3R - 427

CLOSURE REQUEST

04/13/2011

Terry S. Lauck Site Manager

ConocoPhillips Company Risk Management & Remediation 420 South Keeler Avenue Bartlesville, OK 74004 Phone: 918.661.0935 E-mail: terry.s.lauck@conocophillips.com

ConocoPhillips

Mr. Glenn von Gonten State of New Mexico Oil Conservation Division Environmental Bureau 1220 South Saint Francis Drive Santa Fe, NM 87505

April 13, 2011

Re: Formal Request for Site Closure and No Further Action Status Site Name: El Paso No. 1A API Number: 30-045-22778

Dear Mr. von Gonten:

ConocoPhillips Company (ConocoPhillips) submits this letter as a formal request for remediation project closure and no further action status for the El Paso No. 1A gas well (Site), operated by Burlington Resources Oil & Gas Company LP, a wholly-owned subsidiary of ConocoPhillips. The Site is located on federal land in San Juan County.

Enclosed is a report presenting the results of the most recent groundwater monitoring event from December 2010. That sampling event represented the eighth consecutive quarter of results with concentrations of BTEX in all four monitoring wells below New Mexico Water Quality Control Commission (NMWQCC) groundwater standards. Fluoride, sulfate, manganese and total dissolved solids, however, are still present in concentrations exceeding NMWQCC standards. The Site is located in the northwest portion of the Blanco Canyon watershed, adjacent to Canon Largo. According to the San Juan Water Commission's 2003 report, *San Juan Hydrologic Unit Regional Water Plan Supply Assessment, Volume III*, surface water (and presumably alluvial groundwater) in this area is known to have high levels of TDS. A USGS gauging station (09356565) located approximately 3 miles up Canon Largo from the Site, frequently produced samples with analytical values for sulfate, manganese, and dissolved solids in excess of NMWQCC standards. The results for fluoride were often right at the NMWQCC standard.

Because of the high background concentrations of fluoride, sulfate, manganese, and total dissolved solids in the vicinity of the Site, ConocoPhillips respectfully requests a "no further action" determination from NMOCD for the Site. Upon approval of closure by the NMOCD, ConocoPhillips will plug and abandon all monitoring wells at the Site.

Sincerely, Terry S. Lauck

Cc: Brandon Powell, NMOCD – Aztec (w/enc) Kelly Blanchard, Tetra Tech, Inc.

Enc (1)

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DECEMBER 2010 QUARTERLY GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS COMPANY

EL PASO NO.IA NATURAL GAS PRODUCTION SITE SAN JUAN COUNTY, NEW MEXICO

API # 30-045-22778

Prepared for:

ConocoPhillips

420 South Keeler Avenue Bartlesville, OK 74004

Prepared by:



TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200 Albuquerque, NM 87110 Tetra Tech Project No. 96900122.100

April 2011

TABLE OF CONTENTS

I.0 ·	INT	
	1.1	Site HistoryI
2.0	MET	HODOLOGY AND RESULTS I
	2.1	Monitoring Summary I
	2.2	Groundwater Monitoring MethodologyI
	2.3	Groundwater Sampling Analytical Results2
3.0	CON	ICLUSIONS

FIGURES

I. Site Location Map

2. Site Layout Map

- 3. Generalized Geologic Cross Section
- 4. Groundwater Elevation Contour Map (December 2010)
- 5. Groundwater Quality Standard Exceedences Concentration Map (December 2010)
- 6. USGS Gauging Station Location Map

TABLES

I. Site History Timeline

- 2. Groundwater Elevation Data Summary (September 2007 through December 2010)
- 3. Groundwater Laboratory Analytical Results Summary (September 2007 through December 2010)
- 4. USGS Gauging Station 0935656, Canyon Largo NR Blanco, NM Historic Analytical Data Summary

APPENDICES

- Appendix A. December 2010 Quarterly Groundwater Sampling Field Forms
- Appendix B. December 2010 Quarterly Groundwater Laboratory Analytical Report

Appendix C. San Juan Water Commission, San Juan Hydrologic Unit Regional Water Plan, Water Supply Assessment, Volume III. Figure 1-6 (September 2003)

QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS COMPANY EL PASO NO.1A SAN JUAN COUNTY, NEW MEXICO

1.0 INTRODUCTION

This report details the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on December 15, 2010 at the ConocoPhillips Company El Paso No. 1A site in San Juan County, New Mexico (Site). This sampling event represents the ninth quarter of groundwater monitoring conducted by Tetra Tech at the Site, eight of which include all four Site monitor wells.

The Site is located on BLM land east of Blanco, NM near the intersection of New Mexico Highway 64 arand County Road 4450 in Section 20, Township 29 North, Range 9 West. The Site consists of the El and Paso No. IS and El Paso No. 1A natural gas production wellheads and includes all associated equipment and installations. A site location map is included as **Figure 1**, a site detail map is included as **Figure 2**, and a generalized geologic cross section is included as **Figure 3**.

I.I Site History

The history of the Site is outlined in **Table I**.

2.0 METHODOLOGY AND RESULTS

2.1 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

On December 15, 2010 groundwater elevation measurements were recorded in Monitor Wells MW-1, MW-2, MW-3, and MW-4 using a dual interface probe. Groundwater elevations are detailed in **Table 2**. A groundwater elevation contour map is presented as **Figure 4**. Based on December 2010 monitoring event data, groundwater flow is southwest and consistent with historic records at this site. The San Juan River is approximately 1 mile from the site and flows west.

Groundwater sampling

Each monitor well was sampled after three well casing volumes had been purged; or until measured groundwater parameters including temperature, pH, conductivity, total dissolved solids (TDS), oxidation-reduction potential (ORP), and dissolved oxygen (DO) had stabilized. Parameters were collected using a YSI 556 multi-parameter sonde and were recorded on Tetra Tech Groundwater Sampling Field Forms (**Appendix A**).

Purged groundwater was disposed of in the Site produced water tank (**Figure 2**). A dedicated 1.5-inch polyethylene bailer was used to purge and collect groundwater samples. The samples were then placed in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Southern Petroleum Laboratory (SPL) located in Houston, Texas. The samples were analyzed for

presence of volatile organic compounds (VOC) including benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B, ion chromatography by EPA Method E300.0, total dissolved solids (TDS) by EPA Method 2540C, and dissolved metals for manganese by EPA Method 6010B.

2.3 Groundwater Sampling Analytical Results

Groundwater collected from Site monitoring wells during the December 2010 monitoring event was below the New Mexico Water Quality Control Commission (NMWQCC) standards for BTEX. Exceedances of NMWQCC standards were detected for the following constituents:

• Fluoride

The NMWQCC groundwater quality standard for fluoride is 1.6 milligrams per liter (mg/L). Groundwater collected from MW-1 contained a fluoride concentration of 2.02mg/L; The resource groundwater collected from MW-3 contained a fluoride concentration of 1.56 mg/L; while groundwater collected from MW-4 contained a fluoride concentration of 2.37 mg/L.

Sulfate

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The NMWQCC groundwater quality standard for sulfate is 600 mg/L. Groundwater collected masses in a service of the second second sulfate at 7,140 mg/L; groundwater collected from MW-2 contained sulfate at 14,500 mg/L; groundwater collected from MW-3 contained sulfate at 6,950 memoryl; and groundwater collected from MW-4 contained sulfate at 4,870 mg/L. The highest encountration of sulfate was found in groundwater collected from MW-2, the up-gradient monitoring well.

Manganese

The NMWQCC groundwater quality standard for dissolved manganese is 0.2 mg/L. Groundwater collected from Monitor Well MW-1 contained dissolved manganese at 1.36 mg/L, groundwater collected from MW-2 contained dissolved manganese at 1.34 mg/L, and groundwater collected from MW-3 contained dissolved manganese at 0.423 mg/L. Groundwater collected from MW-4 was found to contain dissolved manganese below the NMWQCC standard.

Total Dissolved Solids

The NMWQCC groundwater quality standard for total dissolved solids (TDS) is 1,000 mg/L. Groundwater collected from Monitor Well MW-1 contained TDS at 9,980 mg/L; groundwater collected from MW-2 contained a concentration of 20,300 mg/L; groundwater collected from MW-3 contained a concentration of 9,480 mg/L; and groundwater collected from MW-4 contained a concentration of 4,380 mg/L. The highest concentration of TDS was found in groundwater collected from MW-2, the up-gradient monitoring well.

Groundwater laboratory analytical results are summarized in Table 3. A NMWQCC standard exceedances map is presented as Figure 5. The laboratory analytical report for the December 2010 groundwater sampling event is included as Appendix B.

