based on the sp	oke result.	RPD is	based on	the spike a	nd spike du	iplicate i	result.		
	LCSD	 .	_	Spike	Matrix	_	Rec.		RPI
Param	Result	Units		Amount	Result	Rec.	Limit	RPD	
Dissolved Sodium	46.0	mg/L		50.0	<0.244	92	85 - 115	11	20
Percent recovery is based on the sp	oike result.	RPD is	based on	the spike a	nd spike dı	iplicate i	result.		
Matrix Spike (MS-1) Spiked	Sample: 17								

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•	C Batch: ep Batch:	Date Analyzed: QC Preparation:		Analyzed By: Prepared By:	

Report Date: November 5, 2008 115-6402944		OX	Work (Y/E.C. Hi	Order: 81 ll B ATB		1 #24			Page Nı		21 of 30 Lea Co.
	MS	;			Spik	æ	Matr	·ix		I	Rec.
Param	Resu	lt	Units	Dil.	Amou	int	Resu	lt	Rec.	L	imit
Benzene	0.52	0	mg/L	5	0.50	0	< 0.00	550	104	77.5	- 121.1
Toluene	0.51	9	mg/L	5	0.50	0	< 0.00	500	104	78.8	- 119.6
Ethylbenzene	0.52	0	mg/L	5	0.50	0	< 0.00	500	104	77.9	- 120.5
Xylene	1.48	8	_mg/L	5	1.5	00	< 0.01	45	99	78.3	- 119.4
Percent recovery is based on the s	pike result.	RPD	is based or	n the spil	ke and	spike du	plicate	e resul	t.		
	MSD			Spike	· Ma	trix		I	Rec.		RPD
Param	Result	Units		Amount			Rec.		imit	RPD	Limit
Benzene	0.511	mg/L		0.500		0550	102		- 121.1	2	20
Toluene	0.510	mg/L		0.500		0500	102		- 119.6	2	20
Ethylbenzene	0.514	mg/L		0.500		0500	103		- 120.5	1	20
Xylene	1.46	mg/L	5	1.50		0145	97	78.3	- 119.4	1	20
Percent recovery is based on the s	pike result.	RPD	is based of	n the spil	ke and	spike du	plicate	e resul	t.		
	MS	S	MSD			Spik	æ	MS	MSD		Rec.
Surrogate	Rest		Result	Units	Dil.	Amou		Rec.	Rec.		Limit
Trifluorotoluene (TFT)	0.46	64	0.459	mg/L	5	0.5		93	92	86.6	- 118.9
4-Bromofluorobenzene (4-BFB)	0.40	01	0.404	mg/L	5	0.5		80	81		- 127.3
Matrix Spike (MS-1) Spiked QC Batch: 53710 Prep Batch: 45929	l Sample: 1	Date	Analyzed Preparation		-10-28 -10-27					lyzed Bj ared Bj	
	Ν	иS				Spike	N	Aatrix			Rec.
Param	_	sult	Units	Dil.	Α	mount	I	Result	Re	c	Limit
Chloride	ר <u>9</u> ′	700	mg/L	50		625		9248	72	2	90 - 110
Percent recovery is based on the s	pike result	. RPD	is based o	n the spi	ke and	spike du	plicat	e resu	lt.		
_	MSD			Spil		Matrix	_		Rec.		RPD
Param Chlorida 2	Result	Un		Amou	_	Result	Rec		Limit	RPD	Limit
		mg		625		9248	84		0 - 110	1	
Percent recovery is based on the s	pike result	. RPD	is based o	on the spi	ike and	spike dı	ıplicat	e resu	lt.		
Matrix Spike (MS-1) Spike	d Sample: 1	177263									
_ , , _	d Sample: 1			: 2008	-10-28				Ana	lyzed B	y: AR
Matrix Spike (MS-1) Spiked QC Batch: 53710 Prep Batch: 45929	d Sample: 1	Date	e Analyzed Preparatio		-10-28 -10-27					lyzed B bared B	-

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¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. ²Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

	vember 5, 2008		OXY/		der: 81024 B ATB @ V			Page	Number:	22 of 30 Lea Co.
		MS				Spike	Mat	trix		Rec.
Param		Resu	lt	Units	Dil.	Amount	Res	ult F	lec.	Limit
Sulfate		844		mg/L	50	625	20)7	02	90 - 110
Percent recovery	is based on the spi	ike result. 1	RPD is	based on t	he spike ar	nd spike du	plicate r	esult.		
		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Sulfate		843	mg/L	50	625	207	102	90 - 110	0	
Percent recovery Matrix Spike (i	is based on the spi MS-1) Spiked S	ike result. 1 Sample: 17		based on t	the spike a	nd spike duj	plicate r	esult.		
QC Batch: 539 Prep Batch: 460				nalyzed: paration:	2008-10-3 2008-10-3				nalyzed E repared B	-
		MS	5			Spike	Ма	trix		Rec.
Param		Resu		Units	Dil.	Amount	Re	sultl	Rec.	Limit
Dissolved Calciur	n	45	L	mg/L	10	50.0	4	04	94	75 - 125
Percent recovery	is based on the sp	ike result.	RPD is	based on	the spike a	nd spike du	plicate 1	result.		
		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Calcium	m	453	mg/L	10	50.0	404	98	75 - 125	0	20
Percent recovery Matrix Spike (is based on the sp MS-1) Spiked	ike result. Sample: 17		based on	the spike a	nd spike du	plicate 1	result.		
OO Detaha 52	000		Data A		0000 10 1	5 1				
•	920 006			nalyzed: eparation:	2008-10-3 2008-10-3				nalyzed 1 repared 1	-
Frep Batch: 40	500		QU FR	eparation:	2008-10-6	50		Ľ	repared I	By: KV
		M	5			Spike	Ma	trix		Rec.
_		Res	ult	Units	Dil.	Amount	Re	sult	Rec.	Limit
Param	ium	58.	7	mg/L	1	50.0]	15	87	75 - 125
Param Dissolved Potass			•							
Dissolved Potass	is based on the sp			based on	the spike a	und spike du	plicate	result.		
Dissolved Potass			RPD is		- Spike	Matrix	plicate	Rec.		RPD
Dissolved Potass Percent recovery Param	is based on the sp	oike result. MSD Result	RPD is Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	Limit
Dissolved Potass	is based on the sp	oike result. MSD	RPD is	Dil.	- Spike	Matrix	-	Rec.		
Dissolved Potass Percent recovery Param Dissolved Potass	is based on the sp	oike result. MSD Result 58.4	RPD is Units mg/L	Dil.	Spike Amount 50.0	Matrix Result	Rec.	Rec. Limit 75 - 125		Limit
Dissolved Potass Percent recovery Param Dissolved Potass	is based on the sp ium is based on the sp	oike result. MSD Result 58.4	RPD is Units mg/L RPD is	Dil.	Spike Amount 50.0	Matrix Result	Rec.	Rec. Limit 75 - 125		Limit
Dissolved Potass Percent recovery Param Dissolved Potass Percent recovery Matrix Spike (is based on the sp ium is based on the sp	oike result. MSD Result 58.4 Dike result.	RPD is Units mg/L RPD is 7241	Dil.	Spike Amount 50.0	Matrix Result 15 and spike du	Rec.	Rec. Limit 75 - 125 result.		Limit 20

