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**MARCH 2011
QUARTERLY
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JUNE 2011

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**MARCH 2011 QUARTERLY GROUNDWATER
MONITORING REPORT**

CONOCOPHILLIPS COMPANY

**SAN JUAN 27-5 No. 34A
NATURAL GAS PRODUCTION SITE
RIO ARriba COUNTY, NEW MEXICO**

OCD# TBD

API # 30-039-23739

Prepared for:



Risk Management and Remediation
420 South Keeler Avenue
Bartlesville, OK 74004

Prepared by:



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Tetra Tech Project No. 114-690182

June 2011

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MARCH 2011 QUARTERLY GROUNDWATER MONITORING REPORT SAN JUAN 27-5 NO. 34A, RIO ARRIBA COUNTY, NEW MEXICO

1.0 INTRODUCTION

This report details the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on March 15, 2011 at the ConocoPhillips Company, San Juan 27-5 No. 34A natural gas well site in Unit Letter E, Section 30, Township 27N, Range 05W, of Rio Arriba County, New Mexico (Site). This sampling event represents the eighth quarter of groundwater monitoring conducted by Tetra Tech at the Site.

The location and general features of the Site are presented as **Figures 1** and **2**, respectively. A generalized geologic cross section is presented as **Figure 3**.

1.1 Site Background

Hydrocarbon impacts were discovered beneath an aboveground storage tank (AST) during tank removal at the Site on January 30, 2009. Envirotech Inc. of Farmington, NM (Envirotech) was contacted for spill assessment services following the discovery. Envirotech collected a 5-point composite soil sample from beneath the AST; 4 grab soil samples from test holes advanced around the AST; and an additional 5-point composite soil sample collected from "a small area...excavated to approximately 17 [feet] bgs..." (Envirotech, 2009). All soil samples collected were field analyzed for total petroleum hydrocarbons (TPH) using Environmental Protection Agency (EPA) method 418.1, and for organic vapors using a photoionization detector (PID). The 5-point composite soil samples were also sent for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021, and for TPH analysis by EPA Method 8015. Soil sample results from both 5-point composite samples and from one of the test holes were above recommended action levels; all other samples were below.

On March 3, 2009, Envirotech returned to the Site to continue sampling activities. A 49' x 49' x 20' deep area had been excavated prior to Envirotech's arrival on site. Groundwater was encountered at 20 ft below ground surface (bgs); Envirotech sampled the groundwater for analysis of volatile organic compounds (VOC) using EPA method 8260B (Envirotech, 2009). Laboratory results for benzene were found at a concentration above the NMWQCC standard at 96 micrograms per liter (ug/L) in the groundwater sample. Composite soil samples were collected from the bottom of the excavation and from each of the 4 walls; then field analyzed for organic vapors and TPH. All results were below recommended action levels for organic vapors. TPH concentrations were below recommended action levels in all samples excluding one taken from the south wall of the excavation. Subsequently the excavation was continued along the south wall 4 feet further; field TPH analysis on an additional sample was below recommended action levels and excavation activities stopped. Final excavation dimensions were reported at 53 feet by 49 feet by 20 feet deep. Personal communication on July 13, 2009 between

Tetra Tech and Wade Hack, ConocoPhillips field manager, revealed that the area of the excavation was within the current berm location of the produced water and condensate tanks at the Site (**Figure 2**). A total of 1,900 cubic yards of impacted soil were removed from the Site and transported to an OCD permitted facility located in Farmington, New Mexico. Envirotech recommended the installation of groundwater monitoring wells to determine “groundwater gradient and the extent of groundwater contamination” (Envirotech, 2009).

Between July 15, 2009 and July 16, 2009, EnviroDrill of Albuquerque, New Mexico installed 4 groundwater monitor wells at the Site under the supervision of Tetra Tech: MW-1, MW-2, MW-3, and MW-4. All wells were drilled using a CME-75 drill rig, hollow stem augers, and split-spoon sampling techniques; 15 feet of 0.010” polyvinylchloride (PVC) slotted screen was placed in each well.

Tetra Tech began quarterly groundwater quality monitoring of the Site on July 28, 2009. The most recent groundwater quality monitoring event took place on March 15, 2011. This event marks the eighth consecutive round of quarterly monitoring conducted by Tetra Tech at the Site. Site history is outlined in **Table 1**.

2.0 GROUNDWATER MONITORING SUMMARY, SAMPLING METHODOLOGY AND ANALYTICAL RESULTS

2.1 Groundwater Monitoring Summary

On March 15, 2011, groundwater elevation measurements were recorded in Monitor Wells MW-1, MW-2, MW-3 and MW-4. **Table 2** presents the monitor well specifications and groundwater level data. A groundwater elevation contour map is presented as **Figure 4**, and illustrates that groundwater at the Site flows north-northeast. Groundwater flow direction changed slightly from previous monitoring events, likely due to the construction of a stock pond northeast of the site during early 2010.

2.2 Groundwater Sampling Methodology

Groundwater quality samples were collected from Monitor Wells MW-1, MW-2, MW-3 and MW-4 during the March 15, 2011 groundwater sampling event. Approximately three well volumes were purged from each monitor well prior to sampling. A 1.5-inch polyethylene, dedicated bailer was used in each well to purge and collect groundwater samples. The purged water was disposed of in the on-site produced water tank (**Figure 2**). Samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain of custody documentation to Accutest Laboratories located in Houston, Texas. Groundwater samples were analyzed for the presence of BTEX by Environmental Protection Agency (EPA) Method 8260B and dissolved manganese by EPA Method 6010B. Field sampling forms are included as **Appendix A**.

2.3 Groundwater Sampling Analytical Results

The New Mexico Water Quality Control Commission (NMWQCC) mandates that groundwater quality in New Mexico be protected, and has issued groundwater quality standards in Title 20, Chapter 6, Part 2, Section 3103 of the New Mexico Administrative Code (20.6.2.3103 NMAC). The following constituent was reported in concentrations that exceed the NMWQCC standard.

- **Manganese**

The groundwater quality standard for manganese is 0.2 milligrams per liter (mg/L). Groundwater collected from monitor wells MW-1, MW-2 and MW-3 were found to contain manganese at concentrations of 0.732 mg/L; 2.01 mg/L; and 2.01 mg/L, respectively.

No other analyzed constituents were found above NMWQCC groundwater quality standards in Site monitor wells. A historical summary of groundwater analytical results is provided in **Table 3**.