3.0 CONCLUSIONS

To date, groundwater samples collected from Site monitor wells have never exceeded NMWQCC groundwater quality standards for BTEX. Furthermore, BTEX concentrations have consistently been below the minimum laboratory detection limits in Monitor Wells MW-1, MW-2 and MW-4 since monitoring began. Monitoring Wells MW-1, MW-2, MW-3, and MW-4 were found to have concentrations exceeding the NMWQCC standard for fluoride, sulfate and total dissolved solids. Groundwater collected from Monitoring Wells MW-1, MW-2, and MW-3 were also found to exceed the NMWQCC standard for dissolved manganese. The concentrations of sulfate and TDS appear to come from an up-gradient location since MW-2 consistently contains the highest levels of these constituents. Fluoride concentrations appear to be stable.

State Analytical Based on information obtained from the United States Geological Survey (USGS), specifically data from IDAL TOP STATE (Figure 6), historic analytical data shows elevated concentrations of sulfate, dissolved manganese and TDS above NMWQCC standards in the Canyon Largo area. A summary of the USGS historic analytical data has been included and summarized on **Table 4**. It is likely that the elevated concentrations of sulfate, manganese and TDS that have been reported in El Paso No. IA site monitoring wells are associated with regional background levels of these constituents. In addition, the document *San Juan Hydrologic.Unit Regional Water Plan Water Supply Assessment, Volume III,* groundwater in the vicinity of the Juan Water Commission, 2003).

Since BTEX is below standards in all four monitoring wells, and the other constituents of concern that are above NMWQCC standards appear to be coming from up-gradient of the site, are at background levels, or are stable; Tetra Tech recommends the discontinuation of quarterly groundwater monitoring ...and requests no further action status be granted for the Site. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

14

References

San Juan Water Commission, September 2003. San Juan Hydrologic Unit Regional Water Plan, Water Supply Assessment, Volume III.

FIGURES

 I. Site Location Map

 2. Site Layout Map

 3. Generalized Geologic Cross Section

 4. Groundwater Elevation Contour Map (December 2010)

 5. Groundwater Quality Standard Exceedences Concentration Map

 6. USGS Gauging Station Location Map













TABLES

I. Site History Timeline 2. Groundwater Elevation Data Summary 3. Groundwater Laboratory Analytical Results Summary any 2014 Summary 2015 Canyon Largo NR, Blanco, NM - Historic Analytical Data Summary

	DATE	ACTIVITY
	5-Jan-78	Well spudded by El Paso Natural Gas Co.
	1-Nov-86	Meridian Oil, Inc. becomes the operator under El Paso Production Company
	31-Dec-00	Operator name change from Burlington Resources Oil and Gas Company to Burlington Resources Oil and Gas Company LP.
	31-Mar-06	ConocoPhillips Company completed the aquistion of Burlington Resources.
	Feb-07	Hydrocarbon-impacted soils discovered during trench work being conducted for a new flowline. Original source of contamination is unknown.
	Feb-07	Contaminated soil excavated from the Site. Soil samples collected and analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) were below NMOCD regulations.
••••••••••••••••••••••••••••••••••••••	21-Sep-07	Groundwater monitoring well installed to a depth of ten (10) feet below ground surface (bgs) by Envirotech Inc. of Farmington, NM (Envirotech). A soil sample obtained from the well boring was analyzed for benzene, BTEX and total petroleum hydrocarbons (TPH). Results were below NMOCD regulations of 10 parts per million (ppm), 50 ppm, and 100 ppm, respectively.
·····	21-Sep-07	A ground water sample was collected from the temporary monitoring well and analyzed for BTEX; results were below the State of New Mexico drinking water standard for this constituent.
	27-Sep-07	Depth to groundwater measured at seven (7) feet bgs.
	Sep-07	Envirotech report recommends plugging and abandonment of the temporary ground water monitoring well and a
	Δρr-08	Oil Conservation Division of NM Energy, Minerals, and Resources Dent, indicates additional investigation and
		sampling is necessary for closure consideration during a meeting with Glenn yon Gonten.
inter a sur	25-Oct-08	1st quarter samoling of MW-1 by Tetra Tech.
	Jan-09	Attempt to install additional monitoring wells; roads inaccessible by drill rig due to winter weather conditions.
3974291	3 and 4-March-09 ~	Monitoring wells MW-2, MW-3, MW-4 installed and developed by WDC overseen by Tetra Tech. Soil samples were collected from MW-3 and MW-2 boring locations.
	· 2-Apr-09	First quarter of sampling to include all 4 monitoring wells. A baseline suite was collected for MW-1, MW-2, MW-3 and MW-4. BTEX constituents under NMWQCC standards in all site monitor wells.
••••••••••••••••••••••••••••••••••••••	18-Jun-09	2nd quarter of groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Second consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
· · · · · · · · · · · · · · · · · · ·	29-Sep-09	3rd quarter of groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Samples collected for dissolved metals exceeding standards that were previously run by the total metals test method; AI, Mn, Fe. Dissolved manganese was found in concentrations above NMWQCC standard. Third consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
	15-Dec-09	4th quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Analytical results for fluoride are inconclusive. Fourth consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
	28-Apr-10	5th quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Fifth consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
	8-Jun-10	6th quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Sixth consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
	23-Sep-10	7th quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Seventh consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.
	15-Dec-10	8th quarter groundwater sampling conducted by Tetra Tech to include wells MW-1, MW-2, MW-3 and MW-4. Eighth consecutive quarter of BTEX constituents being under NMWQCC standards in all site monitor wells.

Table 1. Site History Timeline - ConocoPhillips Company El Paso No. 1A

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Table 2. Groundwater Elevation Data Summary - ConocoPhillips Company El Paso No. 1A

	Well ID	Total Depth (ft bgs)	Screen Interval (ft)	*Elevation (ft) (TOC)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
					9/21/2007	7.00	92.52
					10/25/2008	10.92	88.60
ļ					1/30/2009	NM	NM
ľ					4/2/2009	10.33	89.19
					6/18/2009	10.65	88.87
	MW-1	13.55	4.75-9.75	99.52	9/29/2009	10.96	88.56
					12/15/2009	10.99	88.53
					4/28/2010	10.53	88.99
					6/8/2010	10.48	89.04
					9/23/2010	10.47	89.05
					12/15/2010	10.36	89.16
ĺ				•	4/2/2009	8.49	
					6/18/2009	8.71	90.01
					9/29/2009	· 8.70	90.02
	MW 2	20.75	2 17 0	09.72	12/15/2009	8.75	89.97
	14144-2	20.75	5-17.5	50.72	4/28/2010	8.38	90.34
					6/8/2010	8.30	90.42
	·- ·				9/23/2010	8.39	90.33
	•••••				12/15/2010	8.34	90.38
					4/2/2009	9.71	88.47
					6/18/2009	9.75	88.43
					9/29/2009	10.10	88.08
	M\\/-3		. 3 1-18 1	08 175	12/15/2009	10.07	88.11
	1010 0	-21.10	0.1-10.1	30.175	4/28/2010	9.66	88.52
					6/8/2010	9.62	88.56
					9/23/2010	9.59	88.59
					12/15/2010	9.48	88.70
					4/2/2009	· 9.74	88.54
					6/18/2009	9.78	88.50
					9/29/2009	10.04	88.24
	MW-4	20.83	29-170	08.28	12/15/2009	10.06	88.22
	14144-44	20.00	2.5-11.8	30.20	4/28/2010	9.70	88.58
	•				6/8/2010	9.61	88.67
					9/23/2010	9.45	88.83
					12/15/2010	9.41	88.87

ft = Feet

TOC = Top of casing

bgs = below ground surface

* Elevation relative to wellhead, set at an arbitrary elevation of 100 feet above mean sea level

