# 3R - 173

**2014 AGWMR** 

04 / 16 / 2015



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Mr. Glenn von Gonten New Mexico Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

April 16, 2015

Re: NMOCD Case No. 3R-173, 2014 Annual Groundwater Monitoring Report

Dear Mr. von Gonten:

Enclosed is the 2014 Annual Groundwater Monitoring Report for the Flora Vista No. 1 site. This report, prepared by Conestoga-Rovers & Associates (CRA), contains the results of groundwater monitoring from March, June, September, and December 2014.

Please let me know if you have any questions.

Sincérely,

Rick Greiner

Enc













## **2014** Annual Groundwater Monitoring Report

ConocoPhillips Flora Vista No. 1 San Juan County, New Mexico API# 30-045-20073 NMOCD# 3R-173

Prepared for: ConocoPhillips Company

### **Conestoga-Rovers & Associates**

6121 Indian School Road, NE Suite 200 Albuquerque, New Mexico 87110



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#### Section 1.0 Introduction

This annual report presents the results of the quarterly groundwater monitoring events conducted by Conestoga-Rovers & Associates (CRA) during 2014 at the Flora Vista No. 1 natural gas well site (Site), operated by Burlington Resources Oil & Gas Company LP (Burlington), a wholly-owned subsidiary of ConocoPhillips Company (ConocoPhillips) (**Figure 1**). The Site is located on private property in Unit Letter F, Section 22, Township 30N, Range 12W, of San Juan County, New Mexico. The Site consists of a gas well and associated equipment and installations. A detailed Site layout map is provided as **Figure 2**.

#### 1.1 Background

A previous operator removed an earthen dehydrator pit from service in March 1994. Hydrocarbon impacted soil was subsequently excavated in April 1994 and again in November 1995. A pit closure report was submitted to New Mexico Oil Conservation Division (NMOCD) in August 1996 by El Paso Field Services. NMOCD issued a letter to El Paso Field Services on January 24, 1997 approving pit closure and remediation.

Burlington encountered hydrocarbon-impacted soil at the Site during a production facility resetting activity in early 2003. Burlington subsequently directed the excavation of approximately 9,443 cubic yards of soil in an attempt to remove impacted soils. Groundwater was observed in the bottom of the excavation at approximately 25 feet below the ground surface. Field screening was conducted during excavation to determine extent of impacted soil. To enhance the remediation of the remaining amounts of residual hydrocarbon contamination in the excavated area, approximately 80 barrels (bbls) of a potassium permanganate oxidizer solution was sprayed on the soil.

In September 2003, Envirotech installed a groundwater monitoring well (MW-1) slightly downgradient from the center of the excavation (**Figure 2**). Subsequent monitoring included analyses for benzene, toluene, ethylbenzene, and total xylenes (BTEX), as well as total petroleum hydrocarbons (TPH). Groundwater analyses indicated the presence of benzene and total xylenes above regulatory standards. Monitoring wells MW-2, MW-3, and MW-4 were installed at the Site in August 2008 in response to an April 2008 request from NMOCD for Site characterization and enhanced laboratory analyses.

A generalized geologic cross section was prepared using boring logs from the August 2008 monitoring well installation and is presented as **Figure 3**. In an attempt to actively remediate soil and groundwater at the Site, mobile dual phase extraction (MDPE) was conducted on August  $21^{st}$  and  $22^{nd}$ , 2013. The Flora Vista No. 1 Site history is summarized in **Table 1**.



## Section 2.0 Groundwater Monitoring Summary Methodology and Analytical Results

#### 2.1 Groundwater Monitoring Summary

During 2014 quarterly sampling events conducted on March 19, June 17, September 18, and December 18, groundwater elevation measurements were recorded in monitoring wells MW-1, MW-2, MW-3, and MW-4 using an oil/water interface probe. The only exception was during the December 2014 monitoring event when MW-1 and MW-3 were not able to be located beneath newly added gravel and asphalt in the area of the wells. Groundwater elevations are detailed in **Table 2**. Groundwater potentiometric surface maps created from 2014 data are presented as **Figures 4, 5, 6**, and **7**. Based on data collected during the 2014 monitoring events, groundwater flow is to the southwest, consistent with historical data for this Site.

#### 2.2 Groundwater Monitoring Methodology

During monitoring events, at least three well volumes were purged from Site monitoring wells with a dedicated polyethylene 1.5-inch disposable bailer prior to sampling. If three well volumes could not be purged, wells were purged until dry and allowed to recharge prior to sampling. Purge water generated during sampling events was placed in the on-Site produced water tank (Figure 2). While bailing each well, groundwater parameter data, including temperature, pH, conductivity, dissolved oxygen, and oxidation-reduction potential were collected using a calibrated multi-parameter meter. Field parameters are summarized on Table 3.

Groundwater samples were placed in laboratory prepared bottles, packed on ice, and shipped under chain-of-custody documentation to Pace Analytical Services, Inc. of Lenexa, KS. Samples were analyzed for the presence of BTEX by Environmental Protection Agency (EPA) Method 8260, and dissolved iron and dissolved manganese by EPA Method 6010.

On December 18, 2014 an attempt to collect groundwater samples from two down-gradient domestic irrigation wells was made. Domestic irrigation wells DW-1 and DW-2, located at 32 Road 3581 and 34 Road 3581, Flora Vista, NM, respectively, were not sampled during this event. The landowner for DW-1 was not at the residence during the time of the attempted sampling and it is unknown if the well had been shut in for the winter months. The landowner for DW-2 was contacted; however, a sample was not collected since the well had already been shut in for the winter months. Another attempt to collect samples from DW-1 and DW-2 will be made in March of 2015.



#### 2.3 Groundwater Monitoring Analytical Results

Groundwater samples collected during 2014 quarterly sampling events from monitoring wells MW-2 and MW-3 and domestic irrigation wells DW-1 and DW-2 did not exceed New Mexico Water Quality Control Commission (NMWQCC) groundwater quality standards for any target constituents. Groundwater collected from monitoring wells MW-1 and MW-4 exceeded the NMWQCC standards for the following constituents:

#### March 2014

- Benzene The NMWQCC standard for benzene is 0.010 milligrams per liter (mg/L). The
  concentration of benzene in the groundwater sample collected from MW-1 was 0.0822
  mg/L.
- **Dissolved Iron** The NMWQCC standard for dissolved iron is 1 mg/L. The concentration of dissolved iron in the groundwater sample collected from MW-4 was 1.33 mg/L. Insufficient water was present in MW-1 this quarter to allow for metals analysis.
- Dissolved Manganese The NMWQCC standard for dissolved manganese is 0.2 mg/L. The
  concentration of dissolved manganese in the groundwater sample collected from MW-4
  was 4.19 mg/L. Insufficient water was present in MW-1 this quarter to allow for metals
  analysis.