The corresponding laboratory analytical report for the March 2011 groundwater sampling event is included as **Appendix B**.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on eight consecutive quarters of groundwater monitoring, groundwater samples collected from Monitor Wells MW-1, MW-2, MW-3, and MW-4 have never exceeded NMWQCC groundwater quality standards for BTEX constituents. Groundwater samples collected from MW-1, MW-2, and MW-3 consistently exceed NMWQCC groundwater quality standards for dissolved manganese.

Tetra Tech recommends discontinuation of BTEX analysis. The March 2011 monitoring event will mark the final quarter of analysis for BTEX constituents. Tetra Tech will, however, continue annual groundwater monitoring of dissolved manganese until concentrations of these constituents are below NMWQCC standards, appear stable or reach regional background levels. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

4.0 REFERENCES

Envirotech Incorporated (2009). Burlington Resources Spill Closure Report Located at San Juan 27-5 #34A, Section 30, Township 27N, Range 5W, Rio Arriba County, New Mexico. Prepared for ConocoPhillips Company. Report Dated March 20, 2009. 3 pp (not including Figures, Tables, and Appendices).

FIGURES

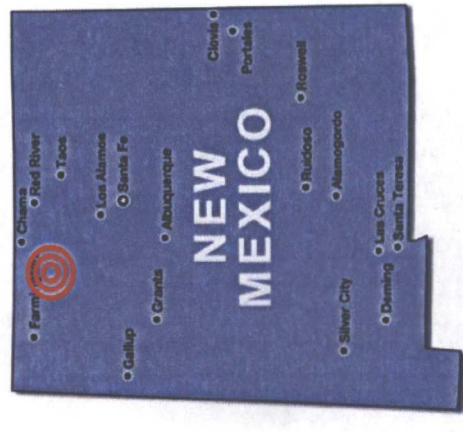
1. Site Location Map
2. Site Detail Map
3. Generalized Geologic Cross Section
4. Groundwater Elevation Contour Map – March 2011



High Resolution Aerial Imagery

FIGURE 1.

Site Location Map
ConocoPhillips
Company
San Juan 27-5 No. 34A
Rio Arriba County, NM

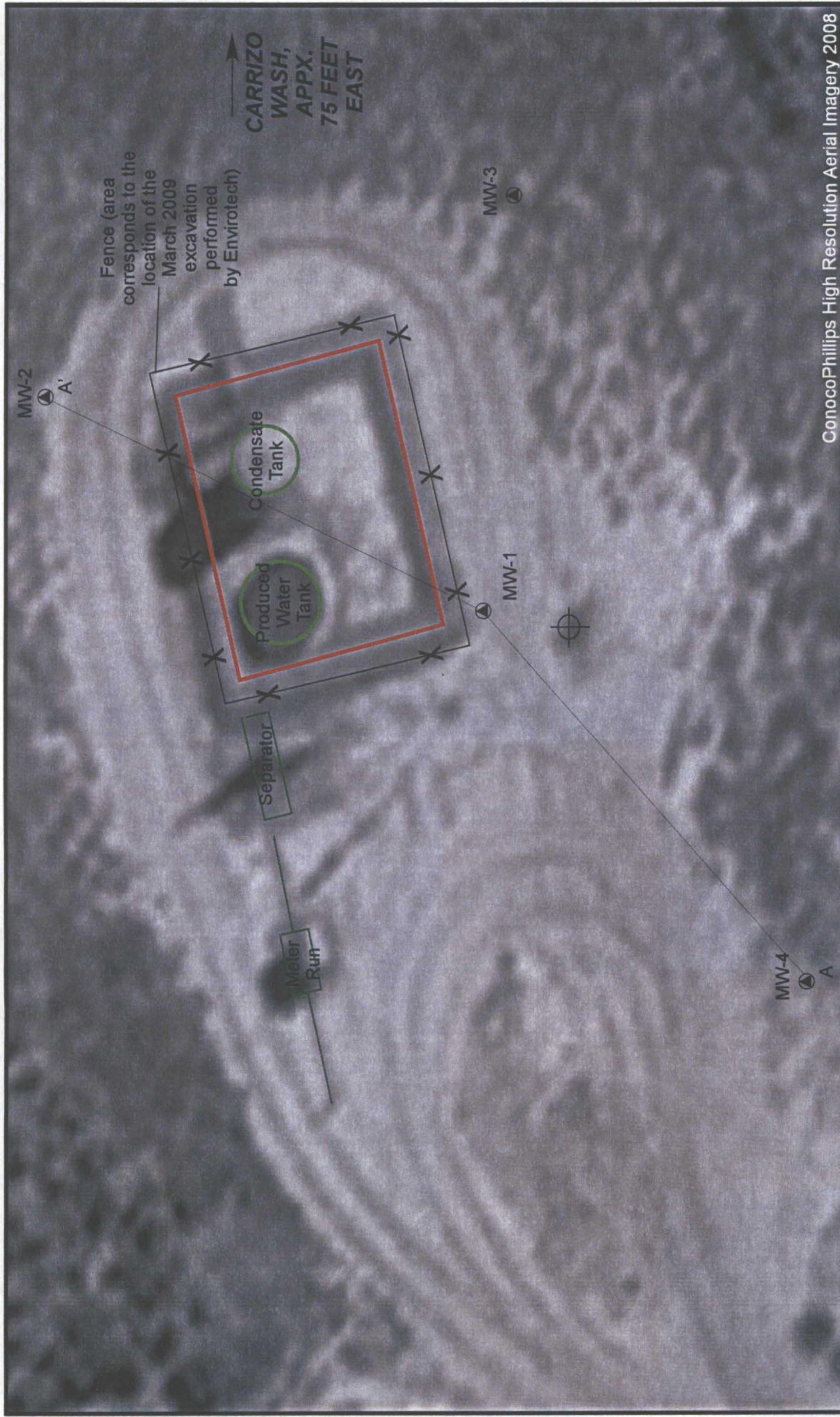


ConocoPhillips Company
San Juan 27-5 #34A Site
Location

Latitude: 36.54721° N
Longitude: -107.40710° W



TETRA TECH, INC.



ConocoPhillips High Resolution Aerial Imagery 2008

FIGURE 2:

SITE LAYOUT MAP
CONOCOPHILLIPS COMPANY
SAN JUAN 27-5 No. 34A
GAS PRODUCTION WELL
 Sec 30, T27N, R5W
 Rio Arriba County, New Mexico

LEGEND

-  WELLHEAD
-  MONITOR WELL
-  BERM
-  EQUIPMENT



TETRA TECH, INC.