NM = Not Measured

lable 3. Groun	dwater Laboratory	/ Analytical Kesi	- Annmary - A		on i in funditu							
Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (μg/L)	Fluoride (mg/L)	Sulfate (mg/L)	Aluminum (mg/L)	lron (mg/L)	Manganese (mg/L)	Total Dissolved Solids	
	9/21/2007	1.4	0.5	<0.2	0.3	SN	SN	NS	NS	SN	NA	
	10/25/2008	<0.5	<0.5	<0.5	<0.5	42	6400	SN	26*	5.49*	Ą	
	1/30/2009	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	NA ⁽¹⁾	(1) NA ⁽¹⁾	NA ⁽¹⁾	
	4/2/2009	<0.5	<0.5	<0.5	<0.5	1.92	7580	2.21*	29.6*	3.14*	10000	
	6/18/2009	<5	<5	€5	<5	2.04	7970	2.1*	7.66*	3.06*	NA	
hw-1	9/29/2009	Ł	4	₽	£	1.56	8030	<0.1	0.0237	1.42	10600	
	12/15/2009	۲,	4	۲	2	<50	10100	AN	NA	1.68	10400	
	4/28/2010	2	٩	₽	2	2.14	8100	AN	NA	2.37	10300	
	6/8/2010	2	4	₽	₽	< 5.0	6690	Ą	NA	2.17	10600	
	9/23/2010	2	4	۶	٩	2.46	7080	AN	NA	1.8	10400	
	12/15/2010	٩	<1	<1	4	2.02	7140	AN	NA	1.36	9980	
	4/2/2009	<0.5	<0.5	<0.5	<0.5	<0.5	15900	0.705*	0.751*	1.16	22500	
	6/18/2009	<5	<5	<5	<5	0.67	17000	1.49*	1.23*	1.92*	AN	
,	9/29/2009	4	4	4	<1	<0.5	29800	<0.1	<0.02	2.03	31800	
C INIM	12/15/2009	£	4	4	2	<100	22100	AN	NA	1.54	25100	
7-4414	4/28/2010	4	<1	4	4	2.18	8350	NA	NA	0.941	12300	
	6/8/2010	4	4	t	٢	< 5.0	12200	NA	NA	1.38	19000	
	9/23/2010	٢	4	<1	4	2.09	12400	AN	AN	1.74	19500	
	12/15/2010	Ŷ	<1	<1	<1	< 0.5	14500	NA	NA	1.34	20300	
	4/2/2009	<0.5	<0.5	52	362	1.68	4090	5.47*	9.31*	0.788*	7530	
	6/18/2009	Ş	<5	15	87	1.68	5750	3.75*	5.3*	0.454*	AN	
	9/29/2009	r	4	2.7	. 20	1.47	6890	0.224	0.14	0.432	8630	
E.WIM	12/15/2009	Ā	۵	e	24	<50	7490	NA	NA	0.583	9230	
	4/28/2010	2	2	15	124	1.53	5680	, NA	NA	0.519	6610	
	6/8/2010	v	₽.	5.4	45.7	< 5.0	4740	NA	NA	0.409	6620	
	9/23/2010	Ŷ	£	1.3	10.5	2.52	4490	NA	NA	0.385	12600	
	12/15/2010	£	4	< 1.0	3.7	1.56	6950	AA	AN	0.423	9480	
	4/2/2009	<0.5	<0.5	<0.5	<0.5	2.42	4750	2.1*	2.12*	0.396*	6660	
	6/18/2009	\$	<5	\$5	.<5	2.25	5300	5.52*	6.91*	0.333*	NA	
	9/29/2009	¥	₽.	Ł	12	2.26	5340	0.943	0.393	0.134	6760	
MW-4	12/15/2009	Ŷ	£	£	£	<50	5660	NA	NA	0.201	6500	_
	4/28/2010	Ţ.	2	2	£	2.38	4820	NA	NA	0.198	8320	
	6/8/2010	.⊽	2	2	2	2.78	3910	NA	NA	0.177	3380	
	9/23/2010	Ł	۰ ۲	₽	2	1.8	6200	, NA	NA	0.157	8600	
	12/15/2010	4	5	4	4	2.37	4870	NA	NA	0.143	4380	
NMWQCC	Standards	10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)	1.6 (mg/L)	600 (mg/L)	5 (mg/L)	1 (mg/L)	0.2 (mg/L)	1000 (mg/L)	

Tetra Tech, Inc.

Explanation NU = Star Di Delectea NU = Not Delectea NU = Not Delectea NU = Not Delectea NU = nicrograms per liter (parts per milicon) upU = milorgrams per liter (parts per milicon) upU = micrograms per liter (parts per milicon) NU = Not Analyzed Nu = Not Analyzed Nu = Eleoi alboratory detection limit of 0.7 ugL e0.7 = Eleoi alboratory detection limit of 0.7 ugL e0.6 = consortations that exceed the MMWOCC fimits = Results reported for total metials analysis, results can not be compared to NMWOCC Standards for dissolved metials

Page 1 of 1

Table 4. USGS Gauging Station 0935656, Canyon Largo NR Blanco, NM - Historic Water Quality Analytical Data Summary

				Dissolved
٤			Dissolved	Solids
	Sulfate	Fluoride	Solids	Sum of
Sample Date and	(Filtered)	(Filtered)	(Filtered)	Constituents
Time (MST)	mg/L	mg/L	mg/L	mg/L
1979-10-31 13:45	5800	1.60	8920	8640
1979-11-08 12:30	6000	1.20	10200	9410
1979-12-03 11:30	4800	1.60	8890	7480
1980-01-04 13:00	3600	1.40	6990	5840
1980-02-05 11:30	4000	1.20	6670	6200
1980-03-03 12:30	390	0.90	729	643
1980-04-04 11:30	4400	1.40	7540	6750
NMWQCC Standards	600 (mg/L)	1.6 (mg/L)	1000 (mg/L)	1000 (mg/L)

Sample Date and Time (MST)	Manganese (Filtered) mg/L
9/14/1958 15:00	0
5/2/1978 14:30	0.02
7/19/1979 12:00	< 0.010
8/15/1979 10:15	< 0.010
1/13/1981 9:35	0.18
3/3/1981 15:45	0.41
7/1/1981 20:00	1.9
7/1/1981 20:15	4.4
7/2/1981 15:00	0
7/15/1981 7:00	2.7
7/26/1981 20:15	3.5
9/9/1981 10:15	< 0.001
NMWOCC Standards	0.2 (ma/l)

Notes:

NMWQCC = New Mexico Water Quality Control Commission mg/L = milligrams per liter (parts per million) Bold = concentrations that exceed the NMWQCC Standards

All data was obtained from the United States Geological Survey, National Water Information System, at http://waterdata.usgs.gov/nwis/qwdata. All available data points were included in the historic summary.

APPENDIX A

GROUNDWATER SAMPLING FIELD FORMS

TH TETRA	TECH, INC.		WATER	SAMPLING F	IELD FOR	M		
Project Name	El Paso 1A				Page	1	of	· 4
i jet No.		.					- 01	· · · · · · · · · · · · · · · · · · ·
Site Location	Blanco, NM							
Site/Well No.	MW-1	Coded/ Replicate	e No. 102	15	Date	12.15	5.0	
Weather	overcast,	Time Sa Began	mpling Kell		Time Samplin Completed	g [620	
			EVACUATIO	ON DATA				
Description of	Measuring Point (MP)	Top of Casing				<i>c</i> 0		
Height of MP	Above/Below Land Su	face		MP Elevation	99.	<u>57</u>		
Total Sounded	Depth of Well Below	MP <u>13.58</u>	3	Water-Level Ele	vation	27.1k	2	
Held	_ Depth to Water Belo	W MP 10.	30	Diameter of Cas	ing <u>2"</u>			
Wet	Water Column in	Well_ <u>3,</u>	22	Prior to Samplin	g <u>pum</u> t	ed/bailed)	
	Gallons pe	r Foot	0.16	Complian Dump	Intelia Cattina	1.7	5	
	Gallons ir	n Well <u>6. 5</u>	55x3-	(feet below land	surface)			
Purging Equip	ment Purge pum	p / Bailer	(1.54)					
			SAMPLING DATA/FIE	LD PARAMETER	s			
	Temperature (°C)	pH	Conductivity (µS/cm)	') TDS (g/L)			ORP (mV)	Volume (gal.)
- IUIA	12 52	-6.0T	5956	<u>2011</u>	2.22	21.5	2.3	0,5
1017	13:05	215	5906	4 976	1.62	16.7	1370	
		0.0				12.0	\bigcup	40
Sampling Equi	pment	Purge Purpp/B	ailer					·
<u>Constit</u>	uents Sampled		Container Description	<u>nc</u>		Prese	rvative	
BTEX		3 40mL	VOA's		HCI			
Total Metals		plastic			none			
Flouride, Sulfa	te	plastic			none			
Demeider	and contra	noll	a in allogati	Halack an	A43	alif	Lizzo a Ar	a pha
Sampling Pers	ionnel Cassie Brow	ND, Christine M	amens & Muia	Prove M		JA NY	Mary	
		· · · · · · · · · · · · · · · · · · ·	W-11 0-c1	Valuma-				
		0 077			0.97	<u> </u>		
	1 ½ ^a =	0.077 0.10	2 = 0.16 $2 \frac{1}{2}^{n} = 0.24$	3" = 3" ½ =	0.50	4" = 0.65 6" = 1.46		
	. ,	······						