#### June 2014

- Benzene The concentration of benzene in the groundwater sample collected from MW-1 was 0.522 mg/L.
- **Dissolved Iron** The concentrations of dissolved iron in groundwater samples collected from MW-1 and MW-4 were 17.4 mg/L and 2.68 mg/L, respectively.
- **Dissolved Manganese** The concentrations of dissolved manganese in groundwater samples collected from MW-1 and MW-4 were 0.896 mg/L and 4.01 mg/L, respectively.

#### September 2014

- Benzene The concentration of benzene in the groundwater sample collected from MW-1 was 0.849 mg/L.
- **Xylenes** The NMWQCC standard for total xylenes is 0.62 mg/L. The concentration of xylenes in the groundwater sample collected from MW-1 was 1.23 mg/L.
- **Dissolved Iron** The concentrations of dissolved iron in groundwater samples collected from MW-1 and MW-4 were 23.4 mg/L and 3.43 mg/L, respectively.



 Dissolved Manganese – The concentrations of dissolved manganese in groundwater samples collected from MW-1 and MW-4 were 1.01 mg/L and 4.63 mg/L, respectively.

#### December 2014

- Benzene The concentration of benzene in the groundwater sample collected from MW-4 was 0.0296 mg/L.
- **Dissolved Iron** The concentration of dissolved iron in the groundwater sample collected from MW-4 was 4.02 mg/L.
- **Dissolved Manganese** The concentrations of dissolved manganese in the groundwater sample collected from MW-4 was 4.46 mg/L.

Benzene concentration maps for the 2014 quarterly groundwater monitoring events are presented in **Figures 8, 9, 10, and 11.** A summary of the historical groundwater laboratory analytical results is presented in **Table 4**. The 2014 laboratory analytical reports are included in **Appendix A**.

#### Section 3.0 Conclusions and Recommendations

Groundwater samples collected from MW-1 have consistently exceeded NMWQCC groundwater quality standards for benzene, dissolved iron, and dissolved manganese from October 2008 through December 2014 and have intermittently exceeded the NMWQCC groundwater quality standards for ethylbenzene and total xylenes. BTEX constituent concentrations exhibit a decreasing trend over time in MW-1.

Groundwater samples collected from MW-4 have consistently exceeded NMWQCC groundwater quality standards for dissolved iron and dissolved manganese from October 2008 through December 2014. Benzene concentrations in samples collected from MW-4 were consistently detected above standard from well installation in 2008 until March of 2014. Since that time, no BTEX constituents have been detected above standards in MW-4. This may be attributable to the mobile dual phase extraction event that occurred at the Site in August of 2013.

Based on the historical groundwater quality data, groundwater samples collected from MW-2, MW-3, DW-1 and DW-2 have never exceeded NMWQCC groundwater quality standards for any target groundwater quality constituents.

CRA recommends an assessment be made of subsurface soil and groundwater conditions north of monitoring well MW-1, between it and the on-Site storage tank, to attempt to determine



whether this tank is a source of released hydrocarbons (**Figure 12**). An additional monitoring well, MW-5, is proposed for this location. Soil and groundwater samples collected during drilling would be analyzed for hydrocarbons.

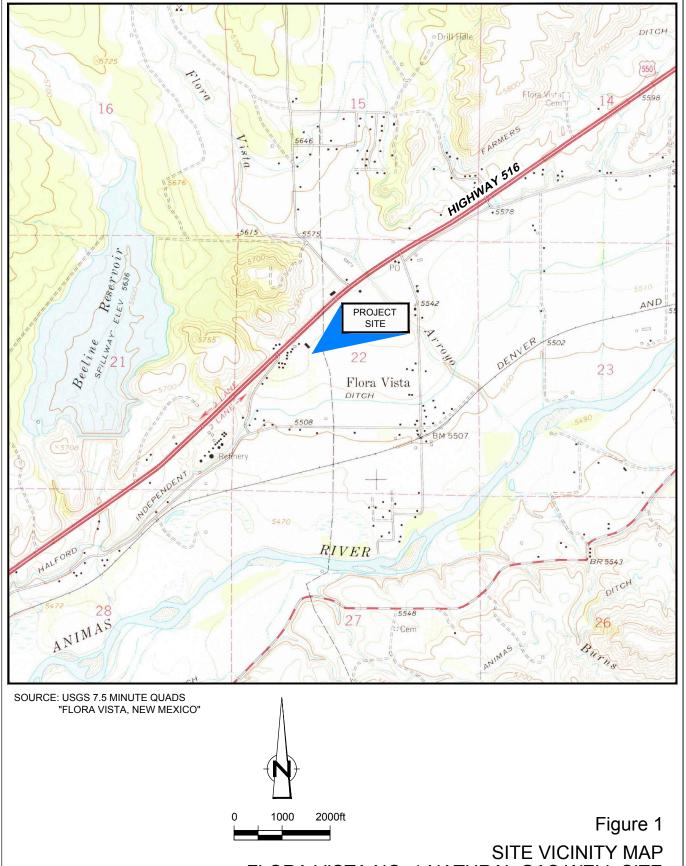
CRA recommends a sample of Site groundwater be analyzed for metals and hydrocarbon treatability via in-situ chemical oxidation or other suitable remedial technology.

CRA recommends the continuation of quarterly sampling of all Site monitoring wells and periodic sampling of DW-1 and DW-2 in order to monitor ongoing natural attenuation at the Site. The next sampling event will take place in March 2015. CRA will collect samples for BTEX, dissolved iron, and dissolved manganese. The results of the 2015 groundwater monitoring events and any additional Site assessments will be summarized in an annual report and submitted to the NMOCD during the first half of 2016.



### **Figures**





FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



ConocoPhillips high resolution aerial imagery 2008.