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Prepared	By:	KV

Report Date: November 5, 200 115-6402944		Work Or DXY/E.C. Hill	rder: 81024 B ATB @			Page 1	Number:	23 of 30 Lea Co.
	MS		·	Spike	Mat	trix		Rec.
Param	Result	Units	Dil.	Amount	Res		ec.	Limit
Dissolved Magnesium	108	mg/L	1	50.0	62	.4 9	1	75 - 125
Percent recovery is based on th	ne spike result. RP	D is based on	the spike a	nd spike du	plicate r	esult.		
	MSD		Spike	Matrix		Rec.		RPD
Param	Result U	Inits Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Magnesium	110 n	ng/L 1	50.0	62.4	95	75 - 125	2	20
Percent recovery is based on th	-		the spike a	nd spike du	plicate r	esult.	·	
Matrix Spike (MS-1) Spi	iked Sample: 17724	41						
QC Batch: 53920	Da	te Analyzed:	2008-10-3	31		An	alyzed B	y: TP
Prep Batch: 46006	Q	C Preparation:	2008-10-3	30			epared B	•
	MS			Spike	Ма	trix		Rec.
Param	Result	Units	Dil.	Amount			ec.	Limit
Dissolved Sodium	431	mg/L	10	50.0			94	75 - 125
Percent recovery is based on th	he spike result. RI		the spike a	nd spike du	plicate r	esult.		
·	- MSD		Spike	- Matrix	-	Rec.		RPD
Param		Jnits Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Sodium	<u> </u>	ng/L 10	50.0	384	96	75 - 125	0	20
Percent recovery is based on the		- <u></u>	the spike a	nd spike du	plicate 1	result.		
Matrix Spike (MS-1) Sp	iked Sample: 1772	58						
QC Batch: 53921	Da	ate Analyzed:	2008-10-	31		An	alyzed H	Bv: TP
Prep Batch: 46006		C Preparation:					epared E	-
		-					-	•
_	MS			Spike	Ma	trix		Rec.
Param	Result		Dil.	Amount			lec.	Limit
Dissolved Calcium Percent recovery is based on t	166 he snike result BI	mg/L PD is based on	the spike :	50.0			94	75 - 125
receivery is bused on t				-	ipiicate .			חחח
Param	MSD Result	Units Dil.	Spike	Matrix Result	Ree	Rec. Limit	RPD	RPD Limit
Dissolved Calcium		$\frac{1}{1}$ ng/L 1	Amount 50.0	Result 119	Rec. 88	75 - 125	$\frac{RPD}{2}$	Limit 20
Percent recovery is based on t							4	20
	oiked Sample: 1772		_					
- 、 , -	-		2008-10-	91		۸.	alwood	By: TP
QC Batch: 53921 Prep Batch: 46006		ate Analyzed: C Preparation					nalyzed I	•
1 Tep Datch: 40000	Q	U r reparation	. 2008-10-	·00		P	epared 1	By: KV

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Report Date: November 5, 2008 115-6402944		OXY/		der: 81024 B ATB @ 1			Page	Number:	24 of 30 Lea Co.
Param	M: Res	ult	Units	Dil.	Spike Amount	Mat Res	ult R	ec.	Rec. Limit
Dissolved Potassium	49.	0	mg/L	1	50.0	4.9	5 1	38	75 - 125
Percent recovery is based on the sp	oike result.	RPD is	based on t	the spike a	nd spike du	plicate re	esult.		
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Potassium	46.6	mg/L	1	50.0	4.95	83	75 - 125	5	20
Percent recovery is based on the sp Matrix Spike (MS-1) Spiked	oike result. Sample: 17		based on	the spike a	nd spike du	plicate re	esult.		
QC Batch: 53921 Prep Batch: 46006	Compton 11	Date A	nalyzed: eparation:	2008-10-3 2008-10-3				alyzed E epared E	-
	М	S			Spike	Mat	trix		Rec.
Param	Res		Units	Dil.	Amount	Res		lec.	Limit
Dissolved Magnesium	66		mg/L	1	50.0	20		93	75 - 125
Percent recovery is based on the sp	pike result.	RPD is	based on	the spike a	nd spike du	plicate r	esult.		
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units		Amount	Result	Rec.	Limit	RPD	Limit
Dissolved Magnesium	63.9	mg/L	1	50.0	20.4	87	75 - 125	4	20
	pike result. Sample: 1	77258		-	-	plicate r			
QC Batch: 53921			nalyzed:	2008-10-3				nalyzed I	
Prep Batch: 46006		QU Pro	eparation:	2008-10-3	30		PI	epared I	By: KV
	М	IS			Spike	Ма	trix		Rec.
Param	Res		Units	Dil.	Amount			Rec.	Limit
Dissolved Sodium	14	40	mg/L	1	50.0	92	2.1	96	75 - 125
Percent recovery is based on the s	pike result.	RPD is	based on	the spike a	nd spike du	plicate r	esult.		
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	
Dissolved Sodium	136	mg/L		50.0	<u>92.1</u>	88	75 - 125	3	20
Percent recovery is based on the s									
1 ercent recovery is based on the s	pike result.		based on	the spike a	ina spike at	ipicate i	court.		
Standard (ICV-1)									