R:\Share\Maxim Forms\Field Forms\EP1A Water Sampling Field Forms.xis

TETRA	TECH, INC.		WATER S	AMPLING F	IELD FOR	M			
Project Name	El Paso 1A		-		Page	2	of	4	·•.
i ct No.		· .					-		
Site Location	Bianco, NM		· ·						
Site/Well No.	<u>MW-2</u>	Coded/ Replicate	No.		Date	2.15	10		
Weather	Grencast,	Time San Began	npling		Time Samplin Completed	<u> </u>	632		
	cold, 350		EVACUATIO	N DATA					
Description of	Measuring Point (MP)	Top of Casing					•		
Height of MP	Above/Below Land Surf	ace		MP Elevation		72			
Total Sounded	Depth of Well Below N	IP20.75		Water-Level Ele	evation	0.8	3		
Held	_ Depth to Water Below	V MP 8.3	4	Diameter of Cas	sing <u>2"</u>				
Wet	Water Column in	Well 2.4	11	Gallons Pumpe Prior to Samplir	d/Bailed Ig <u>pump</u>	ed/bailed	2	. ÷	
	Gallons per	Fcot	0.16						
• . •	Gallons in	Well 1,98	x3=	Sampling Pump (feet below land	lntake Setting		arriancang)		
Purging Equip	ment Purge pump	Bailer)	6.95						. urt
Timo		S			S				
1670	IU 98	779:		8 955	1.79	18.4	-125.9	6.25	
1629	15.08	7.77	10534	8.447	1.85	19.1	-129.6	6.5	-
1630	15.10	7.80	10202	8.177	1.72	17.8	-131.0	6.75	
	· · · · · · · · · · · · · · · · · · ·								- ··
								-	
Sampling Equi	pment	Purge Pump/Ka	iller)				····	• . •	
<u>Constitu</u>	uents Sampled		Container Description	1		Prese	rvative		
BTEX		<u>3 40mL V</u>	OA's		HCI				
Total Metals		plastic			none				
Flouride, Sulfa	te	plastic			none				•
Remarks	Hao is Libi	IT MORKY							
Sampling Pers	onnel <u>Cassie Brow</u>	n, Christine-Ma	theme BCrang	Bong					
			Well Casing	Volumes					
:	Gał./ft. 1 ¼" = 0 1 ½" = 0	.077 .10	2" = 0.16 2 ½" = 0.24	3° ≃ 3°¼ =	0.37 0.50	4" = 0.65 6" = 1.46		·	
	L								

TE TETRA	TECH, INC.		WATER	SAMPLING F		M.		
Project Name	El Paso 1A				Page	3	s of	4
i jet No.			·					
Site Location	Blanco, NM							
Site/Well No.	MW-3	Coded/ Replicate	• No.		Date	2.15.1	0	
Weather	overcast	Time Sar Began	npling		Time Samplin Completed	9 <u>M</u>	03	
	Cola 350		EVACUAT	ION DATA	Ø	1(055	
Description of	Measuring Point (MP)	Top of Casing						
Height of MP A	Above/Below Land Surf	ace		MP Elevation	98	.175		
Total Sounded	Depth of Well Below N	/IP	<u> </u>	Water-Level Ele	vation	88.(095	
Heid	_ Depth to Water Below	NMP <u>9</u> '4	8	Diameter of Cas	ing <u>2"</u>			
Wet	Water Column in	Well_114	2	Gallons Pumped Prior to Samplin	g <u>pum</u>	ped/bailed	· •	
	Gallons per	Foot	0.16	.				
	Gallons in	Well 1.96	x3=	Sampling Pump (feet-below land	Intake Setting surface)	<u> </u>		
Purging Equip	ment Purge pump	Bailer	5.60	9				<u></u>
···· · · · ·		<u> </u>	SAMPLING DATA/FI	ELD PARAMETER	S			
Time	Temperature (°C)	рН	Conductivity (µS/cm	³) TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (g
105.	13,84	Q.1.1	5017	4.640	1.56	154	-2000	4,5
K049	13,74	<u>: 8.52</u>	51030	4,662	1.54	153	-216c	5,0
1051	13,80	-8,64	5636	4.661	1,47	19,5	-223,0	5,5
					,	· ·		<u> </u>
Sampling Equi	pment	Purge Pump/B	ailer					
Constitu	uents Sampled		Container Descripti	ion		Prese	arvative	
BTEX	and a sumpling	3.40mi \	/OA's	<u></u>	HCI	<u>.,</u>		
Total Metale		nlaetio			none			
	•							
Fiounde, Sulfa	(e	plastic		,	none	•		
Remarks	the is F	laek. E	strong hurden	ncarbon oo	lor but	NOT	sheen.	
Sampling Pers	connel <u>Cassie Brow</u>	n, Christino Me	athews & Chain	Born			-	
			Well Casin	g Volumes				
	Gal./ft. 1 ¼" = 0).077	2" = 0.16	3" =	0.37	4" = 0.65	5	
	$1 \frac{1}{2} = 0$).10	2 ½" = 0.24	3" ½ =	0.50	6" = 1.46	3	
	L							

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	HECH, INC.		WATER S	AMPLING I		M		
Project Name	El Paso 1A	_			Page	4	of	4
sct No.								<i>.</i>
Site Location	Blanco, NM							
Site/Well No.	MW-4	Coded/ Replicate No.		• .	Date	2.15	10	
Weather	overrast,	Time Sampling Began	° 1640		Time Sampling Completed	9	703	
	cold 350	•	EVACUATIO					1
Description of	Measuring Point (MP)	Top of Casing						
Height of MP	Above/Below Land Sur	face		MP Elevation	98	28		
Total Sounded	Depth of Well Below	MP		Water-Level Ele	evation <u> </u>	6.67	7	×
Held	_ Depth to Water Belo	w MP 9.41		Diameter of Ca	sing <u>2"</u>			
Wet	Water Column in	Well 11.45	·	Gallons Pumpe Prior to Samplir	d/Bailed ng <u>pum</u> p	ed/bailed	}	· · ·
	Gallons per	r Foot	0.16			\bigcirc		
. •	Gallons in	Well 1.83 X	3-	Sampling Pump (feet below land	o Intake Setting - I surface)			<u></u>
Purging Equip	ment Purge pump	Bailer	6.49)					
-1	-	SAMF	PLING DATA/FIEL	D PARAMETER				
Ţime	Temperature (°C)	pH Con	ductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
1677	15.20	8.34	7733 1) VICUS	3.623	1.00	10.9	-191.0	5.75
1079	17.99	87.9	4670	3.617	.00	8.0	-192.0	6.0
1100	19[-]	0. 2 1	•770	7.60%	1.17	• 2.1	100.2	0.2.
	· · · · · ·							
Sampling Equi	pment	Purge Pump/Bailer	\triangleright					
Constit	uents Sampled	Cor	ntainer Descriptior)		Prese	ervative	
BTEX		3 40mL VOA's	6		HCI			
Total Metals		plastic			none			
Flouride, Sulfa		plastic			none			· .
		· · · · · · · · · · · · · · · · · · ·						
Remarks	И;	10 15 6	and Bear	m				
Sampling Pers	connel Cassie Brov	vn, Christine Mathe u	15 Canig Bost	in				
•			Well Casing	Volumes				l
A)	Gai./ft. 1 ¼" = 0	0.077 2"	= 0.16	3" =	0.37	4" = 0.68	5	
	1 ½" =	0.10 2 1/2"	= 0.24	3" 1/2 =	0.50	6" = 1.46	6	
					<u> </u>			I

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APPENDIX B

GROUNDWATER LABORATORY ANALYTICAL REPORT



Conoco Phillips

Certificate of A <u>101</u>	Analysis Number: 20588		
Report To:	Project Name:	COP ElPaso1A	-
Tetra Tech, Inc.	Site:	Blanco, NM	
Kelly Blanchard	Site Address:		
6121 Indian School Road, N.E.	•		
Suite 200 Albuquerque	PO Number:		
NM	State:	New Mexico	
87110-	State Cert. No .:		
ph (505) 237-8440 fax:	Date Reported:	12/27/2010	· ·

This Report Contains A Total Of 17 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

12/27/2010

Date

Test results meet all requirements of NELAC, unless specified in the narrative.



Case Narrative for: Conoco Phillips

nalysis Number: 20588		
Project Name:	COP ElPaso1A	
<u>Site:</u>	Blanco, NM	
Site Address:		
PO Number:		
State:	New Mexico	
State Cert. No .:		
Date Reported:	12/27/2010	
	nalysis Number: 20588 Project Name: Site: Site Address: PO Number: State: State Cert. No.: Date Reported:	nalysis Number: 20588 Project Name: COP ElPaso1A Site: Blanco, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 12/27/2010

I. SAMPLE RECEIPT:

All samples were received intact. The internal ice chest temperatures were measured on receipt and are recorded on the attached Sample Receipt Checklist.

II: ANALYSES AND EXCEPTIONS:

Per the Conoco Phillips TSM Revision 0, a copy of the internal chain of custody is to be included in final data package. However, due to LIMS limitations, this cannot be provided at this time.

III. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report (" mg\kg-dry " or " ug\kg-dry ").

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or by his designee, as verified by the following signature.

In Cardinas

10120588 Page 1 12/27/2010

Erica Cardenas Project Manager

Test results meet all requirements of NELAC, unless specified in the narrative.