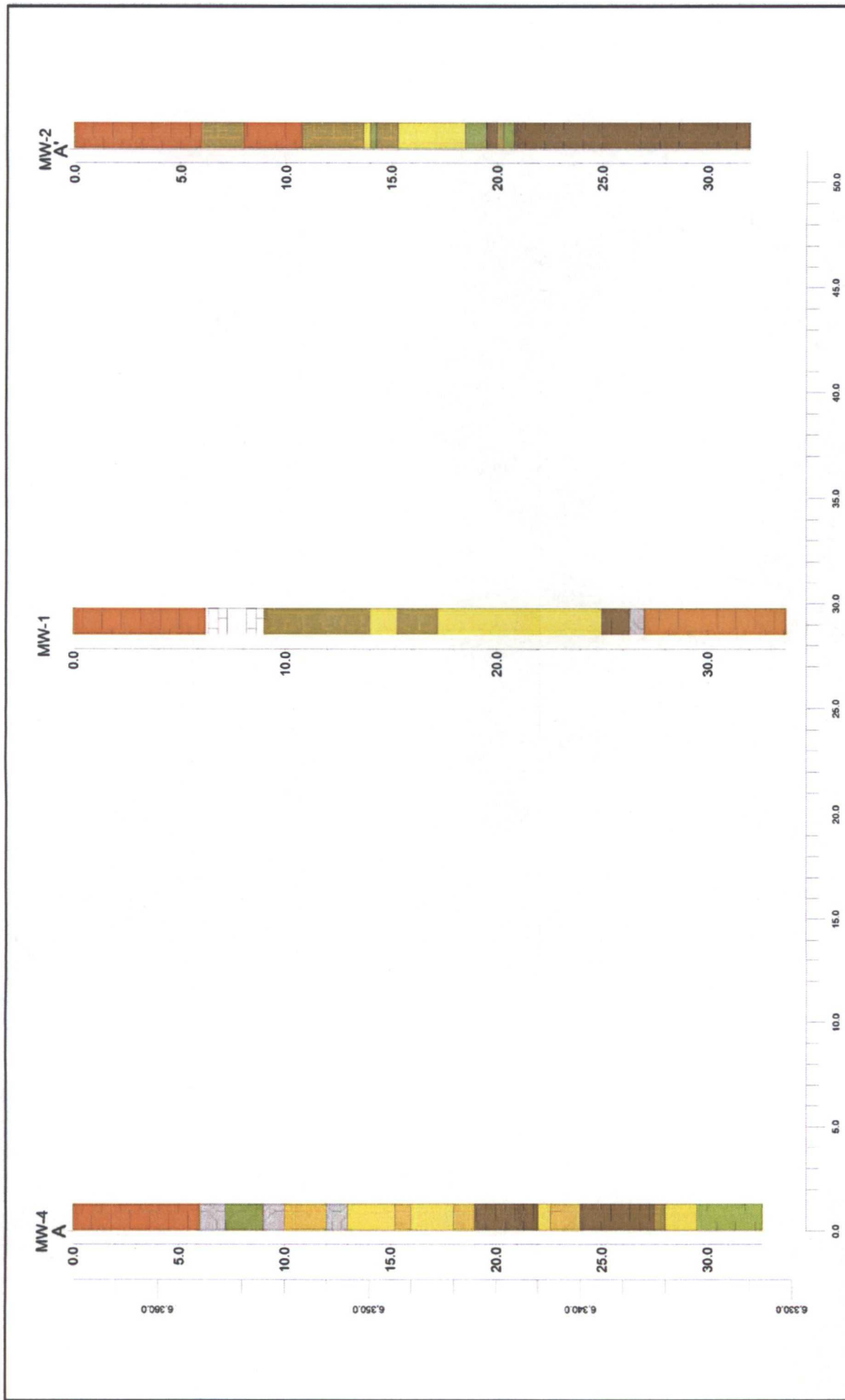
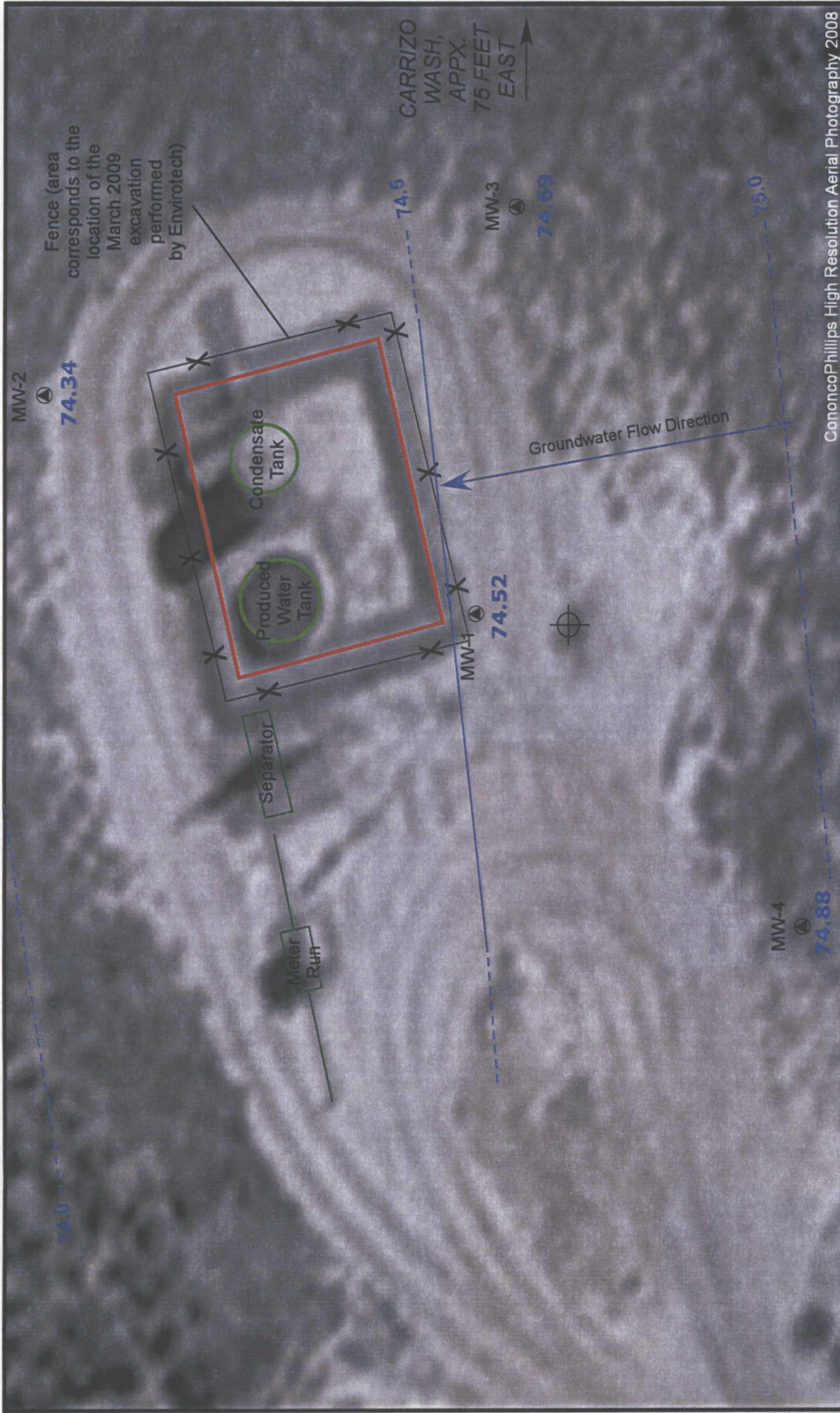