QC Batch: 53609

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Date Analyzed: 2008-10-24

Analyzed By: AR

115-6402944	e: Novemb	per 5, 2	2008		ork Order: 810 C. Hill B ATB		Page Nu	mber: 25 of 30 Lea Co.
Param	Flag		Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH	0_		s.u.	7.00	7.04	100	98 - 102	2008-10-24
Standard. (
QC Batch:	53609			Date Anal	yzed: 2008-10	-24	Anal	yzed By: AR
Param	Flag		Units s.u.	CCVs True Conc. 7.00	CCVs Found Conc. 7.01	CCVs Percent Recovery 100	Percent Recovery Limits 98 - 102	Date Analyzed 2008-10-24
						100		2000-10-24
Standard (ICV-1)							
QC Batch:	53630			Date Anal	yzed: 2008-10	-25	Anal	yzed By: AG
	_	~1		ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
n		Flag	Units	<u> </u>	<u> </u>	Recovery 100	Limits 85 - 115	Analyzed 2008-10-25
			ma / 1	0.100	0.0990		00 - 110	
Benzene			mg/L mg/L		0 0998	100	85 - 115	
Benzene Toluene			mg/L	0.100	0.0998 0.100	100 100	85 - 115 85 - 115	2008-10-25
Param Benzene Toluene Ethylbenzen Xylene					0.0998 0.100 0.286	100 100 95	85 - 115 85 - 115 85 - 115	
Benzene Toluene Ethylbenzen Xylene	e		mg/L mg/L	0.100 0.100	0.100	100	85 - 115	2008-10-25 2008-10-25
Benzene Toluene Ethylbenzen Xylene Standard (e (CCV-1)		mg/L mg/L	0.100 0.100	0.100 0.286	100 95	85 - 115 85 - 115	2008-10-25 2008-10-25
Benzene Toluene Ethylbenzen Xylene Standard (e (CCV-1)		mg/L mg/L	0.100 0.100 0.300 Date Anal CCVs	0.100 0.286 lyzed: 2008-10 CCVs	100 95 -25 CCVs	85 - 115 85 - 115 Anal Percent	2008-10-25 2008-10-25 2008-10-25 yzed By: AG
Benzene Toluene Ethylbenzen Xylene Standard (QC Batch:	e (CCV-1) 53630	· · · · ·	mg/L mg/L mg/L	0.100 0.100 0.300 Date Anal CCVs True	0.100 0.286 lyzed: 2008-10 CCVs Found	100 95 -25 CCVs Percent	85 - 115 85 - 115 Anal Percent Recovery	2008-10-25 2008-10-25 2008-10-25 yzed By: AG Date
Benzene Toluene Ethylbenzen Xylene Standard (QC Batch: Param	e (CCV-1) 53630	Flag	mg/L mg/L mg/L	0.100 0.100 0.300 Date Anal CCVs True Conc.	0.100 0.286 lyzed: 2008-10 CCVs Found Conc.	100 95 -25 CCVs Percent Recovery	85 - 115 85 - 115 Anal Percent Recovery Limits	2008-10-25 2008-10-25 2008-10-25 yzed By: AG Date Analyzed
Benzene Toluene Ethylbenzen Xylene Standard (QC Batch: Param Benzene	e (CCV-1) 53630	· · · · ·	mg/L mg/L mg/L	0.100 0.100 0.300 Date Anal CCVs True Conc. 0.100	0.100 0.286 lyzed: 2008-10 CCVs Found Conc. 0.0957	100 95 -25 -25 CCVs Percent Recovery 96	85 - 115 85 - 115 Anal Percent Recovery Limits 85 - 115	2008-10-25 2008-10-25 2008-10-25 yzed By: AG Date Analyzed 2008-10-25
Benzene Toluene Ethylbenzen	e (CCV-1) 53630	· · · · ·	mg/L mg/L mg/L	0.100 0.100 0.300 Date Anal CCVs True Conc.	0.100 0.286 lyzed: 2008-10 CCVs Found Conc.	100 95 -25 CCVs Percent Recovery	85 - 115 85 - 115 Anal Percent Recovery Limits	2008-10-25 2008-10-25 2008-10-25 yzed By: AG Date Analyzed

QC Batch: 53708

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Date Analyzed: 2008-10-28

Analyzed By: AR

Report Date: November 115-6402944	5, 2008	W OXY/E.	#24	Page Number: 26 of 30 Lea Co.			
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-10-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	250		0 - 200	2008-10-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2008-10-28
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2008-10-28
Standard (CCV-1)							
QC Batch: 53708		Date Anal	yzed: 2008	-10-28		Analy	zed By: AR
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-10-28
Carbonate Alkalinity		mg/L as CaCo3	0.00	244		0 - 200	2008-10-28
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2008-10-28
Total Alkalinity		mg/L as CaCo3	250	247	99	90 - 110	2008-10-28
Standard (ICV-1)							
QC Batch: 53710		Date Ana	lyzed: 2008	8-10-28		Analy	zed By: AR
		ICVs	ICVs	IC	CVs	Percent	
		True	Found		rcent	Recovery	Date
Param Flag	Units	Conc.	Conc.		overy	Limits	Analyzed
Chloride	mg/L	12.5	11.8		94	90 - 110	2008-10-28
Standard (ICV-1)							
			l	8-10-28		' Analy	zed By: AR
QC Batch: 53710		Date Ana	iyzea: 2008	10 20		5	
QC Batch: 53710		ICVs	ICVs	IC	CVs	Percent	
		ICVs True	ICVs Found	IC Per	cent	Percent Recovery	Date
QC Batch: 53710 Param Flag Sulfate Flag	Units mg/L	ICVs	ICVs	IC Per Rec		Percent	Date Analyzed 2008-10-2