Figure 2

SITE PLAN FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



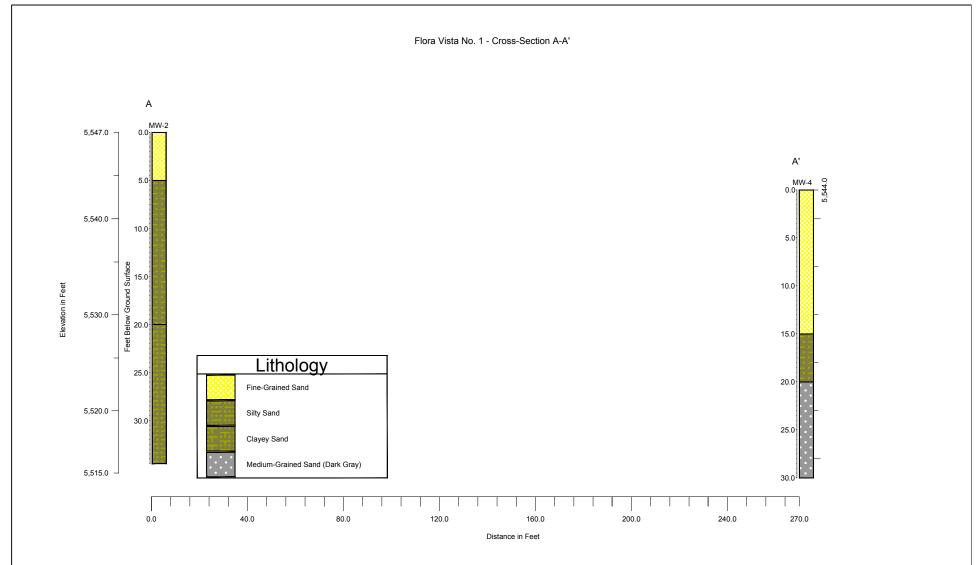


Figure 3

GEOLOGICAL CROSS SECTION
FLORA VISTA NO. 1 NATURAL GAS WELL SITE
SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO
ConocoPhillips Company



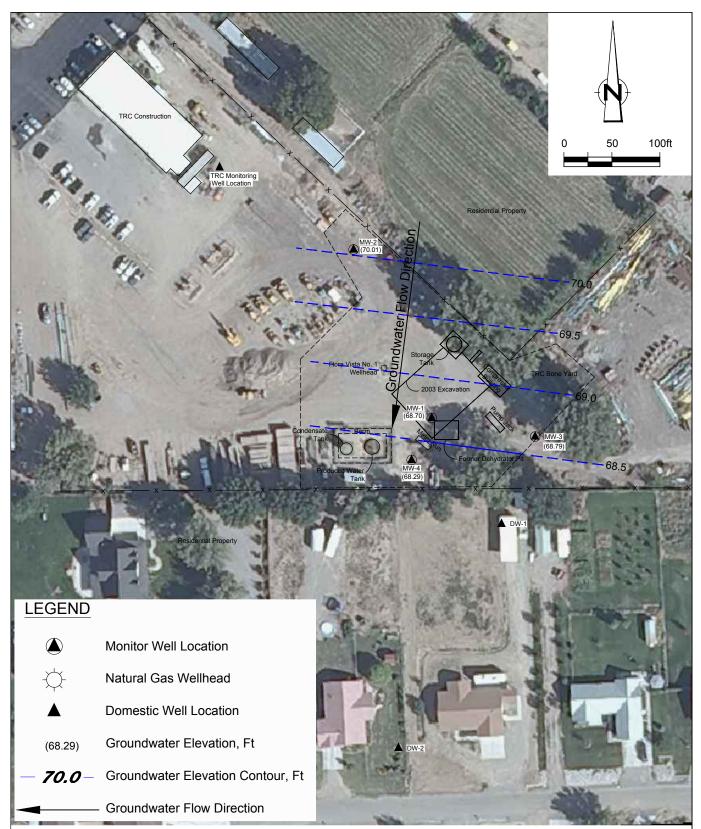


Figure 4

MARCH 2014 GROUNDWATER POTENTIOMETRIC SURFACE MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company

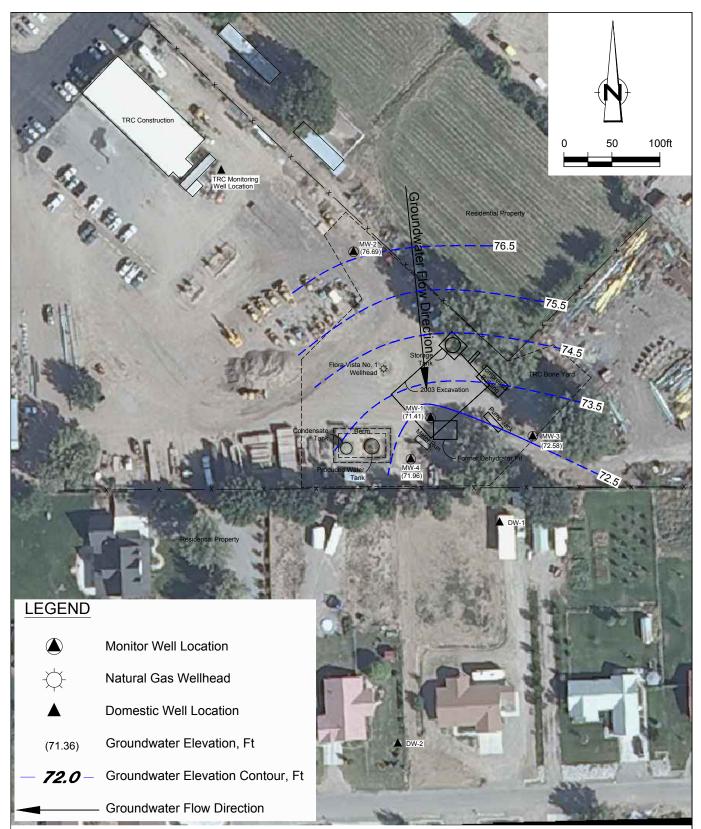


Figure 5

JUNE 2014 GROUNDWATER POTENTIOMETRIC SURFACE MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



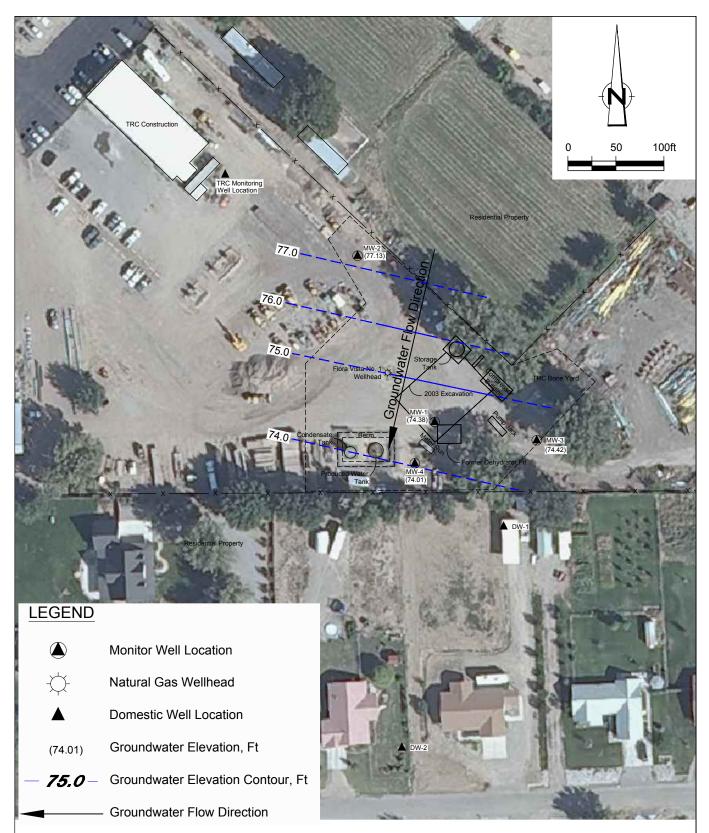


Figure 6

SEPTEMBER 2014 GROUNDWATER POTENTIOMETRIC SURFACE MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company