FIGURE 3:
 GENERALIZED GEOLOGIC CROSS
 SECTION
 CONOCOPHILLIPS COMPANY
 San Juan 27-5 #34A
 Sec 30, T27N, R5W
 Rio Arriba County, New Mexico



TETRA TECH, INC.



ConocoPhillips High Resolution Aerial Photography 2008

FIGURE 4:

GROUNDWATER CONTOUR MAP
MARCH 2011
CONOCOPHILLIPS COMPANY
SAN JUAN 27-5 No. 34A
GAS PRODUCTION WELL
Sec 30, T27N, R5W
Rio Arriba County, New Mexico

LEGEND

- | | | | | |
|---|--------------|---|--|------|
| ⊕ | WELLHEAD | — | GROUNDWATER ELEVATION CONTOUR
IN FEET (Dashed where inferred) |
 |
| ⊙ | MONITOR WELL | | | |
| — | BERM | | | |
| — | EQUIPMENT | | | |



TETRA TECH, INC.

TABLES

- I. Site History Timeline
2. Groundwater Elevation Data Summary (July 2009 – March 2011)
3. Groundwater Laboratory Analytical Results Summary (July 2009 – March 2011)

Table 1. Site History Timeline - ConocoPhillips, San Juan 27-5 No. 34A

DATE	ACTIVITY
January 30, 2009	Hydrocarbon impacts are visually confirmed during tank removal at the Site. Envirotech Inc. of Farmington, New Mexico (Envirotech) conduct spill assessment and initial soil sampling.
March 3, 2009	Envirotech oversees soil excavation at the Site. Final dimensions of excavated area are 53'x49'x20' deep. Groundwater is encountered at 20' bgs and sampled. Laboratory results for benzene were found at a concentration of 95.6 micrograms per liter (ug/L), above the NMWQCC standard.
March 20, 2009	Envirotech excavation report states that a total of 1,900 cubic yards of soil was removed from the Site and transported to an OCD-permitted facility in Farmington, NM. Envirotech recommended the installation of groundwater monitoring wells at the Site (Envirotech, 2009).
April 2, 2009	Tetra Tech visits the Site visit to determine placement of proposed groundwater monitoring wells.
July 15, 2009 & July 16, 2009	Four groundwater monitor wells are installed by EnviroDrill under the supervision of Tetra Tech (MW-1, MW-2, MW-3, MW-4).
July 28, 2009	Baseline quarterly groundwater monitoring event was conducted at the Site by Tetra Tech.
September 29, 2009	Quarterly groundwater monitoring event conducted at the Site by Tetra Tech.
December 15, 2009	Quarterly groundwater monitoring event conducted at the Site by Tetra Tech.
April 8, 2010	Quarterly groundwater monitoring event conducted at the Site by Tetra Tech.
June 8, 2010	Quarterly groundwater monitoring event conducted at the Site by Tetra Tech.
September 21, 2010	Quarterly groundwater monitoring event conducted at the Site by Tetra Tech.
December 15, 2010	Seventh quarterly groundwater monitoring event conducted at the Site by Tetra Tech. Manganese concentrations exceed NMWQCC standards in monitor wells MW-1, MW-2, and MW-3.
March 15, 2011	Eighth quarterly groundwater monitoring event conducted at the Site by Tetra Tech. Manganese concentrations exceed NMWQCC standards in monitor wells MW-1, MW-2, and MW-3.

Table 2. Groundwater Elevation Data Summary - ConocoPhillips Company San Juan 27-5 No. 34A

Well ID	Total Depth (ft bgs)	Screen Interval (ft)	* TOC Elevation (ft)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Groundwater Elevation
MW-1	33.22	18.73 - 33.73	97.44	7/28/2009	23.21	74.23
				9/29/2009	23.88	73.56
				12/15/2009	24.15	73.29
				4/8/2010	21.76	75.68
				6/8/2010	22.26	75.18
				9/21/2010	23.24	74.20
				12/15/2010	23.60	73.84
MW-2	34.35	15.00 - 30.00	96.78	3/15/2011	22.92	74.52
				7/28/2009	22.72	74.06
				9/29/2009	23.40	73.38
				12/15/2009	23.66	73.12
				4/8/2010	21.21	75.57
				6/8/2010	21.81	74.97
				9/21/2010	22.78	74.00
MW-3	33.15	17.55 - 32.55	97.24	12/15/2010	23.13	73.65
				3/15/2011	22.44	74.34
				7/28/2009	22.84	74.40
				9/29/2009	23.54	73.70
				12/15/2009	23.80	73.44
				4/8/2010	21.22	76.02
				6/8/2010	21.90	75.34
MW-4	32.65	17.60 - 32.60	97.23	9/21/2010	22.90	74.34
				12/15/2010	23.27	73.97
				3/15/2011	22.55	74.69
				7/28/2009	22.62	74.61
				9/29/2009	23.31	73.92
				12/15/2009	23.57	73.66
				4/8/2010	21.25	75.98
				6/8/2010	21.75	75.48
				9/21/2010	22.67	74.56
				12/15/2010	23.03	74.20
				3/15/2011	22.35	74.88

ft = Feet

TOC = Top of casing

bgs = below ground surface

*Groundwater elevation is relative to an arbitrary 100 feet

Table 3. Groundwater Laboratory Analytical Results Summary - ConocoPhillips Company San Juan 27-5 No. 34A