QC Batch: 53710

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Date Analyzed: 2008-10-28

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Analyzed By: AR

Report Date: November 115-6402944	5, 2008	02	Work O: XY/E.C. Hill	rder: 81024 B ATB @		Page Nu	mber: 27 of 30 Lea Co.
	Unite	CCV: True	For	CVs and	CCVs Percent	Percent Recovery	Date
Param Flag Chloride	Units mg/L	Conc 12.5		nc. 1.8	Recovery 94	Limits 90 - 110	Analyzed 2008-10-28
Standard (CCV-1)							
QC Batch: 53710		Date	e Analyzed:	2008-10-28		Analy	zed By: AR
		CCVs	CC	Vs	CCVs	Percent	
		True	Fou		Percent	Recovery	Date
Param Flag	Units	Conc.	Co	nc.	Recovery	Limits	Analyzed
Sulfate	mg/L	12.5	12	.8	102	90 - 110	2008-10-28
Standard (ICV-1)							
QC Batch: 53827		Date	e Analyzed:	2008-10-31		Analy	zed By: AR
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Dissolved Solids		mg/L	1000	936	94	90 - 110	2008-10-31
Standard (CCV-1)							
QC Batch: 53827		Date	e Analyzed:	2008-10-31	L	Analy	zed By: AR
•			-			-	
			CCVs True	CCVs Found	CCVs Borecont	Percent	Data
Param	Flag	Units	Conc.	Found Conc.	Percent Recovery	Recovery Limits	Date Analyzed
Total Dissolved Solids	I. Iag	mg/L	1000	<u> </u>	99	90 - 110	2008-10-3
				<u> </u>			
Standard (ICV-1)		_					
QC Batch: 53920		Dat	e Analyzed:	2008-10-3	1	Anal	yzed By: TP
			ICVs	ICVs	ICVs	Percent	
n			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Dissolved Calcium	<u></u>	mg/L	50.0	51.2	102	90 - 110	2008-10-3
Standard (ICV-1)							
QC Batch: 53920		Dat	e Analyzed:	2008-10-3	1	Anal	yzed By: TP

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eport Date: Novembe 15-6402944	r 5, 2008		Work O OXY/E.C. Hill	rder: 8102415 B ATB @ We		Page Nu	mber: 28 of 30 Lea Co.
aram	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
issolved Potassium	······	mg/L	50.0	51.8	104	90 - 110	2008-10-31
tandard (ICV-1)							
C Batch: 53920			Date Analyzed:	2008-10-31		Analy	zed By: TP
aram	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
issolved Magnesium		mg/L	50.0	51.3	103	90 - 110	2008-10-31
tandard (ICV-1)							
C Batch: 53920			Date Analyzed:	2008-10-31		Analy	yzed By: TP
aram	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
issolved Sodium	1 100	mg/L	50.0	50.7	101	90 - 110	2008-10-31
C Batch: 53920	Flag	Units	Date Analyzed: CCVs True Conc.	2008-10-31 CCVs Found Conc.	CCVs Percent Recovery	Anal Percent Recovery Limits	yzed By: TP Date Analyzed
issolved Calcium		mg/L	50.0	50.5	101	90 - 110	2008-10-31
tandard (CCV-1) 2C Batch: 53920			Date Analyzed:	2008-10-31		Anal	yzed By: TP
aram	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Potassium		mg/L	50.0	47.8	96	90 - 110	2008-10-31
tandard (CCV-1) 2C Batch: 53920 Param	Flag	Units	Date Analyzed: CCVs True Conc.	2008-10-31 CCVs Found Conc.	CCVs Percent Recovery	Anal Percent Recovery Limits	yzed By: TP Date Analyzed
tandard (CCV-1)			D . A A A				
C Batch: 53920			Date Analyzed:	2008-10-31		Anal	yzed By: TP

Report Date: Novembe 115-6402944	er 5, 2008		Work O OXY/E.C. Hill	rder: 8102415 B ATB @ W		Page Number: 29 of 30 Lea Co.				
Daram	Flor	, Ti-ita	CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date			
Param Dissolved Magnesium	Flag	Units mg/L	<u> </u>	<u>Conc.</u> 50.5	Recovery 101	Limits 90 - 110	Analyzed 2008-10-31			
Dissolved Wagnesium		IIIg/ L		00.0			2008-10-31			
Standard (CCV-1)										
QC Batch: 53920		D	ate Analyzed:	2008-10-31		Analy	zed By: TP			
			CCVs .	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Dissolved Sodium		mg/L	50.0	49.7	99	90 - 110	2008-10-31			
Standard (ICV-1)										
QC Batch: 53921		D	ate Analyzed:	2008-10-31		Analy	zed By: TP			
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Dissolved Calcium		mg/L	50.0	51.2	102	90 - 110	2008-10-31			
Standard (ICV-1)										
QC Batch: 53921		D	ate Analyzed:	2008-10-31		Analy	zed By: TP			
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Dissolved Potassium		mg/L	50.0	51.8	104	90 - 110	2008-10-31			
Standard (ICV-1)										
QC Batch: 53921		Γ	ate Analyzed:	2008-10-31		Anal	yzed By: TP			
QC Datcii. 55521			ICVs	ICVs	ICVs	Percent				
QC Dattil. 55521			1 0010	Found	Percent	Recovery	Date			
	F lag	TT:4~	True		Decomer	T:mit-	Anal1			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits				
Param Dissolved Magnesium	Flag	Units mg/L			Recovery 103	Limits 90 - 110	Analyzed 2008-10-3			
Param	Flag		Conc.	Conc.						

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Report Date: November 115-6402944	er 5, 2008		Work O OXY/E.C. Hill		Page Number: 30 of 30 Lea Co				
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed		
Dissolved Sodium		mg/L	50.0	50.7	101	90 - 110	2008-10-31		
Standard (CCV-1)									
QC Batch: 53921			Date Analyzed:	2008-10-31		Analy	vzed By: TP		
_			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param Dissolved Calcium	Flag	Units mg/L	<u>Conc.</u> 50.0	Conc. 49.5	Recovery 99	Limits 90 - 110	Analyzed 2008-10-31		
Param Dissolved Potassium	Flag	Units mg/L	CCVs True Conc. 50.0	CCVs Found Conc. 47.1	CCVs Percent <u>Recovery</u> 94	Percent Recovery Limits 90 - 110	Date Analyzed 2008-10-3		
Standard (CCV-1)	·	mg/L		47.1	94	90 - 110	2008-10-31		
QC Batch: 53921			Date Analyzed:	2008-10-31		Anal	yzed By: TP		
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
Param	Flag	Units		Conc.	Recovery	Limits	Analyzed		
Dissolved Magnesium Standard (CCV-1)		mg/L	50.0	49.4	99	90 - 110	2008-10-31		
QC Batch: 53921			Date Analyzed:	2008-10-31	• •	Anal	yzed By: TP		
			CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date		
	171	TT	0	0	Decement		لمصادمهم		
Param Dissolved Sodium	Flag	Units mg/L	<u>Conc.</u> 50.0	Conc. 49.7	Recovery 99	Limits 90 - 110	Analyzed 2008-10-31		