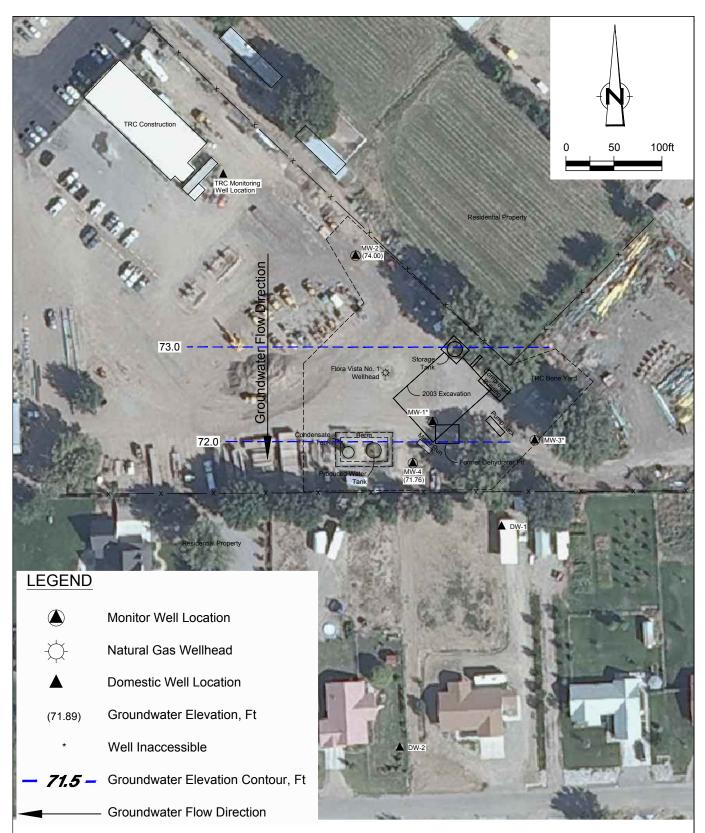


Figure 7

DECEMBER 2014 GROUNDWATER POTENTIOMETRIC SURFACE MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company

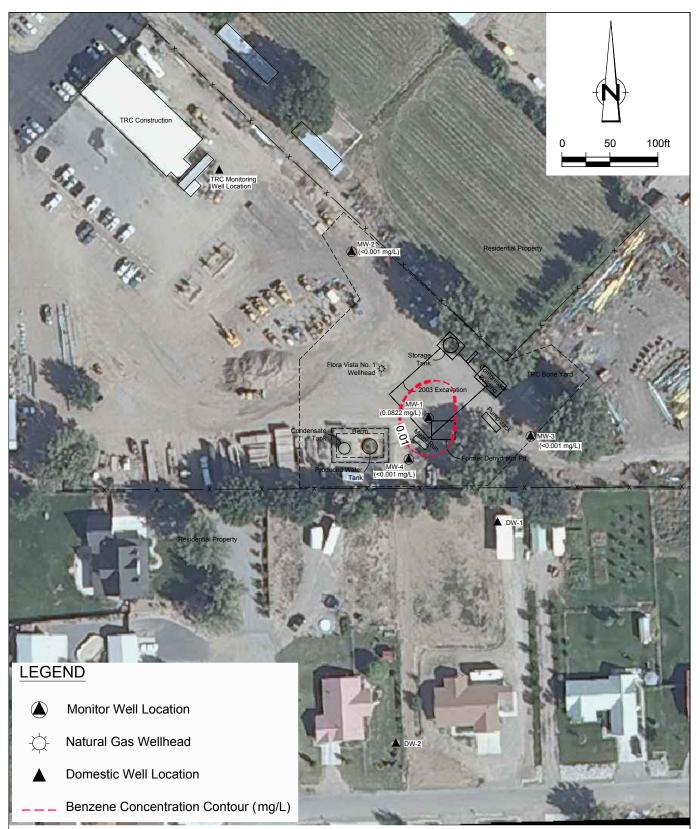


Figure 8

MARCH 2014 BENZENE CONCENTRATION MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



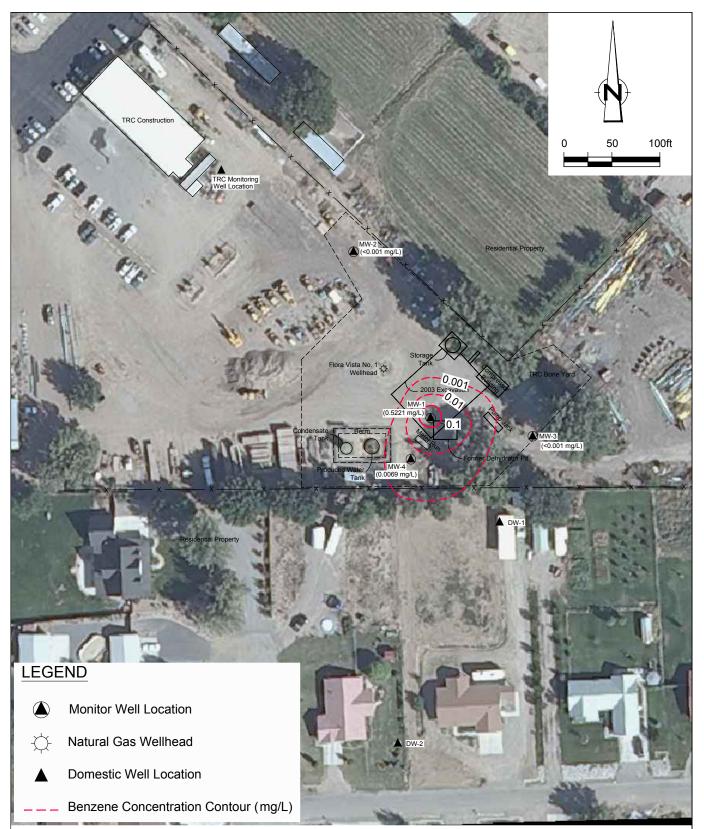


Figure 9

JUNE 2014 BENZENE CONCENTRATION MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