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Dissolved Manganese (mg/L)	Total Dissolved Solids (mg/L)
MW-1	7/28/2009	< 5	< 5	< 5	< 5	NA	NA
	9/29/2009	< 1	< 1	< 1	< 1	0.694	NA
	12/15/2009	<1	<1	<1	<1	0.576	NA
	4/8/2010	<1	<1	<1	<1	0.896	640
	6/8/2010	<1	<1	<1	<1	0.612	NA
	9/21/2010	<1	<1	<1	<1	0.784	NA
	12/15/2010	<1	<1	<1	<1	0.933	NA
	3/15/2011	<1	<1	<1	<1	0.732	NA
MW-2	7/28/2009	< 5	< 5	< 5	< 5	NA	NA
	9/29/2009	< 1	< 1	< 1	< 1	1.38	NA
	12/15/2009	<1	<1	<1	<1	1.92	NA
	4/8/2010	<1	<1	<1	<1	2.43	700
	6/8/2010	<1	<1	<1	<1	2.12	NA
	9/21/2010	<1	<1	<1	<1	2.25	NA
	12/15/2010	<1	<1	<1	<1	2.17	NA
	3/15/2011	<1	<1	<1	<1	2.01	NA
MW-3	7/28/2009	< 5	< 5	< 5	< 5	NA	NA
	9/29/2009	< 1	< 1	< 1	< 1	1.7	NA
	12/15/2009	<1	<1	<1	<1	2.04	NA
	4/8/2010	<1	<1	<1	<1	2.51	525
	6/8/2010	<1	<1	<1	<1	2.51	NA
	9/21/2010	<1	<1	<1	<1	2.87	NA
	12/15/2010	<1	<1	<1	<1	2.69	NA
	3/15/2011	<1	<1	<1	<1	2.01	NA
MW-4	7/28/2009	< 5	< 5	< 5	< 5	NA	NA
	9/29/2009	< 1	< 1	< 1	< 1	0.269	NA
	12/15/2009	<1	<1	<1	<1	0.0579	NA
	4/8/2010	<1	<1	<1	<1	0.121	684
	6/8/2010	<1	<1	<1	<1	0.0384	NA
	9/21/2010	<1	<1	<1	<1	0.0301	NA
	12/15/2010	<1	<1	<1	<1	0.0088	NA
	3/15/2011	<1	<1	<1	<1	0.008	NA
NMWQCC Standards		10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)	0.2 (mg/L)	1000 (mg/L)

Explanation

ND = Not Detected

NMWQCC = New Mexico Water Quality Control Commission

mg/L = milligrams per liter (parts per million)

µg/L = micrograms per liter (parts per billion)

NA = Not Analyzed

< 1.0 = Below laboratory detection limit of 1.0 µg/L

Bold = concentrations that exceed the NMWQCC limits

APPENDIX A

March 2011 Quarterly Groundwater Sampling Field Forms



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name San Juan 27-5 34APage 1 of 4

Act No. _____

Site Location San Juan County, New MexicoSite/Well No. MW-1Coded/
Replicate No. 1345Date 3.15.11Weather Sunny, breezy,
65°Time Sampling
Began 1320Time Sampling
Completed 1340

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation 97.44Total Sounded Depth of Well Below MP 33.22 33.14Water-Level Elevation 74.52Held _____ Depth to Water Below MP 22.92Diameter of Casing 2"Wet _____ Water Column in Well 10.22Gallons Pumped/Bailed
Prior to Sampling 5.0 gallonsGallons per Foot 0.16Gallons in Well 1.1635 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump/Bailer

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
1334	13.01	7.61	667	.562	1.68	15.7	41.8	4.0
1336	13.02	7.49	674	.568	1.43	13.5	41.1	4.5
1337	13.03	7.44	673	.567	1.47	14.0	40.2	5.0

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClFe, Mn, Dissolved plastic 16 oz noneRemarks H₂O is light brown w/ silt. no odor or seen observedSampling Personnel Cassie Brown, Christine Mathews

Well Casing Volumes

Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name San Juan 27-5 34APage 2 of 4

Project No. _____

Site Location San Juan County, New MexicoSite/Well No. MW-2Coded/
Replicate No. _____Date 3-15-11Weather Sunny, breezyTime Sampling
Began 1250Time Sampling
Completed 135065°

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation 96.78Total Sounded Depth of Well Below MP 34.35-34.33Water-Level Elevation 74.34Held _____ Depth to Water Below MP 22.44Diameter of Casing 2"Wet _____ Water Column in Well 11.89Gallons Pumped/Bailed
Prior to Sampling 4.5Gallons per Foot 0.16Gallons in Well 1.902 x 3 =Sampling Pump Intake Setting
(feet below land surface) ←Purging Equipment Purge pump / Bailer 5.70

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>1346</u>	<u>13.08</u>	<u>7.35</u>	<u>791</u>	<u>0.6666</u>	<u>3.41</u>	<u>32.4</u>	<u>41.8</u>	<u>4.0</u>
<u>1347</u>	<u>13.07</u>	<u>7.35</u>	<u>787</u>	<u>0.6663</u>	<u>3.63</u>	<u>34.7</u>	<u>36.9</u>	<u>4.25</u>

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX 3 40mL VOA's HClFe, Mn, Al Dissolved Mn plastic 16 oz noneRemarks bailed dry @ 2.5 gallons H₂O is slightly tan; No odor or tasteSampling Personnel Cassie Brown, Christine Mathews

Well Casing Volumes

Gal./ft.	1 1/4" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 1/2" = 0.10	2 1/2" = 0.24	3 1/2" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name San Juan 27-5 34APage 3 of 4

Project No. _____

Site Location San Juan County, New MexicoSite/Well No. MW-3Coded/
Replicate No. _____Date 3.15.11Weather Sunny, breezy
6:50Time Sampling
Began 1300Time Sampling
Completed 1330

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 97.24Total Sounded Depth of Well Below MP 33.15 Water-Level Elevation 74.69Held _____ Depth to Water Below MP 22.55 Diameter of Casing 2"Wet _____ Water Column in Well 10.6 Gallons Pumped/Bailed Prior to Sampling 5.25Gallons per Foot 0.16Gallons in Well 1.696 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump / Bailer 5.08

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>1327</u>	<u>13.24</u>	<u>7.37</u>	<u>1655</u>	<u>0.549</u>	<u>2.14</u>	<u>20.3</u>	<u>73.6</u>	<u>4.25</u>
<u>1328</u>	<u>13.29</u>	<u>7.27</u>	<u>1659</u>	<u>0.551</u>	<u>1.94</u>	<u>18.5</u>	<u>53.9</u>	<u>4.75</u>
<u>1330</u>	<u>13.32</u>	<u>7.25</u>	<u>1661</u>	<u>0.553</u>	<u>1.64</u>	<u>15.7</u>	<u>40.9</u>	<u>5.0</u>

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX _____ 3 40mL VOA's _____ HCl _____

Fe, Mn, Ar Dissolved mn plastic 16oz none _____Remarks H₂O is light tan. No odor or green detectedSampling Personnel Cassie Brown, Christine Mathews

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46



TETRA TECH, INC.