																81	0	21	119	5									
An	alys	sis F	Re	e	ļU	es	st of Cha	ain of Cust	tody	R	e	CC	oro	b	┣								GE:		1		OF:	Τ	
			ſ						······································						-				(S RE cify N			Vo.)			
								Spring St. as 79705 • Fax (432) 682-3946								05 (Ext. to C35)		Cd Cr Pb Hg Se Cd Vr Pd Hg Se											
CLIENT NAM	NAME: OXY SITE MANAGER:					EH I			SER	VATIVE		TX1005		Ba Ba			0/624	70/625					Ť						
PROJECT NO			PF	30J	ECT	NAM XY	1E)	S ATB @ Well #	24	F CONTAIN								ils Ag As als Ag As	les	Volatiles	8240/826	ni. Vol. 82	V608 08		20	(Air) stast	ns/Cations		
LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB		-	E IDENTIFICATION		NUMBER OF CONTAINERS	HCL HCL	HNO3	ICE	NONE	GTEX 8021	TPH 8015 MOD.	PAH 8270	TCLP Meta	TCLP Volatiles	TCLP Semi Volatiles RCI	GC,MS Vol. 8240/8260/624	GC.MS Sen	PCB's 8080/608 Pest. 808/608	Chloride	Gamma Sp	Alpha Beta (Air) PLM (Asbestos)	Major Anions/Cations pH. (DS)		
177256	10/23	1210	ລ		×		mw-Z			7	X		X		X												Х		
257	10/23	1200	ŵ		x		MW-3			7	x		X		X												X		
258	1%3	1220	ω		X		MW-4			7	X		X		X												X		
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SAMPLE CONDI	ite	لمك	\ \		HONE		REMARKS: Alk. TOS.	DATE: 10 0400 DATE: DAL 504 Child copy - Return Orginal co	sride-			II a	n	1 (29	_ 1 , <i>H</i>	lai	ð	20	22	,K	$\langle n \rangle$	1 ₉₎	L	10		Yes LU	66	ock

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ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

22-Dec-08

Tim Reed Tetra Tech 1910 N. Big Spring St Midland, TX 79705

Tel: (432) 682-4559 Fax:

Re: ATB at Well #24

Dear Tim,

Work Order : 0812310

ALS Laboratory Group received 4 samples on 12/13/2008 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group 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 Laboratory Group. 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,

Lora Terrell

Electronically approved by: Glenda H. Ramos Lora Terrill VP Lab Operations



Certificate No: T104704231-08-TX

ALS Group USA, Corp. Part of the ALS Laboratory Group 10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887 www.alsglobal.com www.elabi.com A Campbell Brothers Limited Company

MW-3

MW-4

0812310-02

0812310-03

Date: 22-Dec-08

12/12/2008 11:00 12/13/2008 09:15

12/12/2008 11:35 12/13/2008 09:15

Client: Project: Work Order:	Tetra Tech ATB at Well #24 0812310			Work Order S	ample Summary
Lab Samp ID	<u>Client Sample ID</u>	<u>Matrix</u>	Tag Number	Collection Date	Date Received Hold
0812310-01 N	MW-2	Water		12/12/2008 10:25	12/13/2008 09:15

Water

Water

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Client:	Tetra Tech
Project:	ATB at Well #24
Work Order:	0812310

Case Narrative

Date: 22-Dec-08

No Findings.

CN Page 1 of 1

Date:	22-Dec-0	98

Client:	Tetra Tech							
Project:	ATB at Well #24					Work Order:	0812310	
Sample ID:	MW-2					Lab ID:	0812310-01	
Collection Date:	12/12/2008 10:25 AM					Matrix:	WATER	
Analyses		Result	Qual	Report Limit	Units	Dilution Factor		Date Analyzed
TCL VOLATILES				SW826	60			Analyst: PC
Benzene		- U		ŧ	5.0 µg/L	1		12/15/2008 03:55 PM
Ethylbenzene		U		ŧ	5.0 µg/L	1		12/15/2008 03:55 PM
Toluene				,	50 ug/l	1		12/15/2008 03-55 PM

Toluene υ 5.0 µg/L 12/15/2008 03:55 PM Xylenes, Total U 12/15/2008 03:55 PM 15 µg/L 1 Surr: 1,2-Dichloroethane-d4 93.2 70-125 %REC 1 12/15/2008 03:55 PM Surr: 4-Bromofluorobenzene 97.3 12/15/2008 03:55 PM 72-125 %REC 1 Surr: Dibromofluoromethane 95.8 71-125 %REC 12/15/2008 03:55 PM 1 Surr: Toluene-d8 102 75-125 %REC 12/15/2008 03:55 PM 1 ANIONS E300 Analyst: IGF Chloride 270 10 12/19/2008 12:02 PM 5.00 mg/L Surr: Selenate (surr) 93.1 85-115 %REC 10 12/19/2008 12:02 PM

Qualifiers:

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

a - Not accredited

S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

n - Not offered for accreditation

AR Page 1 of 3

Date: 22-Dec-08

		Report Dilution	
Collection Date:	12/12/2008 11:00 AM	Matrix	: WATER
Sample ID:	MW-3	Lab ID	: 0812310-02
Project:	ATB at Well #24	Work Order	: 0812310
Client:	Tetra Tech		

Analyses	Result	Repor Qual Limit		Dilution Factor	Date Analyzed
TCL VOLATILES		SW8	260		Analyst: PC
Benzene	U		5.0 µg/L	1	12/15/2008 04:20 PM
Ethylbenzene	U		5.0 µg/L	1	12/15/2008 04:20 PM
Toluene	U		5.0 µg/L	1	12/15/2008 04:20 PM
Xylenes, Total	U		15 µg/L	1	12/15/2008 04:20 PM
Surr: 1,2-Dichloroethane-d4	94.6	70	-125 %REC	: 1	12/15/2008 04:20 PM
Surr: 4-Bromofluorobenzene	98.8	72	2-125 %REC	; 1	12/15/2008 04:20 PM
Surr: Dibromofluoromethane	96. <i>4</i>	71	-125 %REC	: 1	12/15/2008 04:20 PM
Surr: Toluene-d8	108	75	5-125 %REC	: 1	12/15/2008 04:20 PM
ANIONS		E300)		Analyst: IGF
Chloride	120		5.00 mg/L	10	12/19/2008 12:48 PM
Surr: Selenate (surr)	91.6	8	5-115 %REC	: 10	12/19/2008 12:48 PM

Qualifiers:

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

a - Not accredited

S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

n - Not offered for accreditation

AR Page 2 of 3

Client:Tetra TechProject:ATB at Well #24Sample ID:MW-4Collection Date:12/12/2008 11:35 AM

Work Order: 0812310 Lab ID: 0812310-03

Matrix: WATER

Analyses	Result	Report Qual Limit	Units	Dilution Factor	Date Analyzed
TCL VOLATILES		SW8260			Analyst: PC
Benzene	ບ	5.0	µg/L	1	12/15/2008 04:46 PM
Ethylbenzene	U	5.0	µg/L	1	12/15/2008 04:46 PM
Toluene	υ	5.0	µg/L	1	12/15/2008 04:46 PM
Xylenes, Total	U	15	µg/L	1	12/15/2008 04:46 PM
Surr: 1,2-Dichloroethane-d4	93.5	70-125	%REC	1	12/15/2008 04:46 PM
Surr: 4-Bromofluorobenzene	98.8	72-125	%REC	1	12/15/2008 04:46 PM
Surr: Dibromofluoromethane	95.9	71-125	%REC	1	12/15/2008 04:46 PM
Surr: Toluene-d8	105	75-125	%REC	1	12/15/2008 04:46 PM
ANIONS		E300			Analyst: IGF
Chloride	108	10.0	mg/L	20	12/19/2008 03:30 PM
Surr: Selenate (surr)	95.5	85-115	%REC	20	12/19/2008 03:30 PM

Qualifiers:

U - Analyzed for but Not Detected

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

a - Not accredited

S - Spike Recovery outside accepted recovery limits

P - Dual Column results percent difference > 40%

E - Value above quantitation range

H - Analyzed outside of Hold Time

n - Not offered for accreditation

AR Page 3 of 3

Client:	Tetra Tech
Work Order:	0812310
Project:	ATB at Well #24

Date: 22-Dec-08

QC BATCH REPORT

Batch ID: R7	1249 Instrumer	nt ID VOA1		Metho	d: SW826	0						
MBLK	Sample ID: VBLKW-12	1508-R71249				U	nits: µg/L		Anal	ysis Date: 1	2/15/2008	12:33 PM
Client ID:		Run II	D: VOA1_(081215A		Seq	ąNo: 156 (063	Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene		U	5.0									
Ethylbenzene	•	UU	5.0							_		
Toluene		υ	5.0									
Xylenes, Tota	al	U	15									
Surr: 1,2-D	ichloroethane-d4	49.53	5.0	50		0	99.1	70-125		0		
Surr: 4-Bro	mofluorobenzene	50.5	5.0	50		0	101	72-125		0		
Surr: Dibro	mofluoromethane	49.71	5.0	50		0	99.4	71-125		0		
Surr: Tolue	ene-d8	52.89	5.0	50		0	106	75-125		0		

LCS	Sample ID: VLCSW-12	1508-R/1249				Units: µ	lg/∟	Anar	ysis Date: 1	2/15/2008	3 12:58 PM
Client ID:		Run II	D: VOA1_	081215A		SeqNo:1	560064	Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%RE	Contro	RPD Ref	%RPD	RPD Limit	Qual
Benzene		49.96	5.0	50	(0 99	.9 73-12 ⁻	1	0		
Ethylbenzen	e	50.59	5.0	50		0 10	01 80-12	00	0		
Toluene		50.13	5.0	50		0 10	0 80-12	0	0		
Xylenes, Tot	al	147.4	15	150	_	0 98	.3 80-12	C	0		
Surr: 1,2-[Dichloroethane-d4	50.14	5.0	50		0 10	0 70-12	5	0		
Surr: 4-Bro	omofluorobenzene	50.71	5.0	50		0 10	01 72-12	5	0		
Surr: Dibro	omofluoromethane	50.44	5.0	50		0 10	01 71-12	5	0		
Surr: Tolu	iene-d8	50.74	5.0	50		0 10	01 75-12	5	0		
Surr: Tolu	iene-d8	50.74	5.0	50		0 10	01 75-12	5	0		

MS	Sample ID: 0812245-04AMS					ί	Jnits: µg/L	•	Ana	ysis Date:	12/15/2008	3 03:05 PM
Client ID:		Run I	D: VOA1_0	081215A		Se	qNo: 156	0066	Prep Date:		DF: 1	
Analyte	·	Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene		50.14	5.0	50		0	100	73-121		0		
Ethylbenzen	e	47.63	5.0	50		0	95.3	80-120		0		
Toluene		47.31	5.0	50		0	94.6	80-120		0		
Xylenes, Tot	al	141.3	15	150		0	94.2	80-120		0		
Surr: 1,2-1	Dichloroethane-d4	48.15	5.0	50		0	96.3	70-125		0		
Surr: 4-Br	omofluorobenzene	49.8	5.0	50		0	99.6	72-125		0		
Surr: Dibr	omofluoromethane	49.14	5.0	50		0	98.3	71-125	_	0		
Surr: Tolu	ene-d8	50.24	5.0	50		0	100	75-125		0		

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

- J Analyte detected below quantitation limits
- O Referenced analyte value is > 4 times amount spiked
- R RPD outside accepted recovery limits
- P Dual Column results percent difference > 40%
- B Analyte detected in assoc. Method Blank
- U Analyzed for but not detected
- E Value above quantitation range

QC Page: 1 of 4

Client:Tetra TechWork Order:0812310Project:ATB at Well #24

QC BATCH REPORT

Batch ID: R712	49 Instrumer	nt ID VOA1		Method	: SW826	0						
MSD S	ample ID: 0812245-04	AMSD				U	Jnits: µg/L	-	Analysi	s Date: 12	/15/2008	03:30 PM
Client ID:		Run ID:	VOA1_	081215A		Se	qNo: 156 (0067	Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene		50.09	5.0	50		0	100	73-121	50.14	0.115	20	
Ethylbenzene		51.39	5.0	50		0	103	80-120	47.63	7.59	20	
Toluene		50.54	5.0	50		0	101	80-120	47.31	6.59	20	
Xylenes, Total		145.6	15	150		0	97.1	80-120	141.3	3.02	20	
Surr: 1,2-Dic	hloroethane-d4	46.98	5.0	50		0	94	70-125	48.15	2.46	20	
Surr: 4-Brom	ofluorobenzene	52.12	5.0	50		0	104	72-125	49.8	4.57	20	
Surr: Dibrom	ofluoromethane	49.18	5.0	50		0	98.4	71-125	49.14	0.0693	20	
Surr: Toluen	e-d8	54.88	5.0	50		0	110	75-125	50.24	8.83	20	
The following	samples were analyz	ed in this batch:	08	312310-01A	08	3123	10-02A	08	12310-03A			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