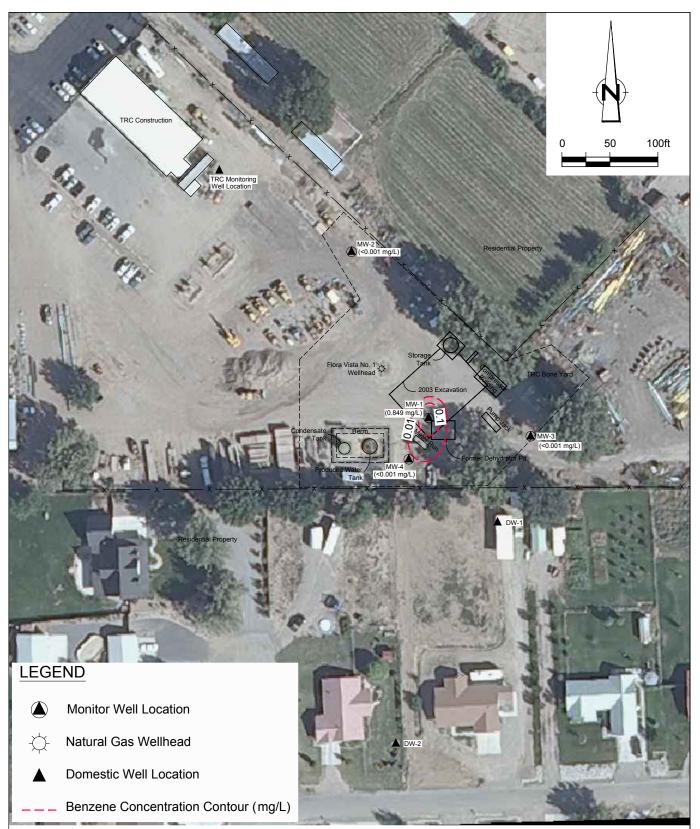


Figure 10

SEPTEMBER 2014 BENZENE CONCENTRATION MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



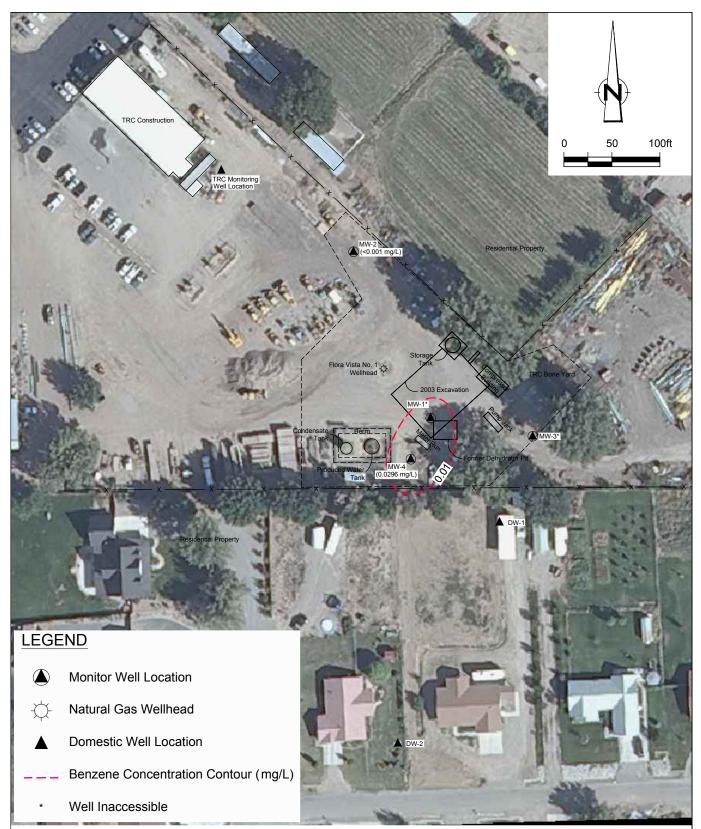


Figure 11

DECEMBER 2014 BENZENE CONCENTRATION MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company





ConocoPhillips high resolution aerial imagery 2008.

Figure 12

PROPOSED MONITOR WELL LOCATION MAP FLORA VISTA NO. 1 NATURAL GAS WELL SITE SECTION 22, T30N-R12W, SAN JUAN COUNTY, NEW MEXICO ConocoPhillips Company



### **Tables**



#### SITE HISTORY TIMELINE CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

Date/Time Period	Event/Action	Description/Comments
November 28, 1995	Pit Closure Activities	Philip Environmental excavated and removed approximately 850 cubic yards of soil from the area where the Flora Vista No. 1 dehydrator pit was located. Excavation activities were stopped in the north and west directions due to the positions of the compressor and meter run equipment.
July and August 1996	Submittal of Pit Closure	El Paso Field Services submits Pit Closure Reports to the New Mexico Oil Conservation Division outlining the excavation and closure of the dehydrator pit at the site.
January 24, 1997	Pit Closure Approval	El Paso Field Services receives approval of pit closure from the New Mexico Oil Conservation Division.
June and July 2003	Initial Site Assessment	Historical petroleum contaminated soil discovered during a production facility resetting activity. Environmental investigation began with the excavation of approximately 4,986 cubic yards of impacted soil and 4,446 cubic yards of clean soil. Groundwater was encountered at approximately 25 feet below the ground surface. The impacted soil was taken to a commercial landfill facility located on Crouch Mesa in Farmington, New Mexico. Approximately 80 bbls of potassium permanganate was sprayed on the soils to breakdown any minor amounts of residual petroleum contaminants. The excavation area was backfilled with clean soil.
September 2, 2003	Groundwater Monitor Well Installation	One ground water Monitor Well, MW-1, was installed slightly down-gradient from the center of the soil excavation by Envirotech. Total depth of well is 26 feet.
September of 2003 through December 13, 2006	Quarterly Groundwater Monitoring	Quarterly groundwater monitoring of MW-1 for analysis of BTEX constituents. MW-1 remained above standards for benzene, ethylbenzene, and total xylenes.
March 31, 2006	Site Transfer	ConocoPhillips Company completes acquisition of Burlington Resources.  After the acquisition of Burlington Resources by ConocoPhillips, consulting
March 2007 through January 2008	Consultant Change and Groundwater Monitoring	responsibilities were transferred from Lode Star LLC of Farmington, NM to Tetra Tech of Albuquerque, NM. Tetra Tech began sampling the Flora Vista site quarterly in March of 2007. Four consecutive quarters of groundwater sampling were conducted at the Flora Vista site. Groundwater was sampled from MW-1 and was analyzed for BTEX constituents during all sampling events. MW-1 remained above standards for benzene, ethylbenzene, and total xylenes.
March 28, 2008	Reporting	Annual report for 2007 is submitted to the Oil Conservation Division of NM Energy, Minerals, and Resources Department (OCD).
April 1, 2008	Additional Monitoring Requested by OCD	Oil Conservation Division of NM Energy, Minerals, and Resources Dept. indicates additional investigation and sampling is necessary for closure consideration during a meeting with Glenn Von Gonten.
July 23, 2008	Groundwater Monitoring	Groundwater monitoring of MW-1. One sample and a duplicate were collected. Benzene and Xylenes are above NMWQCC standards.
August 12 and 13, 2008	Groundwater Monitor Well Installation and Groundwater Monitoring	Three additional groundwater Monitor Wells, MW-2, MW-3 and MW-4 were installed by WDC and overseen by Tetra Tech. MW-2 was installed upgradient of MW-1. Both MW-3 and MW-4 were installed downgradient of MW-1. Soil samples were collected from just above the groundwater interface for each boring location and sent to Southern Petroleum Laboratory for a baseline soil analysis. All wells were developed by purging approximately 80 gallons of fluid using a surge block and hand bailer/purge pump.
October 21, 2008	Groundwater Monitoring	Third quarter 2008 groundwater monitoring was completed and was the first quarter of sampling to include all four monitor wells on site. A baseline suite was completed including major ions, total metals, semi-volatile organic compounds (VOCs) including BTEX, diesel range organics, and gasoline range organics. There were 3 constituents that returned results above NMWQCC limits, Benzene (MW-1 and MW-4), Total Xylenes (MW-1), and Sulfate (MW-1).
January 28, 2009	Groundwater Monitoring	Tetra Tech conducted fourth quarter 2008 groundwater monitoring at the site for BTEX constituents in all four monitor wells. Benzene (MW-1 and MW-4), Ethylbenzene (MW-1) and Xylenes (MW-1) were above NMWQCC standards.
March 1, 2009	Initiate Annual Sampling	The Flora Vista No. 1 site is put on an annual monitoring schedule. The next sampling event was scheduled for September 2009.
September 30, 2009	Groundwater Monitoring	Tetra Tech conducted 2009 annual groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1) and manganese (MW-1 and MW-4) were above NMWQCC standards.