WATER SAMPLING FIELD FORM

Project Name San Juan 27-5 34APage 4 of 4

act No. _____

Site Location San Juan County, New MexicoSite/Well No. MW-4Coded/
Replicate No. _____Date 3-15-11Weather Sunny, breezyTime Sampling
Began 1250Time Sampling
Completed 140046°

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface _____ MP Elevation 97.23Total Sounded Depth of Well Below MP 32.65 33.49 Water-Level Elevation 74.88Held _____ Depth to Water Below MP 22.35 Diameter of Casing 2"Wet _____ Water Column in Well 11.14 Gallons Pumped/Bailed
Prior to Sampling _____Gallons per Foot 0.16Gallons in Well 1.78 x 3 =Sampling Pump Intake Setting
(feet below land surface) _____Purging Equipment Purge pump/Bailer 5.34

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature (°C)	pH	Conductivity (µS/cm ³)	TDS (g/L)	DO (mg/L)	DO %	ORP (mV)	Volume (gal.)
<u>1356</u>	<u>12.74</u>	<u>8.03</u>	<u>775</u>	<u>.658</u>	<u>4.23</u>	<u>40.0</u>	<u>46.9</u>	<u>2.5</u>

Sampling Equipment Purge Pump/Bailer

Constituents Sampled

Container Description

Preservative

BTEX _____ 3 40mL VOA's _____ HCl _____

Fe, Mn, Al Dissolved Mn plastic 16 oz plastic noneRemarks Bailed dry @ 2 gallons. H₂O is light brown w/ silt. no odor orSampling Personnel Cassie Brown, Christine Mathews Shreen

Well Casing Volumes

Gal./ft.	1 ¼" = 0.077	2" = 0.16	3" = 0.37	4" = 0.65
	1 ½" = 0.10	2 ½" = 0.24	3 ½" = 0.50	6" = 1.46

observed.
Will sample
after
re-charge.

APPENDIX B

March 2011 Quarterly Groundwater Sampling Field Forms



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

Conoco Phillips

Certificate of Analysis Number:

11030428

Report To: Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph (505) 237-8440 fax: (505) 881-3283	Project Name: San Juan 27-5 #34A Site: Rio Arriba County, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 3/28/2011
---	--

This Report Contains A Total Of 15 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments

3/28/2011

Date

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

Version 2.1 - Modified February 11, 2011



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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:
11030428

Report To: Tetra Tech, Inc. Kelly Blanchard 6121 Indian School Road, N.E. Suite 200 Albuquerque NM 87110- ph (505) 237-8440 fax: (505) 881-3283	Project Name: San Juan 27-5 #34A Site: Rio Arriba County, NM Site Address: PO Number: State: New Mexico State Cert. No.: Date Reported: 3/28/2011
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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 Method Blank (MB) are processed with the samples 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

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3/28/2011

Erica Cardenas
Project Manager

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

Date



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HOUSTON, TX 77054
(713) 660-0901

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:
11030428

his designee, as verified by the following signature.

A handwritten signature in cursive script, reading 'Erica Cardenas'.

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3/28/2011

Erica Cardenas
Project Manager

Date

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

Version 2.1 - Modified February 11, 2011



SPL ENVIRONMENTAL
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Conoco Phillips

Certificate of Analysis Number:

11030428

Report To: Tetra Tech, Inc.
Kelly Blanchard
6121 Indian School Road, N.E.
Suite 200
Albuquerque
NM
87110-
ph (505) 237-8440 fax: (505) 881-3283

Project Name: San Juan 27-5 #34A
Site: Rio Arriba County, NM
Site Address:

PO Number:
State: New Mexico
State Cert. No.:
Date Reported: 3/28/2011

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	11030428-01	Water	03/15/2011 13:40	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>
MW-2	11030428-02	Water	03/15/2011 13:50	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>
MW-3	11030428-03	Water	03/15/2011 13:30	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>
MW-4	11030428-04	Water	03/15/2011 14:00	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>
Duplicate	11030428-05	Water	03/15/2011 13:45	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>
Trip Blank	11030428-06	Water	03/15/2011 20:30	3/17/2011 9:00:00 AM	302905	<input type="checkbox"/>

Erica Cardenas

Erica Cardenas
Project Manager

3/28/2011

Date

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

Ted Yen
Quality Assurance Officer



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

Client Sample ID MW-1

Collected: 03/15/2011 13:40 SPL Sample ID: 11030428-01

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	0.732		0.005	1	03/24/11 22:25	EG	5751561

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	03/17/2011 10:15	M_W	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	03/17/11 15:25	LU_L	5746399
Ethylbenzene	ND		1	1	03/17/11 15:25	LU_L	5746399
Toluene	ND		1	1	03/17/11 15:25	LU_L	5746399
m,p-Xylene	ND		2	1	03/17/11 15:25	LU_L	5746399
o-Xylene	ND		1	1	03/17/11 15:25	LU_L	5746399
Xylenes, Total	ND		1	1	03/17/11 15:25	LU_L	5746399
Surr: 1,2-Dichloroethane-d4	88.6	%	70-130	1	03/17/11 15:25	LU_L	5746399
Surr: 4-Bromofluorobenzene	106	%	74-125	1	03/17/11 15:25	LU_L	5746399
Surr: Toluene-d8	96.0	%	82-118	1	03/17/11 15:25	LU_L	5746399

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

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SPL ENVIRONMENTAL
8880 INTERCHANGE DRIVE
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(713) 660-0901

Client Sample ID MW-2. Collected: 03/15/2011 13:50 SPL Sample ID: 11030428-02

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	2.01		0.005	1	03/24/11 22:31	EG	5751562