QC Page: 2 of 4

QC BATCH REPORT

Batch ID: R7	1470	Instrument ID ICS3000		Method	E300						·	
MBLK	Sample ID:	WBLKW1-121908-R71470				U	nits: mg/l		Analy	/sis Date: 1	2/19/2008	10:26 AM
Client ID:		Run	D: ICS300	0_081219A		Se	qNo: 156 4	1298	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: Seler	nate (surr)	4.782	0.10	5		0	95.6	85-115	· · · · · · · · · · · · · · · · · · ·	0		
LCS	Sample ID:	WLCSW2-121908-R71470				U	/nits: mg/	1_	Anal	ysis Date: 1	2/19/2008	10:49 AM
Client ID:		Run	ID: I CS300	0_081219A		Se	qNo: 156 4	4299	Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride		19.66	0.50	20		0	98.3	90-110		0		
Surr: Selei	nate (surr)	4.851	0.10	5		0	97	85-115		0		·
MSD	Sample ID:	0812310-03BMS				Ĺ	Jnits: mg/	L	Anal	ysis Date:	12/19/2008	04:16 PM
Client ID: MV	V-4	Run	ID: 1CS300	0_081219A		Se	qNo: 156	4313	Prep Date:		DF: 20)
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride		298.5	10	200	107	7.7	95.4	80-120	•	0		
Surr: Sele	nate (surr)	93.83	2.0	100	······	0	93.8	85-115	;	0		
DUP	Sample ID	0812310-03BDUP				ι	Jnits: mg/	/L	Ana	ysis Date:	12/19/2008	03:53 PM
Client ID: MV	N-4	Run	ID: ICS300	0_081219A		Se	eqNo: 156	4312	Prep Date:		DF: 20)
Analyte		Result	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	_	107.8	10	0		0	0	0-0	107	7.7 0.14	3 20	
Surr: Sele	nate (surr)	95.82	·2.0	100		0	95.8	85-115	5 <u>9</u> 5.4	48 0.35	5820	
The followin	ng samples	were analyzed in this batch	: 0	812310-03B]		

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

- O Referenced analyte value is > 4 times amount spiked
- S Spike Recovery outside accepted recovery limits
- R RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

- B Analyte detected in assoc. Method Blank
- U Analyzed for but not detected
- E Value above quantitation range

QC Page: 3 of 4

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QC BATCH REPORT

Batch ID: R	71472	Instrument ID ICS3	000		Method	E300							
MBLK	Sample ID:	WBLKW2-121908-R7	1472				U	nits: mg/l		Analy	ysis Date: 1	2/19/2008	10:11 AM
Client ID:			Run ID:	ICS3000	_081219C		Sec	aNo: 1564	357	Prep Date:		DF: 1	
Analyte		Re	sult_	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride Surr: Sele	enate (surr)	4.	. U 753	0.50 0.10	5		0	95.1	85-115		0		
LCS	Sample ID:	WLCSW2-121908-R7	1472				U	nits: mg/l		Anal	ysis Date: 1	2/19/2008	10:34 AM
Client ID:			Run ID:	ICS300	0_081219C		Sec	qNo: 156 4	1358	Prep Date:		DF: 1	
Analyte		Re	sult	PQL	SPK Val	SPK Ref Value		%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride Surr: Sele	enate (surr)		19.7 753	0.50 0.10	20 5		0 0	98.5 95.1	90-110 <i>85-<u>115</u></i>		0		
MS	Sample ID:	0812349-28BMS						Inits: mg/	L	Ana	lysis Date: 1	2/19/2008	07:16 PM
Client ID:			Run ID	ICS300	0_081219C		50	qNo: 1564	4371	Prep Date:	-	DF: 1	
							26	•				D1 . 1	
Analyte		Re	esult	PQL	SPK Val	SPK Ref Value	58	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	enate (surr)		esult 0.13 656		-			%REC 95.2 93.1			%RPD 0 0	RPD	Qual
Chloride Surr: Sel		1(4.	0.13	PQL 0.50	SPK Val	Value	15 0	95.2 93.1	Limit 80-120 85-115	Value	0	RPD Limit	
Chloride			0.13 656	PQL 0.50 0.10	SPK Val	Value	15 0	95.2	Limit 80-120 85-115 L	Value	0	RPD Limit	
Chloride Surr: Sele		1(4. 0812349-28BDUP	0.13 656	PQL 0.50 0.10	SPK Val 10 5	Value	15 0 	95.2 93.1 Jnits: mg/	Limit 80-120 85-115 L	Value	0	RPD Limit 12/19/2008	
Chloride Surr: Sela DUP Client ID:		10 4. 0812349-28BDUP Re	0.13 656 Run ID	PQL 0.50 0.10	SPK Val 10 5 0_081219C	Value 0.6 SPK Ref	15 0 U Se	95.2 93.1 Jnits: mg/ qNo: 156 %REC	Limit 80-120 85-115 L 4370 Control Limit	Value Ana Prep Date: RPD Ref Value	0 0 lysis Date: 1 %RPD	RPD Limit 12/19/2008 DF: 1 RPD Limit	06:53 PM Qual
Chloride Surr: Sele DUP Client ID: Analyte Chloride		1(4. 0812349-28BDUP 	0.13 656 Run ID esult	PQL 0.50 0.10 : ICS300 PQL	SPK Val 10 5 0_081219C SPK Val	Value 0.6 SPK Ref	15 0 	95.2 93.1 Jnits: mg/ qNo: 156	Limit 80-120 85-115 L 4370 Control	Value Ana Prep Date: RPD Ref Value 0.6	0 0 lysis Date: 1 %RPD 15	RPD Limit 12/19/2008 DF: 1 RPD Limit 0 20	06:53 PN

ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

- B Analyte detected in assoc. Method Blank
- U Analyzed for but not detected
- E Value above quantitation range

QC Page: 4 of 4



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10450 Standiff 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

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Purchase Order	urchase Order											A VOC (8260) BTEX											
Work Order		Number -							B: Anions (300) Chioride														
Company Name	a Tech		,Bill ToʻC	ompany i	CRA				С. С.	ĉ													
	Reed		275 ANV	pice Attn	Daria S	Stewart			D,										<u></u>				
A # ** X & d/ # 4 / # & & & # & & #	N. Big Spring St		· · · · · · · · · · · · · · · · · · ·	Address	2055 N Suite #	Jiagara Falls 3	; Blvd		ш. Ц.														
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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.