Conoco Phillips

Certificate of Analysis Number: 10120588 COP ElPaso1A Report To: Tetra Tech, Inc. Project Name: Kelly Blanchard Site: Blanco, NM 6121 Indian School Road, N.E. Site Address: Suite 200 Albuquerque NM PO Number: 87110-State: **New Mexico** ph (505) 237-8440 fax: (505) 881-3283 State Cert. No.: Fax To: Date Reported: 12/27/2010

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	10120588-01	Water	12/15/2010 0:00	12/17/2010 9:05:00 AM	303429	
MW-2	10120588-02	Water	12/15/2010 0:00	12/17/2010 9:05:00 AM	303429	
MW-3	10120588-03	Water	12/15/2010 0:00	12/17/2010 9:05:00 AM	303429	
MW-4 .	10120588-04	Water	12/15/2010 17:03	12/17/2010 9:05:00 AM	303430	
Duplicate	10120588-05	Water	12/15/2010.16:25	12/17/2010 9:05:00 AM	303430	
Trip Blank	10120588-06	Water	12/15/2010 21:55	12/17/2010 9:05:00 AM	303430	

In Cardenas

Erica Cardenas Project Manager

> Kesavalu M. Bagawandoss Ph.D., J.D. Laboratory Director

> > Ted Yen Quality Assurance Officer

12/27/2010

Date

10120588 Page 2 12/27/2010 11:59:22 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID MW-1		Col	lected: 12	2/15/201	0 0:00	SPL Sar	nple l	D: 1012	0588-01	
			Sit	e: Blan	nco, NM					
Analyses/Method	Result	QUAL	R	ep.Limit	C	il. Facto	r Date Ana	lyzed	Analyst	Seq. #
ION CHROMATOGRA	NPHY				MCL		E300.0	Un	its: mg/L	
Fluoride	2.02			0.5		1	12/18/10	0 0:56	ESK	5677659
Sulfate	7140			500		1000	12/19/10	17:27	ESK	5678093
METALS BY METHO	D 6010B, DISSOLVED)			MCL	S	W6010B	Un	nits: mg/L	
Manganese	1.36			0.005		1	12/22/10	0 0:20	EG	5680494
Prep Method	Prep Date	Prep Initials	Prec	Factor						
SW3005A	12/17/2010 12:45	M_W	1.00							
TOTAL DISSOLVED	SOLIDS				MCL	S	M2540 C	Un	its: mg/L	
Total Dissolved Solids (Residue,Filterable)	9980			100		10	12/17/10	16:00	MM1	5677485
VOLATILE ORGANIC	S BY METHOD 8260	3			MCL	S	W8260B	Un	nits: ug/L	
Benzene	ND			1		1	12/22/10	20:29	LU_L	5683410
Ethylbenzene	ND			1		1	12/22/10	20:29	LU_L	. 5683410
Toluene	ND			1		1	12/22/10	20:29	LU_L	5683410
m,p-Xylene	ND			2		1	12/22/10	20:29	LU_L	5683410
o-Xylene	- ND			1		1	12/22/10	20:29	LU_L	5683410
Xylenes,Total	ND			1		1	12/22/10	20:29	LU_L	5683410
Surr: 1,2-Dichloroetha	ne-d4 88.0		%	70-130		1	12/22/10	20:29	LU_L	5683410
Surr: 4-Bromofluorobe	enzene 102		%	74-125		1	12/22/10	20:29	LU L	5683410

% 82-118

1

12/22/10 20:29 LU L

Qualifiers:

Surr: Toluene-d8

ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

105

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference

> 10120588 Page 3 12/27/2010 11:59:29 AM

5683410



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Clien	t Sample ID MW-	2		Col	lected:	12/15/201	0 0:00	SPL Sam	ple l	D : 1012	0588-02
		•		Sit	te: Bl	anco, NM					
Analy	ses/Method	Result	QUAL	R	ep.Limit	[Dil. Fact	or Date Anal	yzed	Analyst	Seq. #
ION (CHROMATOGRA	PHY				MCL		E300.0	Un	its: mg/L	
Fluo	ride	. ND			0.5		1	12/18/10	1:12	ESK	5677660
Sulf	ate	. 14500			500		1000	12/19/10	17:43	ESK	5678094
MET	ALS BY METHOD	6010B, DISSOLVED		•		MCL		SW6010B	Un	its: mg/L	<u></u>
Man	ganese	1.34			0.005		1	12/22/10	0:26	EG	5680495
	Prep Method	Prep Date	Prep Initials	Prec	Factor			•			
	SW3005A	12/17/2010 12:45	M_W	1.00							
TOTA	L DISSOLVED S	OLIDS				MCL		SM2540 C	Un	its: mg/L	
Tota (Res	l Dissolved Solids sidue,Filterable)	20300			200		20	12/17/10	16:00	MM1 .	5677486
VOLA	TILE ORGANICS	BY METHOD 8260E	3			MCL	•	SW8260B	Un	its: uq/L	
Ben	zene	ND			1		1	12/22/10	20:55	LU_L	5683411
Ethy	lbenzene	. ND			1		1	12/22/10 2	20:55	LU_L	5683411
Tolu	iene	ND			1		1	12/22/10	20:55	LU_L	5683411
m,p	Xylene	ND			2		1	12/22/10 2	20:55	LU_L	5683411
o-Xy	lene	ND			1		1	12/22/10 :	20:55	LU_L	5683411
Xyle	nes,Total	ND			1		1	12/22/10	20:55	LU_L	5683411
S	urr: 1,2-Dichloroethar	ne-d4 87.1		%	70-130		1	12/22/10 2	20:55	LU_L	5683411
S	urr: 4-Bromofluorober	nzene 95.0		%	74-125	*****	1	12/22/10 :	20:55	LU_L	5683411
S	urr: Toluene-d8	. 96.8		%	82-118		1 -	12/22/10 2	20:55	LUL	5683411

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte Detected in The Associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference

> 10120588 Page 4 12/27/2010 11:59:30 AM



HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID MW-	3		Colle	cted: 1	2/15/2010	0:00	SPL San	nple IC): 1012	0588-03
			Site	Blar	nco, NM					
Analyses/Method	Result	QUAL	Rep	.Limit	D	il. Factor	Date Ana	lyzed	Analyst	Seq. #
ION CHROMATOGRAF	PHY				MCL		E300.0	Uni	ts: mg/L	
Fluoride	1.56			0.5	,	1	12/18/10	0 1:28	ESK	5677661
Sulfate	6950			500		1000	12/19/10	17:59	ESK	5678095
METALS BY METHOD	6010B, DISSOLVED)			MCL	SV	V6010B	Uni	ts: mg/L	
Manganese	0.423			0.005		1	12/22/10	0 0:32	EG	5680496
Prep Method	Prep Date	Prep Initials	Prep F	actor						
SW3005A	12/17/2010 12:45	M_W	1.00							
TOTAL DISSOLVED SO	OLIDS				MCL	SN	12540 C	Uni	ts: mg/L	
Total Dissolved Solids (Residue, Filterable)	9480	-		50		5	12/17/10	16:00	MM1	5677487
VOLATILE ORGANICS	BY METHOD 8260E	3			MCL	SV	V8260B	Uni	ts: ug/L	
Benzene	ND			1		1	12/22/10	21:22 l	_U_L	5683412
Ethylbenzene	ND			. 1		1	12/22/10	21: 22 l	_U_L	5683412
Toluene	ND			1		1	12/22/10	21:22 l	_U_L	5683412
m,p-Xylene	3.7			2		1	12/22/10	21:22 1	_U_L	5683412
o-Xylene	ND			· 1		1	12/22/10	21:22 I	_U_L	5683412
Xylenes, Total	3.7			1		1	12/22/10	21:22 I	_U_L	5683412
Surr: 1,2-Dichloroethan	e-d4 84.9		% 7	'0 - 130		1	12/22/10	21:22 l	U_L	5683412
Surr: 4-Bromofluoroben	zene 99.6		% 7	'4-125		1	12/22/10	21:22 l	.U_L	5683412
Surr: Toluene-d8	95.7		% 8	32-118		1	12/22/10	21:22 l	U_L	5683412

Qualifiers:

ND/U - Not Detected at the Reporting Limit

- B Analyte Detected In The Associated Method Blank
- * Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

10120588 Page 5 12/27/2010 11:59:31 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID MW	/-4	·	Col	lected:	12/15/2010	0 17:03	SPL Sar	nple ID:	1012	0588-04
			Sit	te: Bla	anco, NM					
Analyses/Method	Result	QUAL	R	ep.Limit	D	il. Facto	r Date Ana	lyzed A	Analyst	Seq. #
ION CHROMATOGRA	APHY				MCL		E300.0	Units	s: mg/L	
Fluoride	2.37			0.5		1	12/18/10) 1:44 E	SK	5677662
Sulfate	4870			500		1000	12/19/10	18:15 E	SK	5678096
METALS BY METHO	D 6010B, DISSOLVED)			MCL	S	W6010B	Units	s: mg/L	
Manganese	0.143		•	0.005		1	12/22/10) 0:56 E	G	5680500
Prep Method	Prep Date	Prep Initials	Prep	Factor						
SW3005A	12/17/2010 12:45	M_W	1.00			•				
TOTAL DISSOLVED	SOLIDS				MCL	S	M2540 C	Units	s: mg/L	
Total Dissolved Solids (Residue, Filterable)	4380			50		5	· 12/17/10	16:00 M	M1	5677488
VOLATILE ORGANIC	S BY METHOD 8260	3		· · · · · · · · · · · · · · · · · · ·	MCL	S	W8260B	Units	s: ua/L	
Benzene	ND			1		1	12/22/10	21:48 LL	J L	5683413
Ethylbenzene	ND			1		· 1	12/22/10	21:48 LL	 / L	5683413
Toluene	ND			1		1	12/22/10	21:48 LL	 / L	5683413
m,p-Xylene	ND			2		1	12/22/10	21:48 LL	<u> </u>	5683413
o-Xylene	ND			1		1	12/22/10	21:48 LL	 J_L	5683413
Xylenes,Total	ND			1		1	12/22/10	21:48 LU	 J_L	5683413
Surr: 1,2-Dichloroetha	ane-d4 85.6	•	%	70-130		1	12/22/10	21:48 LU	 L	5683413
Surr: 4-Bromofluorob	enzene 99.4		%	74-125	· ···	1	12/22/10	21:48 LU		5683413
Surr: Toluene-d8	104		%	82-118	· · · · · · · · · · · · · · · · · · ·	1	12/22/10	21.48 11	11	5683413