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	03/17/2011 10:15	M_W	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	03/17/11 15:51	LU_L	5746400
Ethylbenzene	ND		1	1	03/17/11 15:51	LU_L	5746400
Toluene	ND		1	1	03/17/11 15:51	LU_L	5746400
m,p-Xylene	ND		2	1	03/17/11 15:51	LU_L	5746400
o-Xylene	ND		1	1	03/17/11 15:51	LU_L	5746400
Xylenes, Total	ND		1	1	03/17/11 15:51	LU_L	5746400
Surr: 1,2-Dichloroethane-d4	96.3	%	70-130	1	03/17/11 15:51	LU_L	5746400
Surr: 4-Bromofluorobenzene	106	%	74-125	1	03/17/11 15:51	LU_L	5746400
Surr: Toluene-d8	95.4	%	82-118	1	03/17/11 15:51	LU_L	5746400

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

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

Client Sample ID MW-3 Collected: 03/15/2011 13:30 SPL Sample ID: 11030428-03

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED				MCL	SW6010B	Units: mg/L	
Manganese	2.01		0.005	1	03/24/11 22:37	EG	5751563

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	03/17/2011 10:15	M_W	1.00

VOLATILE ORGANICS BY METHOD 8260B				MCL	SW8260B	Units: ug/L	
Benzene	ND		1	1	03/17/11 16:16	LU_L	5746401
Ethylbenzene	ND		1	1	03/17/11 16:16	LU_L	5746401
Toluene	ND		1	1	03/17/11 16:16	LU_L	5746401
m,p-Xylene	ND		2	1	03/17/11 16:16	LU_L	5746401
o-Xylene	ND		1	1	03/17/11 16:16	LU_L	5746401
Xylenes, Total	ND		1	1	03/17/11 16:16	LU_L	5746401
Surr: 1,2-Dichloroethane-d4	92.6	%	70-130	1	03/17/11 16:16	LU_L	5746401
Surr: 4-Bromofluorobenzene	103	%	74-125	1	03/17/11 16:16	LU_L	5746401
Surr: Toluene-d8	92.5	%	82-118	1	03/17/11 16:16	LU_L	5746401

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

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

Client Sample ID MW-4 Collected: 03/15/2011 14:00 SPL Sample ID: 11030428-04

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
METALS BY METHOD 6010B, DISSOLVED			MCL	SW6010B	Units: mg/L		
Manganese	0.008		0.005	1	03/24/11 22:43	EG	5751564

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3005A	03/17/2011 10:15	M_W	1.00

VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		1	1	03/17/11 16:42	LU_L	5746402
Ethylbenzene	ND		1	1	03/17/11 16:42	LU_L	5746402
Toluene	ND		1	1	03/17/11 16:42	LU_L	5746402
m,p-Xylene	ND		2	1	03/17/11 16:42	LU_L	5746402
o-Xylene	ND		1	1	03/17/11 16:42	LU_L	5746402
Xylenes, Total	ND		1	1	03/17/11 16:42	LU_L	5746402
Surr: 1,2-Dichloroethane-d4	94.3	%	70-130	1	03/17/11 16:42	LU_L	5746402
Surr: 4-Bromofluorobenzene	100	%	74-125	1	03/17/11 16:42	LU_L	5746402
Surr: Toluene-d8	96.0	%	82-118	1	03/17/11 16:42	LU_L	5746402

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

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

Client Sample ID Duplicate Collected: 03/15/2011 13:45 SPL Sample ID: 11030428-05

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		1	1	03/17/11 14:57	LU_L	5746398
Ethylbenzene	ND		1	1	03/17/11 14:57	LU_L	5746398
Toluene	ND		1	1	03/17/11 14:57	LU_L	5746398
m,p-Xylene	ND		2	1	03/17/11 14:57	LU_L	5746398
o-Xylene	ND		1	1	03/17/11 14:57	LU_L	5746398
Xylenes, Total	ND		1	1	03/17/11 14:57	LU_L	5746398
Surr: 1,2-Dichloroethane-d4	92.8		% 70-130	1	03/17/11 14:57	LU_L	5746398
Surr: 4-Bromofluorobenzene	105		% 74-125	1	03/17/11 14:57	LU_L	5746398
Surr: Toluene-d8	97.3		% 82-118	1	03/17/11 14:57	LU_L	5746398

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

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

Client Sample ID Trip Blank

Collected: 03/15/2011 20:30

SPL Sample ID: 11030428-06

Site: Rio Arriba County, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS BY METHOD 8260B			MCL	SW8260B	Units: ug/L		
Benzene	ND		1	1	03/17/11 14:32	LU_L	5746397
Ethylbenzene	ND		1	1	03/17/11 14:32	LU_L	5746397
Toluene	ND		1	1	03/17/11 14:32	LU_L	5746397
m,p-Xylene	ND		2	1	03/17/11 14:32	LU_L	5746397
o-Xylene	ND		1	1	03/17/11 14:32	LU_L	5746397
Xylenes, Total	ND		1	1	03/17/11 14:32	LU_L	5746397
Surr: 1,2-Dichloroethane-d4	97.0		% 70-130	1	03/17/11 14:32	LU_L	5746397
Surr: 4-Bromofluorobenzene	103		% 74-125	1	03/17/11 14:32	LU_L	5746397
Surr: Toluene-d8	95.2		% 82-118	1	03/17/11 14:32	LU_L	5746397

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

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Quality Control Documentation



ACCUTEST
LABORATORIES

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

Quality Control Report

Conoco Phillips

San Juan 27-5 #34A

Analysis: Metals by Method 6010B, Dissolved
Method: SW6010B

WorkOrder: 11030428
Lab Batch ID: 105517

Method Blank

Samples in Analytical Batch:

RunID: ICP2_110324A-5751546 Units: mg/L
Analysis Date: 03/24/2011 20:52 Analyst: EG
Preparation Date: 03/17/2011 10:15 Prep By: M_ Method SW3005A

Lab Sample ID	Client Sample ID
11030428-01B	MW-1
11030428-02B	MW-2
11030428-03B	MW-3
11030428-04B	MW-4

Analyte	Result	Rep Limit
Manganese	ND	0.005

Laboratory Control Sample (LCS)

RunID: ICP2_110324A-5751547 Units: mg/L
Analysis Date: 03/24/2011 20:58 Analyst: EG
Preparation Date: 03/17/2011 10:15 Prep By: M_ Method SW3005A

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Manganese	0.1000	0.1001	100.1	80	120

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

Sample Spiked: 11030408-02
RunID: ICP2_110324A-5751549 Units: mg/L
Analysis Date: 03/24/2011 21:10 Analyst: EG
Preparation Date: 03/17/2011 10:15 Prep By: M_ Method SW3005A

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Manganese	2.267	0.1	2.396	N/C	0.1	2.584	N/C	N/C	20	75	125

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
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

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

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.