#### SITE HISTORY TIMELINE CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

Date/Time Period	Event/Action	Description/Comments
December 16, 2009	Private Irrigation Well Sampling	Tetra Tech collected a groundwater sample from a domestic well (DW-1) located to the south of the site to be analyzed for BTEX. All constituents were found to be below laboratory detection limits and NMWQCC standards.
May 14, 2010	Initiate Quarterly Sampling	The Flora Vista No. 1 site is put on a semi-annual monitoring schedule. Private domestic irrigation well sampling is also to be included in semi-annual sampling events.
June 10, 2010	Private Irrigation Well Sampling	Tetra Tech collected a groundwater sample from a second private down- gradient domestic well (DW-2) to be sampled for BTEX. All constituents were found to be below laboratory detection limits and NMIWQCC standards.
June 10 and 11, 2010	Groundwater Monitoring	Tetra Tech conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1) and manganese (MW-1 and MW-4) were above NMWQCC standards.
September 27, 2010	Groundwater Monitoring	Tetra Tech conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron and manganese (MW-1 and MW-4) were above NMWQCC standards.
December 14, 2010	Groundwater Monitoring	Tetra Tech conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron and manganese (MW-1 and MW-4) were above NMWQCC standards.
March 17, 2011	Groundwater Monitoring	Tetra Tech conducted groundwater monitoring at the site for BTEX constituents, dissolved iron, dissolved manganese, and sulfate. Groundwater collected from MW-1 exceeded the NMWQCC standards for benzene, xylenes, dissolved iron and dissolved manganese. Groundwater collected from MW-4 exceeded the NMWQCC standards from benzene and dissolved manganese. Tetra Tech also collected a groundwater sample from a domestic well (DW-2) located to the south of the site to be analyzed for BTEX. All constituents were found to be below laboratory detection limits and NMWQCC standards in the domestic well sample.
June 15, 2011	Transfer of Site Consulting Responsibilities	On June 15, 2011, Site consulting responsibilities were transferred from Tetra Tech of Albuquerque, NM to Conestoga-Rovers & Associates (CRA) of Albuquerque, NM.
June 24, 2011	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards. CRA also collected a groundwater sample from Domestic Well DW-1 located south of the site to be analyzed for BTEX. All constituents were found to be below laboratory detection limits and NMWQCC standards in the domestic well sample.
September 29, 2011	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
December 14, 2011	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese, and sulfate. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
March 9, 2012	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards. The well vault of MW-2 is found to be destroyed.
April 25, 2012	Well Pad Repair	CRA on site to oversee repair of MW-2.
June 7, 2012	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards. CRA also collected a groundwater sample from Domestic Well DW-2 located south of the site to be analyzed for BTEX. All constituents were found to be below laboratory detection limits and NMWQCC standards in the domestic well sample.
July 27, 2012	Private Irrigation Well Sampling	CRA collected a groundwater sample from Domestic Well DW-1 located south of the site to be analyzed for BTEX. All constituents were found to be below laboratory detection limits and NMWQCC standards in the domestic well sample.

#### SITE HISTORY TIMELINE CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

Date/Time Period	Event/Action	Description/Comments
September 19, 2012	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
December 13, 2012	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), ethylbenzene (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
March 20, 2013	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
June 12, 2013	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
August 21-22, 2013	Dual-Phase Extraction	CRA and subcontractor AccuVac conducted Mobile Dual-Phase Extraction from MW-1 and MW-4. 1292 gallons pumped from these wells and 0.5 gallons equivalent product removed via SVE during the two-day event.
September 11, 2013	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
December 13, 2013	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1 and MW-4), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
March 19, 2014	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
June 17, 2014	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
September 18, 2014	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. Benzene (MW-1), xylenes (MW-1), dissolved iron (MW-1 and MW-4) and dissolved manganese (MW-1 and MW-4) were above NMWQCC standards.
December 18, 2014	Groundwater Monitoring	CRA conducted groundwater monitoring at the site for BTEX constituents, dissolved iron and manganese. MW-1 and MW-3 were inaccessible during this monitoring event. Benzene, dissolved iron, and dissolved manganese were above NMWQCC standards in MW-4.

## MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

Well ID	Total Depth (ft below TOC)	Elevation*	Screen Interval (ft bgs)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Water Level
				6/20/2003	NM	NM
				9/23/2003	17.03	77.35
				12/16/2003	20.11	74.27
				3/16/2004	23.69	70.69
				6/21/2004	19.92	74.46
				9/30/2004	16.82	77.56
				12/13/2004 3/22/2005	20.40 24.32	73.98 70.06
				6/22/2005	24.32 NM	70.06 NM
				10/24/2005	NM	NM
				12/13/2005	21.24	73.14
				3/22/2006	24.75	69.63
				6/22/2006	20.48	73.90
				10/20/2006	19.13	75.25
		94.38		12/13/2006	21.24	73.14
				11/9/2007	19.71	74.67
				1/15/2008	NM	NM
				3/19/2008	24.35	70.03
				7/23/2008	19.89	74.49 74.90
MW-1	26.02		11.02 - 26.02	10/21/2008 1/28/2009	19.48 23.96	74.90
	20.02		11.02 20.02	9/30/2009	18.16	76.22
				6/10/2010	21.64	72.74
				9/27/2010	19.31	75.07
				12/14/2010	21.41	72.97
				3/17/2011	24.95	69.43
				6/24/2011	22.55	71.83
				9/29/2011	18.37	76.01
			-	12/14/2011	20.63	73.75
				3/9/2012	24.12	70.26
				6/7/2012	23.08	70.88
				9/19/2012	18.94 21.22	75.02 72.74
				12/13/2012 3/20/2013	24.79	69.17
				6/12/2013	22.51	71.45
		93.96		9/11/2013	18.34	75.62
				12/13/2013	21.53	72.43
				3/19/2014	25.26	68.70
				6/17/2014	21.55	72.41
				9/18/2014	19.58	74.38
				12/18/2014	Well covere	d by gravel and asphalt
				10/21/2008	20.71	76.39
				1/28/2009	22.75	74.35
				9/30/2009	18.83	78.27
			1	6/11/2010	22.09	75.01
		97.1	1	9/27/2010 12/14/2010	20.12 NM	76.98 NM
		57.1	1	3/17/2011	NM	NM
			1	6/24/2011	22.50	74.60
			1	9/29/2011	18.95	75.43
			1	12/14/2011	21.79	75.31
MW-2	31.35		12.35 - 27.35	3/9/2012	25.60	71.50
IVIVV-Z	31.33		12.33 - 27.35	6/7/2012	22.46	74.54
				9/19/2012	17.70	79.30
			1	12/13/2012	22.43	74.57
				3/20/2013	26.49	70.51
				6/12/2013	22.13	74.87
		97.00		9/11/2013	17.95	79.05
				12/13/2013	22.78	74.22
				3/19/2014 6/17/2014	26.99	70.01 76.69
				6/17/2014 9/18/2014	20.31 19.87	76.69 77.13
	1	1	1	12/18/2014	23.00	74.00

#### MONITORING WELL SPECIFICATIONS AND GROUNDWATER ELEVATIONS CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

Well ID	Total Depth (ft below TOC)	Elevation*	Screen Interval (ft bgs)	Date Measured	Depth to Groundwater (ft below TOC)	Relative Water Level
				10/21/2008	17.92	74.98
				1/28/2009	21.53	71.37
				9/30/2009	16.43	76.47
				6/10/2010	19.71	73.19
				9/27/2010	17.81	75.09
		92.9		12/14/2010	19.61	73.29
				3/17/2011	23.32	69.58
				6/24/2011	20.55	72.35
				9/29/2011	16.84	77.54
				12/14/2011	19.13	73.77
MW-3	30.87		11.87 - 26.87	3/9/2012	22.51	70.39
IVIVV-3	30.67	-	11.07 - 20.07	6/7/2012	20.93	71.50
				9/19/2012	17.48	74.95
				12/13/2012	19.78	72.65
				3/20/2013	23.18	69.25
				6/12/2013	20.68	71.75
		92.43		9/11/2013	16.90	75.53
				12/13/2013	20.11	72.32
				3/19/2014	23.64	68.79
			-	6/17/2014	19.85	72.58
				9/18/2014	18.01	74.42
				12/18/2014	Well cove	rd by standing water
				10/21/2008	18.06	75.54
				1/28/2009	24.55	69.05
				9/30/2009	17.89	75.71
				6/10/2010	21.02	72.58
				9/27/2010	18.93	74.67
		93.6		12/14/2010	21.04	72.56
				3/17/2011	24.58	69.02
				6/24/2011	21.80	71.80
				9/29/2011	17.94	76.44
				12/14/2011	20.28	73.32
MW-4	30.42		11.42 - 26.42	3/9/2012	23.70	69.90
10100 -7	30.42		22.72 20.72	6/7/2012	22.19	70.98
				9/19/2012	18.60	74.57
				12/13/2012	20.96	72.21
				3/20/2013	24.38	68.79
				6/12/2013	21.81	71.36
		93.17		9/11/2013	18.89	74.28
				12/13/2013	21.28	71.89
				3/19/2014	24.88	68.29
				6/17/2014	21.21	71.96
				9/18/2014	19.16	74.01
				12/18/2014	21.41	71.76

#### Notes:

- 1. \*Casing elevations are based on an arbitrary 100 ft relative surface elevation set at the gas well head 2. ft = Feet
- 3. TOC = Top of casing
- 4. bgs = below ground surface
- 5. NM = Not measured