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference

> 10120588 Page 6 12/27/2010 11:59:32 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID Duplicate

Collected: 12/15/2010 16:25

SPL Sample ID: 10120588-05

			Sit	e: Blar	nco, NM					
Analyses/Method	Result	QUAL	R	ep.Limit	Dil. Fac	tor	Date Anal	yzed	Analyst	Seq. #
VOLATILE ORGANICS BY MET	HOD 8260B				MCL	SW	8260B	Ur	nits: ug/L	
Benzene	ND			. 1	· 1		12/22/10	16:30	LU_L	5683406
Ethylbenzene	ND			1	1		12/22/10	16:30	LU_L	5683406
Toluene	ND			. 1	1		12/22/10	16:30	LU_L	5683406
m,p-Xylene	ND			2	1		12/22/10	16:30	LU_L	5683406
o-Xylene	ND			1	1		12/22/10	16:30	LU_L	5683406
Xylenes,Total	ND	1 H		1	1		12/22/10	16:30	LU_L	5683406
Surr: 1,2-Dichloroethane-d4	88.4		%	70-130	1		12/22/10	16:30	LU_L	5683406
Surr: 4-Bromofluorobenzene	98.3		%	74-125	1		12/22/10	16:30	LU_L	5683406
Surr: Toluene-d8	106		%	82-118	1		12/22/10	16:30	LU_L	5683406

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference

> 10120588 Page 7 12/27/2010 11:59:32 AM



Client Sample ID Trip Blank

Collected: 12/15/2010 21:55

SPL Sample ID: 10120588-06

•			Site:	Blan	co, NM	·				
Analyses/Method	Result	QUAL	Rep.Lin	nit	Dil.	Factor	Date Anal	yzed	Analyst	Seq. #
VOLATILE ORGANICS BY MET	HOD 8260B				MCL	SV	V8260B	Unit	ts: ug/L	
Benzene	ND	·.		1		1	12/22/10	17:49 L	U_L	5683409
Ethylbenzene	ND			1		1	12/22/10	17:49 L	U_L	5683409
Toluene	ND	·· · · · ·		1		1	12/22/10	17:49 L	U_L	5683409
m,p-Xylene	ND			2		1	12/22/10	17:49 L	U_L	5683409
o-Xylene	ND			1		1	12/22/10	17:49 L	U_L	5683409
Xylenes,Total	ND			1		<u>1</u>	12/22/10	17:49 L	U_L	5683409
Surr: 1,2-Dichloroethane-d4	85.3		% 70-13	30		1	12/22/10	17:49 L	U_L	5683409
Surr: 4-Bromofluorobenzene	99.2		% 74-12	25		1	12/22/10	17:49 L	U_L	5683409
Surr: Toluene-d8	104	•	% 82-1	18		1	12/22/10	17:49 L	U_L ·	5683409

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)
 D - Surrogate Recovery Unreportable due to Dilution
 MI - Matrix Interference

10120588 Page 8 12/27/2010 11:59:32 AM

Quality Control Documentation

10120588 Page 9 12/27/2010 11:59:32 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips COP ElPaso1A

Method:	Metals by SW6010E	y Method 6 3	010B, Dissol [,]	ved					WorkOrder	: 10 ID: 10	120588 3991		
		Met	hod Blank				Samples	in Analytica	I Batch:				
RunID: ICI	P2_101221C-56804	78	Units:	mg/L			Lab Sam	ple ID	Clier	nt Sample II	<u>D</u> .		
Analysis Date	e: 12/21/201	0 22:43	Analyst:	EG			10120588	-01B	MW-	·1	-		
Preparation [Date: 12/17/201	0 12:45	Prep By:	М_	Method SV	V3005A	10120588	-02B	MW-	2		•	
							10120588	-03B	MW-	3			
	<u>г</u>	Analyte	T	Pocult	Ren Limit	1	10120588	-04B	MW-	4	· . ·		
	Manganese			Nesult		Ī							
	manganooe	· · ·			0.000	1							
			4										
			•	Ē	aboratory	Control Sam	ole (LCS)						
		RunID	:	ICP2_10	1221C-56804	479 Units:	mg/L						
		Analys	is Date:	12/21/2	010 22:49	Analys	t: EG						
		Prepar	ation Date:	12/17/2	010 12:45	Prep B	y: M_	Method SW	3005A				
·	•												•
			Analyt	ė		Spike Re	sult P	ercent Lo	wer Uppe	r			
			-			Added	Re	ecovery L	imit Limi	t			
		Mangane	se			0.1000 0.0	9500	95.00	80 1	120			
									·				
													_
	······.		Matrix	Spike (MS) / Matri	x Spike Dupl	icate (MS	<u>D)</u>					
		Samı	Matrix	Spike (<u>MS) / Matri</u> 0587-03	x Spike Dupl	icate (MS	<u>D)</u>					
		Samj Runi	Matrix ple Spiked: D:	Spike (10120 ICP2_	<u>MS) / Matri</u>)587-03 101221C-568	x Spike Dupl	icate (MS	<u>D)</u>					
<u></u>		Sam Runl Analy	<u>Matrix</u> ple Spiked: D: /sis Date:	Spike (10120 ICP2_1 12/21	<u>MS) / Matri</u> 0587-03 101221C-568 /2010 23:01	x Spike Dupl 0481 Units Analy	i cate (MS : mg/ /st: EG	D) L					
		Sam Runi Analy Prepa	Matrix ple Spiked: D: vsis Date: aration Date:	Spike (10120 ICP2_ 12/21, 12/17,	MS) / Matri 0587-03 101221C-568 /2010 23:01 /2010 12:45	<u>x Spike Dupl</u> 0481 Units Analy Prep	i <u>cate (MS</u> : mg/ /st: EG By: M_	<u>D)</u> L Method S ¹	W3005A				
	· · ·	Samı Runl Analy Prepa	Matrix ole Spiked: D: /sis Date: aration Date:	Spike (10120 ICP2_ 12/21/ 12/17/	<u>MS) / Matri</u> 0587-03 101221C-568 /2010 23:01 /2010 12:45	x Spike Dupl 0481 Units Analy Prep	i <u>cate (MS</u> : mg/ /st: EG By: M_	<u>D)</u> L Method S ¹	W3005A				
	Analyte	Sam Runi Analy Prep	Matrix ole Spiked: D: /sis Date: aration Date: Sample	Spike (10120 ICP2_ 12/21, 12/17, MS	MS) / Matri 0587-03 101221C-568 /2010 23:01 /2010 12:45 MS	x Spike Dupl 0481 Units Analy Prep	icate (MS : mg/ /st: EG By: M_ MSD	D) L Method S ¹ MSD	W 3005A MSD %	RPD		Low	High
	Analyte	Samı Runi Analı Prepi	<u>Matrix</u> ple Spiked: D: /sis Date: aration Date: Sample Result	Spike (10120 ICP2_ 12/21/ 12/17/ MS Spike	MS) / Matri 0587-03 101221C-568 /2010 23:01 /2010 12:45 MS Result	x Spike Dupl 0481 Units Analy Prep MS % Recovery	icate (MS : mg/ /st: EG By: M_ MSD Spike	D) L Method S ¹ MSD Result	W 3005A MSD % Recovery	RPD	RPD	Low Limit	High Limi
	Analyte	Samı Runi Analı Prep:	<u>Matrix</u> ple Spiked: D: /sis Date: aration Date: Sample Result	Spike (10120 ICP2_ 12/21, 12/17, MS Spike Added	MS) / Matri 0587-03 101221C-568 /2010 23:01 /2010 12:45 MS Result	x Spike Dupl 0481 Units Analy Prep MS % Recovery	icate (MS : mg/ /st: EG By: M_ MSD Spike Added	D) L Method S ¹ MSD Result	W3005A MSD % Recovery	RPD	RPD Limit	Low Limit	High Limi