Version 2.1 - Modified February 11, 2011

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Quality Control Report

Conoco Phillips

San Juan 27-5 #34A

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 11030428
Lab Batch ID: R317230

Method Blank

RunID: K_110317A-5746391 **Units:** ug/L
Analysis Date: 03/17/2011 11:29 **Analyst:** LU_L

Analyte	Result	Rep Limit
Benzene	ND	1.0
Ethylbenzene	ND	1.0
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	91.0	70-130
Surr: 4-Bromofluorobenzene	102.8	74-125
Surr: Toluene-d8	95.1	82-118

Samples in Analytical Batch:

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
11030428-01A	MW-1
11030428-02A	MW-2
11030428-03A	MW-3
11030428-04A	MW-4
11030428-05A	Duplicate
11030428-06A	Tripp Blank

Laboratory Control Sample (LCS)

RunID: K_110317A-5746390 **Units:** ug/L
Analysis Date: 03/17/2011 11:03 **Analyst:** LU_L

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	20.9	104	74	123
Ethylbenzene	20.0	19.6	98.0	72	127
Toluene	20.0	19.7	98.3	74	126
m,p-Xylene	40.0	40.8	102	71	129
o-Xylene	20.0	20.4	102	74	130
Xylenes, Total	60.0	61.2	102	71	130
Surr: 1,2-Dichloroethane-d4	50.0	47.2	94.4	70	130
Surr: 4-Bromofluorobenzene	50.0	52.8	106	74	125
Surr: Toluene-d8	50.0	48.1	96.2	82	118

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

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
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

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

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.

Version 2.1 - Modified February 11, 2011



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

Quality Control Report

Conoco Phillips
San Juan 27-5 #34A

Analysis: Volatile Organics by Method 8260B
Method: SW8260B

WorkOrder: 11030428
Lab Batch ID: R317230

Sample Spiked: 11030377-01
RunID: K_110317A-5746393 Units: ug/L
Analysis Date: 03/17/2011 12:48 Analyst: LU_L

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	21.6	108	20	21.8	109	0.973	22	70	124
Ethylbenzene	ND	20	19.2	95.8	20	19.6	98.2	2.43	20	76	122
Toluene	ND	20	19.8	98.8	20	20.2	101	2.39	24	80	117
m,p-Xylene	ND	40	37.3	93.3	40	39.8	99.5	6.45	20	69	127
o-Xylene	ND	20	19.3	96.6	20	20.3	102	5.06	20	84	114
Xylenes, Total	ND	60	56.6	94.4	60	60.1	100	5.98	20	69	127
Surr: 1,2-Dichloroethane-d4	ND	50	45.8	91.5	50	45.6	91.2	0.387	30	70	130
Surr: 4-Bromofluorobenzene	ND	50	52.3	105	50	53.2	106	1.72	30	74	125
Surr: Toluene-d8	ND	50	47.3	94.6	50	48.2	96.4	1.90	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
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

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

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.

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*Sample Receipt Checklist
And
Chain of Custody*



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

Sample Receipt Checklist

Workorder:	11030428	Received By:	NB
Date and Time Received:	3/17/2011 9:00:00 AM	Carrier name:	Fedex-Standard Overnight
Temperature:	4.0/4.0°C	Chilled by:	Water Ice

- | | | | |
|--|---|-----------------------------|--|
| 1. Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 2. Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| 3. Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 5. Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 6. Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 7. Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 8. Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 9. Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 10. All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 11. Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| 12. Water - VOA vials have zero headspace? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | VOA Vials Not Present <input type="checkbox"/> |
| 13. Water - Preservation checked upon receipt (except VOA*)? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Applicable <input checked="" type="checkbox"/> |

*VOA Preservation Checked After Sample Analysis

SPL Representative:	<input type="text"/>	Contact Date & Time:	<input type="text"/>
Client Name Contacted:	<input type="text"/>		
Non Conformance Issues:	<input type="text"/>		
Client Instructions:	<input type="text"/>		



SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No.

302905

Client Name: Tetra Tech
Address: 6121 Indian School Rd NE #200
City Albuquerque State NM Zip 87110
Phone/Fax: 505 237-0440
Client Contact: Kelly Blanchard Email: Kelly.Blanchard@tetra-tech.com
Project Name/No.: San Juan 27.5 #34A
Site Name: ~~San Juan~~ Rio Arriba County, NM
Site Location: ~~San Juan~~ Corral Phillips
Invoice To: Corral Phillips
P#:
SAMPLE ID

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	1-HCl 2-HNO3 3-H2SO4 X=other	Number of Containers	Requested Analysis
MW-1	3.15.11	1340		X	W	V	40	1	3	X
MW-1	3.15.11	1340		X	W	P	16	1	1	X
MW-2	3.15.11	1350		X	W	V	40	1	3	X
MW-2	3.15.11	1350		X	W	P	16	1	1	X
MW-3	3.15.11	1330		X	W	V	40	1	3	X
MW-3	3.15.11	1330		X	W	P	16	1	1	X
MW-4	3.15.11	1400		X	W	V	40	1	3	X
MW-4	3.15.11	1400		X	W	P	16	1	1	X
Duplicate	3.15.11	1345		X	W	V	40	1	3	X
Tripp Blank	3.15.11	2030		X	W	P	40	1	2	X

Client/Consultant Remarks: Please filter metals before analysis
Laboratory remarks:
Intact? ☐ Y ☐ N
Ice? ☐ Y ☐ N
Temp: 4.0/9.0 PM review (initial):

Requested TAT
☐ 1 Business Day ☐ Contract
☐ 2 Business Days ☒ Standard
☐ 3 Business Days
☐ Other
Rush TAT requires prior notice
Special Reporting Requirements Results: ☐ Fax ☐ Email ☐ PDF ☐ LA RECAP ☐ TX TRRP
Standard QC: ☒ Level 3 QC ☐ Level 4 QC
1. Relinquished by: Corral Phillips date: 3.16.11 time: 0730
3. Relinquished by:
5. Relinquished by:
6. Received by Laboratory: Corral Phillips date: 3.16.11 time: 0900
Special Detection Limits (specify): NMUQC Standards Provided to Lab