Copyright 2008 by ALS Laboratory Group.

Sample Receipt Checklist

Client Name: TETRA TECH MIDLAND			Date/Time Re	ceived:	<u>12/13/2008 09:15</u>					
Work Order Number 0812310		Received by:	ECD							
Checklist completed by Signature Matrix: Carrier	Date r name: _j	12/13/08 FedEx	Reviewed by	tnitials	H	12/15/08				
Shipping container/cooler in good condition?		Yes 🗸	No' N	lot Presenl	:;					
Custody seals intact on shipping container/cooler?		Yes 🗸	No No	lol Present	۰. ۱					
Custody seals intact on sample bottles?		Yes	No N	Not Present	V					
Chain of custody present?		Yes 🗸	No							
Chain of custody signed when relinquished and received?		Yes 🗸	No							
Chain of custody agrees with sample labels?	r	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):	<u>1</u> .	9	<u>004</u>							
Cooler(s)/Kil(s):	<u>11</u>	<u>821</u>								
Waler - VOA vials have zero headspace?		Yes 🗸	Νο Νο Ν	/OA vials su	bmilled .					
Water - pH acceptable upon receipt?		Yes 🔨	No N/A	. 1						
Adjusted?		Ch	ecked by							
Login Noles: <u>Trip Blanks logged in without analysis</u>										

 Client contacted:
 Date contacted:
 Person contacted

 Contacted by:
 Regarding;

 Comments:
 Verson contacted

Corrective Action

.

 ALS Laboratory Group
 CUS

 10450 Stancilli Rd., Builte 210
 Pate:
 -12-08

 Houston, Texas 77969
 Tel. +1 281 530 5656
 Pate:
 -12-08

 Name:
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 Comp^{NC}
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 Kateria

Aujte 210 Aujte 210 Date: -12-08 Name: Rest Court Comp^{4/2} Tetes K

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Today SEAL Seat Broken By: JMC Date: LL 13/07

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CONESTOGA-ROVERS & ASSOCIATES 9033 Meridian Way, West Chester, Ohio 45069 Telephone: (513) 942-4750 Fax: (513) 942-8585 www.CRAworld.com

MEMORANDUM

TO:	Tim Reed (Timothy.Reed@TetraTech.com)
From:	Deborah Brennan/bjw/1-NF DB/lyn
CC:	Angela Bown
RE:	Analytical Results and QA/QC Review Quarterly Groundwater Monitoring Program PXP-Hill, E.C. "B" ATB at Well #24 Site Lea County, New Mexico June 2009

Ref. No.: 55625 [55625DM-95]

DATE: July 15, 2009

E-Mail and Hard Copy if Requested

INTRODUCTION

Groundwater samples were collected in June 2009 in support of the Quarterly Groundwater Monitoring Program at the PXP-Hill, E.C. "B" ATB at Well #24 Site. Accutest Laboratories (Accutest) in Houston, Texas and Dayton, New Jersey analyzed the samples for the following:

Parameter

Methodology

SW-846 8260B1

EPA 300²

ISO 9001

Select Volatile Organic Compounds (VOCs) Chloride

A field key is presented in Table 1. The analytical results are summarized in Table 2. The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods, the "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999, and the "National Functional Guidelines for Inorganic Data Review," February 1994.

Data assessment was based on information obtained from the Chain of Custody form, finished data sheets, blank data, surrogate recoveries, and blank spike recoveries. A copy of the Chain of Custody is attached.

QA/QC REVIEW

All samples were prepared and analyzed within the method required holding times.

[&]quot;Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and subsequent revisions.

 ¹Evisions.
 ² "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

CRA MEMORANDUM

Surrogate compounds were added to all samples, blanks, and QC samples prior to VOC analysis. All surrogate recoveries were acceptable, demonstrating good analytical accuracy.

Method blanks were analyzed for all parameters. Target compounds were not detected in the method blanks indicating that contamination was not an issue for this event.

Blank spike (BS) samples were prepared and analyzed for all parameters. The BS analyses demonstrated acceptable analytical accuracy.

While a Duplicate analysis was performed for the Chloride and MS/MSD analyses were performed for all VOCs, the samples chosen were not from this project. The data was not evaluated on this basis.

One trip blank was submitted to the laboratory and analyzed for the selected VOCs (see Table 1). Trip blanks are collected to assess contamination from sample bottles, preservation, and storage. All results were non-detect for the VOCs of interest.

One field duplicate sample set was submitted for analysis. The data indicate that an adequate level of precision was achieved for the sampling event.

CONCLUSION

Based on the preceding assessment, the data were acceptable for use without qualifications.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY QUARTERLY GROUNDWATER MONITORING PXP-HILL, E.C. "B" ATB AT WELL #24 LEA COUNTY, NEW MEXICO JUNE 2009

		<u> </u>	Analysis/P	aramete	<u>ers</u>
Sample I.D.	Collection Date (mm/dd/yy)	Collection Time (hr:min)	VOCs (BTEX)	Chloride	Comments
MW-2	06/22/09	11:15	х	х	
MW-3	06/22/09	11:25	Х	Х	
MW-4	06/22/09	11:35	Х	Х	
Dup#1	06/22/09	-	Х	Х	Field Duplicate of MW-4
Trip Blank	06/22/09	-	Х		*

Notes:

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BTEXBenzene, Toluene, Ethylbenzene and Xylene.VOCsVolatile Organic Compounds.

CRA 055625Memo-1-Tbls

TABLE 2

	Sample Location: Sample ID: Sample Date:	MW-2 MW-2 6/22/2009	MW-3 MW-3 6/22/2009	MW-4 MW-4 6/22/2009	MW-4 DUP#1 6/22/2009 (Duplicate)
Parameters	Units				
Volatile Organic Compounds - Bl	TEX				
Benzene	μg/L	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	μg/L	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	μg/L	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	μg/L	3.0 U	3.0 U	3.0 U	3.0 U
General Chemistry					
Chloride	mg/L	254	115	110	109

Notes:

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U - Not present at or above the associated value.

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CHAIN OF CUSTODY

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