Qualifiers:

ers: ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

J - Estimated Value Between MDL And PQL

MI - Matrix Interference

D - Recovery Unreportable due to Dilution * - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10120588 Page 10 12/27/2010 11:59:34 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips COP ElPaso1A

Analysis: Method:	Volatile Organics by SW8260B	/ Method 820	50B		· · ·	WorkOrder: Lab Batch ID:	10120588 R313328
	Met	hod Blank			Samples in Analy	tical Batch:	
RunID: MS	DVOA3_101222D-5683405	Units:	ug/L		Lab Sample ID	<u>Client San</u>	nple ID
Analysis Date	e: 12/22/2010 12:30	Analyst:	LU_L		10120588-01A	MW-1	
					10120588-02A	MW-2	
					10120588-03A	MW-3	
	· · · · · · · · · · · · · · · · · · ·				10120588-04A	MW-4	
	Analyte		Result	Rep Limit	10120588-054	Dunlicate	
	Benzene		ND	1.0	10120500-05A	Duplicate	
	Ethylbenzene		ND	1.0	10120588-06A	Trip Blank	
•	Toluene		ND	1.0			
	m,p-Xylene		ND	2.0			
	o-Xylene		ND	1.0			
	Xylenes,Total		ND	1.0			
	Surr: 1,2-Dichloroethane-d4		82.1	70-130			
	Surr: 4-Bromofluorobenzene		90.5	74-125			
	Surr: Toluene-d8		. 99.8	82-118			

		Laboratory Contr	ol Sample	(LCS)
	RunID:	MSDVOA3_101222D-5683	Units:	ug/L
,	Analysis Date:	12/22/2010 11:36	Analyst:	LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	19.7	98.5	74	123
Ethylbenzene	20.0	19.7	98.4	72	127
Toluene	20.0	19.0	95.1	74	· 126
m,p-Xylene	40.0	40.2	101	71	129
o-Xylene	20.0	19.9	99.6	74	130
Xylenes,Total	60.0	60.1	100	71	130
Surr: 1,2-Dichloroethane-d4	50.0	40.2	80.5	70	130
Surr: 4-Bromofluorobenzene	50.0	52.7	105	74	125
Surr: Toluene-d8	50.0	51.4	103	82	118

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: RunID: Analysis Date:

I: 10120588-05 MSDVOA3_101222D-5683 Units: 12/22/2010 16:56 Analys

Units: ug/L Analyst: LU_L

Qualifiers:

ND/U - Not Detected at the Reporting Limit B - Analyte Detected In The Associated Method Blank

- J Estimated Value Between MDL And PQL
- MI Matrix Interference D - Recovery Unreportable due to Dilution
- * Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10120588 Page 11 12/27/2010 11:59:34 AM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips COP ElPaso1A

Analysis: Method:	nalysis: Volatile Organics by Method 8260B ethod: SW8260B Analyte Sample M									10120588 R313328		
	Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene		ND	20	19.7	98.3	20	· 19.4	96.8	1.49	22	70	124
Ethylbenzene	· · · · · · · · · · · · · · · · · · ·	ND	20	18.5	92.4	· 20	18.9	94.6	2.36	20	76	122
Toluene		ND	20	18.0	90.0	20	18.4	92.1	2.27	24	80	117
m,p-Xylene		ND	40	38.3	95.7	40	38.7	96.8	1.23	20	69	127
o-Xylene		ND	20	19.1	95.7	20	18.8	94.1	1.69	20	84	114
Xylenes,Total		ND	60	57.4	95.7	60	57.5	95.9	0.265	20	69	127
Surr: 1,2-Dich	loroethane-d4	ND	50	44.4	88.9	50	40.3	80.5	9.87	30	70	130
Surr: 4-Bromo	ofluorobenzene	ND	50	51.1	102	50	52.4	105	2.48	30	74	125
Surr: Toluene	-d8	ND	50	47.7	95.4	50	48.1	96.2	0.791	30	82	118

Qualifiers: ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

- J Estimated Value Between MDL And PQL
- E Estimated Value exceeds calibration curve

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10120588 Page 12 12/27/2010 11:59:34 AM



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Quality Control Report

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips COP ElPaso1A

netnoa:	SM2540 C						l) :	R313000	A
	Me	ethod Blani	<u>«</u>			Samples in	Analytical E	Batch:			·
tuniD: WE	T_101217O-5677470	Units	: mg/l	L		Lab Sampl	e ID	Client	t Sampl	e ID	
nalvsis Date	12/17/2010 16:00	Analy	st MM	1		10120588-0	10	MW-1	(outpr	<u> </u>	
analyete Date.						10120588-0	2C	MW-2	2		
						10120588-0	3C	MW-3	}		
-			r			10120588-0	4C	MW-4	ļ		
Ļ	Analyte		Resu	It Rep Limit							
Ľ	Total Dissolved Solids (Resid	ue,Filterable		ND 10							
									·		
	Labora	atory Contr	ol Sample	e/Laboratory	Control San	nple Duplica	te (LCS/LCS	<u>SD)</u>			
	RunID:	w	ET_101217	70-5677472	Units: n	na/L					
	Analysis D	ate: 12	2/17/2010	16:00	Analyst: N	1M1					
					•						
	Analyte	LCS	LCS	LCS	LCSD	LCSD	LCSD	RPD	RPD	Lower	Upper
		Spike	Result	Percent	Spike	Result	Percent		Limit	Limit	Limit
tel Discolution			100.0				101.0		10		107
	a Solias (Residue, Filterabi	200.0	196.0	99.00	200.0	202.0	101.0	2.0	1 10	95	107
	R	unID: .nalysis Date	pie: 10 Wi e: 12	0120589-01 ET_101217O-56 2/17/2010 16:0	677489 Un 0 An	its: mg/ alyst: MM	L 1				
	R	uniD: nalysis Date	pie: 10 Wi e: 12 Analyte	120589-01 ET_101217O-56 2/17/2010 16:0 e	677489 Un 0 An Sample	its: mg/ alyst: MM	L 1 RPD	RPD			
		otal Dissolv	pie: 10 Wi e: 12 Analyte	120589-01 ET_1012170-56 2/17/2010 16:0 e e	677489 Un 0 An Sample Result	its: mg/ alyst: MM P DUP Result	L 1 RPD 0.647	RPD Limit			
	R A T	otal Dissolv	ple: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM P DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	inginal Sam RunID: nalysis Date	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM P DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	ituniD: nalysis Date	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM DUP Result '0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-50 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T T	otal Dissolv	pie: 10 Wi e: 12 Analyte	120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM P DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	pie: 10 Wi e: 12 Analyti ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	ple: 10 Wi e: 12 Analyte	120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM P DUP Result 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T	otal Dissolv	ple: 10 Wi e: 12 Analyte	120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM DUP Result 0 775	L 1 0.647	RPD Limit 10			
	R A T T	otal Dissolv	pie: 10 Wi e: 12 Analyte	120589-01 ET_1012170-50 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM Besult 0 775	L 1 RPD 0.647	RPD Limit 10			
	R A T T	otal Dissolv	pie: 10 Wi e: 12 Analyti ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77	its: mg/ alyst: MM Result 0 775	L 1 RPD 0.647	RPD Limit 10			
Qualifiers:	R A T T	inginal Sam RunID: nalysis Date	pie: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI -	its: mg/ alyst: MM Result 0 775	L RPD 0.647	RPD Limit 10			
Qualifiers:	R A T ND/U - Not Detected at tt B - Analyte Detected In T	he Reporting	ple: 10 Wi e: 12 Analyte ed Solids (120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI - D - F	its: mg/ alyst: MM Result 0 775 Matrix Interfe	L 1 RPD 0.647	RPD Limit 10			
Qualifiers:	R A T T ND/U - Not Detected at tt B - Analyte Detected In T J - Estimated Value Betw	tuniD: nalysis Date	ple: 10 Wi e: 12 Analyte ed Solids (ed Solids (d Solids (120589-01 ET_1012170-56 2/17/2010 16:0 (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI - D - F * - R	its: mg/ alyst: MM DUP Result 0 775 0 775 Matrix Interfe Recovery Un ecovery Out	L 1 0.647 0.647 erence reportable due	RPD Limit 10			
Qualifiers:	ND/U - Not Detected at tt B - Analyte Detected In T J - Estimated Value Betw E - Estimated Value exce	tuniD: nalysis Date	pie: 10 Wi e: 12 Analyte ed Solids (ded Sol	120589-01 ET_1012170-56 2/17/2010 16:0 (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI - D - F * - R	its: mg/ alyst: MM 0 775 0 775 0 775 Result 0 775	L 1 0.647 0.647 erence reportable due	RPD Limit 10			
Qualifiers:	ND/U - Not Detected at tt B - Analyte Detected In T J - Estimated Value Betw E - Estimated Value exce N/C - Not Calculated - Sa	he Reporting he Associal reen MDL A heds calibrat	g Limit ed Solids (g Limit ted Methoo nd PQL ion curve	120589-01 ET_1012170-56 2/17/2010 16:0 (Residue,Filter (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI - D - F * - R	its: mg/ alyst: MM 0 775 0 775 0 775 0 775 Result 0 775 0 775	L 1 RPD 0.647 0.647 erence reportable due side Advisable e added. Cor	RPD Limit 10 10 e to Dilution e QC Limits	not app	y	
Qualifiers:	ND/U - Not Detected at tt B - Analyte Detected In T J - Estimated Value Betw E - Estimated Value exce N/C - Not Calculated - Sa TNTC - Too numerous to	he Reporting he Associativeen MDL A eeds calibrat ample conce	g Limit red Solids (d Solids (d Solids (d PQL ion curve entration is	120589-01 ET_1012170-56 2/17/2010 16:0 e (Residue,Filter	677489 Un 0 An Sample Result abl 77 MI - D - F * - R	its: mg/ alyst: MM Result 0 775 0 775 0 775 0 775 nount of spik	L 1 RPD 0.647 0.647 erence reportable due side Advisable e added. Cor	RPD Limit 10 e to Dilution e QC Limits	not app	у. 1	0120588 Page



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips COP ElPaso1A

Analysis: Method:	Ion Chromatogr E300.0	aphy		•				Worl Lab	kOrder: Batch II	10 [.] D: R3	120588 13006E)	
	<u> </u>	Method Blank			•	Samples	in Analyti	cal Batc	h:				
RunID: IC1_10	1217C-5677650	Units:	mg/L			l ab Sam	nie ID	•	Client	t Samole II	n		
Analysis Date:	12/17/2010 22·31	Analyst	FSK		-	10120588	3-01C		MW-1	t gample i	2		
analysis succ.	1211/2010 22:01	/ incliger.	LOIX			10120588	3-02C		MW-2				
						10120588	3-03C		MW-3	3			·
·						10120588	3-04C		MW-4	Ļ			
Ehr	Analyte		Result	Rep Limit									
(<u>Fluc</u>	onde	1	<u>ND</u>	50									
			La	boratory Co	ontrol Samp	le (LCS)							
	Pi	nID:	IC1 1012	17C-5677651	(Inite:	ma/l							
	An	alveis Date:	12/17/20	10 22.47	Analvet	· EGK							
		alysis Date.	12/17/20	10 22.47	Analysi	. LON							
	[Apoly	2	c		ault D	oroont	Lower	Unnor	_			
		Analy	te	S	Spike Re:	sult P	ercent	Lower Limit	Upper Limit				
	Fluor	Analy	te	S A	Spike Res dded	sult P Re	ercent ecovery 98.25	Lower Limit 90	Upper Limit	10			
	Fluor	Analy	te	S A	Spike Res dded 10.00 9	sult P Re 9.825	ercent ecovery 98.25	Lower Limit 90	Upper Limit 11	10			
	Fluor	Analy de	te	S A	Spike Res Added	sult P Re 9.825	ercent ecovery 98.25	Lower Limit 90	Upper Limit	10			
	Fluor	Analy de <u>Matrix</u>	e Spike (M	S) / Matrix	Spike Res Added 10.00 9 Spike Dupli	sult P Re 9.825 cate (MS	ercent ecovery 98.25 D)	Lower Limit 90	Upper Limit 11	10	· ·		
	Fluor	Analy de <u>Matrix</u>	te Spike (M	S) / Matrix	Spike Re: dded 10.00 9 Spike Dupli	sult P Re 9.825 cate (MS	ercent ecovery 98.25 D	Lower Limit 90	Upper Limit 11	10			
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Qualifiers:

ers: ND/U - Not Detected at the Reporting Limit

B - Analyte Detected In The Associated Method Blank

J - Estimated Value Between MDL And PQL

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MI - Matrix Interference

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

10120588 Page 14 12/27/2010 11:59:35 AM



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 10120588 Page 15

 QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values
 12/27/2010 11:59:35 AM

Sample Receipt Checklist And Chain of Custody

> 10120588 Page 16 12/27/2010 11:59:35 AM



Sample Receipt Checklist

Workorder: Date and Time Received: Temperature:	10120588 12/17/2010 9:05:00 AM 3.5/3.5/3.5/3.0/4.0/4.0		Received By: Carrier name: Chilled by:	NB Fedex-Standard Overnight Water Ice
1. Shipping container/co	ooler in good condition?	Yes 🗹	No 🗌	Not Present
2. Custody seals intact	on shippping container/cooler?	Yes 🗹	Νο	Not Present
3. Custody seals intact	on sample bottles?	Yes 🗍	No 🗌	Not Present
4. Chain of custody pres	sent?	Yes 🗹	No	
5. Chain of custody sigr	ned when relinquished and received?	Yes 🗹	No 🗌	
6. Chain of custody agree	ees with sample labels?	Yes 🗹	No 🗌	
7. Samples in proper co	ntainer/bottle?	Yes 🗹	No	
8. Sample containers in	lact?	Yes 🗹	No	
9. Sufficient sample vol	ume for indicated test?	Yes 🗹	No 🗌	
0. All samples received	within holding time?	Yes 🗹	No 🗌	
11. Container/Temp Blan	k temperature in compliance?	Yes 🗹	No 🗌	
12. Water - VOA vials hav	re zero headspace?	Ýes 🔽	. No 🗆 Va	DA Vials Not Present
3. Water • Preservation	checked upon receipt (except VOA*)?	Yes	No 🗌	Not Applicable
*VOA Preservation Cl	necked After Sample Analysis			·
SPL Representati Client Name Contact	ve:	Contact Date	& Time:	
Non Conformance Issues:		·····		
Client Instructions:		······································		
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APPENDIX C

SAN JUAN WATER COMMISSION, SAN JUAN HYDROLOGIC UNIT REGIONAL WATER PLAN, WATER SUPPLY ASSESSMENT, VOLUME III. FIGURE 1-6 (SEPTEMBER 2003)

Water Supply Assessment

September 2003



Figure 1-6 Water Quality Standards Exceedance Locations

The exceedances for pH, temperature, fecal coliform, and turbidity are included in Appendix B. Phosphorus standards were not exceeded.

1.3.3. Total Dissolved Solids

Total Dissolved Solids (TDS) is a frequently used parameter for evaluating water quality. Municipal uses are typically limited to waters with less than 1,000 mg/l TDS. Agricultural uses are frequently limited to 800 to 1,200 mg/l depending on the ability of the soils to drain and move salts away from root zones. Crop types determine the root zone depths.

The water quality issues section of the 1994 40-Year Regional Water Plan, Planning and Development District 1 identifies salinity as a "long-term water quality issue." Much of this long-term issue is related to the salt loading (1.2 million tons per year) at Bluff, Utah.

San Juan Basin Regional Water Plan Volume III

Water Supply Assessment

However, there is a difference between loading and concentration. Loading has significance to downstream uses but concentration has significance to the uses within the San Juan Hydrologic Unit. Although there are instances of extremely high concentrations associated with return flows from NIIP lands in the Gallegos and Ojo Amarillo Washes (3,000 mg/l) and the Hogback area (15,000 mg/l), the principal surface water supplies – San Juan, Animas, and La Plata Rivers, have exhibited few instances of moderate to high salinity concentrations. Implementation plans to mitigate pollutants from these return flow areas should be included in the TMDL study to be completed in 2004.

A review of the water quality data identified the stations that experience TDS readings greater than 1,200 mg. Figure 1.6 shows the location of those stations.

The frequency of the TDS exceedance represents 7.5% of the TDS measurements (249 of 3,334 records).

1.3.4. Polynuclear Aromatic Hydrocarbon (PAH)

Because of the significant oil and gas industry in the San Juan Hydrologic Unit, there have been questions about the impact of PAH from these industries on the water quality of the region. The Bureau of Land Management (BLM) issued a draft Resource Management Plan and Environmental Impact Statement on oil and gas leasing. This document resulted in an on-going PAH study being conducted by the BLM Farmington Field Office. The fiscal year 2002 project proposal for this study states:

"The sediment and water sampling program has been relatively ineffective. The Reasons for this may be attributed to the short life of PAHs, which are quickly partitioned either to sediment or biota, sediment cycling and removal, the complete absence of PAHs from the San Juan or Animas Rivers, or a combination of all these factors."

It was concluded by the study participants that monitoring of the rivers will be discontinued and their efforts focused on storm water collection and air monitoring. Therefore, it can be concluded for this regional plan that the principal water supplies for the San Juan Hydrologic Unit are not impaired by PAH.

1.3.5. Surface Water Quality Summary

The following conclusions were developed from the data evaluated for this study:

- The surface water quality throughout the San Juan Hydrologic Unit supports all uses except for fisheries according to 303(d) List for assessed streams.
- The State of New Mexico Standards for Surface Waters are exceeded primarily in the San Juan River below the confluence with the Animas River.
- TDS exceeds 1,200 mg/l at several locations but their frequency of exceedance is only 7.5 percent of the samples.
- Generally, the water quality of surface water supplies do not impair the uses in the basin and do not reduce the available water supply.

19