#### FIELD PARAMETERS SUMMARY CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

	Sample	Temperature			Conductivity	DO	ORP	Volume	
Well ID	Date	(°C)	рН	TDS (g/L)	- 1	(mg/L)	(mV)	(gallons)	
	3/19/2014	, ,	No para		ken due to low		ne.		
NA)A/-1	6/17/2014	15.52	6.08	0.601	925	2.45	-185.9	1.25	
	6/17/2014	15.56	6.19	0.601	925	2.36	-174.7	1.75	
	6/17/2014	15.92	6.35	0.603	928	2.64	-148.9	2.00	
MW-1	, ,								
	9/18/2014	17.00	6.79	0.800	1280	11.19	-110.0	2.50	
	9/18/2014	16.90	6.76	0.900	1330	11.26	-111.0	2.75	
	12/18/2014	Well	was obstr	ucted and	inaccessible du	e to TRC o	perations.	I	
	3/19/2014				ken due to low				
	6/17/2014	15.71	6.83	0.528	812	4.60	-81.5	4.75	
	6/17/2014	15.48	6.71	0.524	807	4.41	-74.9	5.25	
	6/17/2014	15.43	6.73	0.528	812	4.13	-74.8	5.75	
	0,11,201.	201.0	0.7.5	0.520	011	25	70	5.75	
MW-2	9/18/2014	16.40	7.08	0.600	930	10.28	65.0	4.25	
	9/18/2014	16.40	7.03	0.600	910	9.88	69.0	4.75	
	9/18/2014	16.50	7.04	0.600	910	9.57	71.0	5.75	
	3, 10, 201 :	10.50	7.0.	0.000	310	3.37	7 2.0	5.75	
	12/18/2014	15.51	7.70	0.742	1141	6.99	-18.4	3.50	
	12/18/2014	15.91	7.57	0.748	1150	6.86	-4.5	4.00	
	12/18/2014	15.86	7.55	0.749	1152	7.73	7.5	4.50	
	3/19/2014	15.36	7.07	0.598	920	7.18	-95.7	2.00	
	3/19/2014	15.47	6.75	0.596	920	4.41	-92.5	2.50	
	3/19/2014	15.41	6.69	0.597	919	4.15	-90.9	3.00	
	3/13/2011	20112	0.03	0.557	313	25	30.3	5.00	
	6/17/2014	14.83	6.99	0.508	781	4.51	-96.1	3.75	
	6/17/2014	14.81	6.90	0.508	782	4.31	-93.8	4.25	
MW-3	6/17/2014	14.80	6.89	0.507	780	4.29	-93.5	4.75	
	0,11,201	2 1.00	0.03	0.507	, 00	5	30.0		
	9/18/2014	15.00	7.34	0.360	557	11.31	80.0	4.50	
	9/18/2014	14.90	7.15	0.350	553	10.62	87.0	5.25	
	9/18/2014	14.90	7.15	0.350	548	10.24	90.0	5.75	
	0, 20, 2021								
	12/18/2014		Well was	found to k	e covered in st	anding wa	iter.	ļ	
	3/19/2014	15.49	6.12	0.698	1073	2.96	-137.8	1.75	
	3/19/2014	15.56	6.50	0.676	1039	2.27	-156.1	2.25	
	3/19/2014	15.51	6.32	0.671	1032	1.87	-174.8	2.75	
	3, 13, 2017	10.01	0.52	0.07.1	1002	2.07	27 1.0		
	6/17/2014	15.51	6.85	0.600	924	3.45	-182.5	3.50	
	6/17/2014	15.23	6.70	0.600	923	1.76	-186.4	4.00	
MW-4	6/17/2014	15.11	6.66	0.599	922	1.29	-186.3	4.50	
	3, 1., 2017	25.22	0.00	0.000	3		230.3	50	
	9/18/2014		No para	meters tak	en due to cont	inuous she	en.	I	
	3, 13, 2017		para			2.2.30 0/10			
	12/18/2014	15.43	7.55	0.899	1383	3.85	-64.8	3.50	
	12/18/2014	15.89	7.38	0.897	1381	3.21	-93.5	4.00	
	12/18/2014	16.00	7.32	0.895	1377	2.69	-106.5	4.50	
	12/10/2014	10.00	7.34	0.033	13//	۷.05	-100.3	4.30	

Notes:

TDS = total dissolved solids

DO = dissolved oxygen

 ${\sf ORP} = {\sf oxidation}\text{-}{\sf reduction} \ {\sf potential}$ 

## GROUNDWATER ANALYTICAL RESULTS SUMMARY CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

				ı		1	Xylenes	ſ	Iron	Managnoso
			Camanda	Dansana.	F4blbansa	Taluana	-	Sulfate		Manganese
Well ID	Sample ID	Date	Sample Type	Benzene (mg/L)	Ethylbenze ne (mg/L)	Toluene (mg/L)	(total) (mg/L)	(mg/L)	(dissolved) (mg/L)	(dissolved) (mg/L)
	NMWQCC Groundwater Quali		.,,,,	0.01	0.75	0.75	0.62	600	1	0.2
	MW-1	6/20/2003	(orig)	1.7	0.49	0.3	5.09			
	MW-1	9/23/2003	(orig)	7.5	0.66	0.02	9.22			
	MW-1	12/16/2003	(orig)	7.93	1.18	0.01	0.864			
	MW-1	3/16/2004	(orig)	6.86	1.16	ND	8.47			
	MW-1	6/21/2004	(orig)	4.14	0.43	ND	3.12			
	MW-1	9/30/2004	(orig)	9.08	1.41	0.03	9.98			
	MW-1 MW-1	12/13/2004 3/22/2005	(orig) (orig)	8.52 4.55	1.34 0.85	ND ND	9.39 5.95			
	MW-1	6/22/2005	(orig)	4.33	0.85	0.02188	3.33			
	MW-1	10/24/2005	(orig)	6.39	1.01	ND	7.416			
	MW-1	12/13/2005	(orig)	6.17	1.01	ND	7.57			
	MW-1	3/22/2006	(orig)	3.58	0.77	ND	5.84			
	MW-1	6/22/2006	(orig)	3.1	0.5	ND	3.5			
	MW-1	10/20/2006	(orig)	6.6	1.22	0.01	8.91			
	MW-1	12/13/2006	(orig)	4.23	1.09	0.01	8.13			
	MW-1 MW-1	3/27/2007 6/25/2007	(orig) (orig)	2.37 2.87	0.504 0.51	0.007 0.14	3.749 3.89			
	MW-1	11/9/2007	(orig)	5.6	0.91	< 0.0007	6.8			
	MW-1	1/15/2008	(orig)	4.2	0.89	< 0.0007	5.7			
	MW-1	3/19/2008	(orig)	2.7	0.59	< 0.005	4.7			
	MW-1	7/23/2008	(orig)	2	0.38	< 0.005	1.4			
MW-1	MW-1	10/21/2008	(orig)	4.5	0.63	< 0.005	5.3			
10100 1	MW-1	1/28/2009	(orig)	4	0.88	< 0.005	8.7			
	MW-1 MW-1	9/30/2009 6/10/2010	(orig)	4.2 1.7	0.53 0.33	0.0016 0.0012	5.1 0.99	11.7 27	<b>2.08</b> 0.126	1.09 1.28
	MW-1	9/27/2010	(orig) (orig)	3.2	0.53	0.0012	4.2016	1.8	7.73	1.19
	MW-1	12/14/2010	(orig)	3.2	0.62	0.0012	5.3016	1.03	4.13	0.888
	MW-1	3/17/2011	(orig)	1.7	0.48	0.0037	4.3092	2.27	1.11	1.07
	GW-74926-062411-PG-01	6/24/2011	(orig)	2.1	0.494	0.0025	2.03	18.4	< 0.1	0.894
	GW-74926-062411-PG-02	6/24/2011	(Duplicate)	1.97	0.458	0.0026	1.94			
	GW-074926-092911-CM-009	9/29/2011	(orig)	2.44	0.519	< 0.005	3.65	< 1.0	25.2	1.02
	GW-074926-121411-CB-MW-1 GW-074926-3912-CB-MW-1	12/14/2011 3/9/2012	(orig) (orig)	2.31 1.59	0.508 0.636	0.0055 < 0.001	3.93 5.04	13.2	25.4 25.3	0.945 1.03
	GW-074926-060712-CB-MW-1	6/7/2012	(orig)	1.77	0.030	0.127	0.633		21.4	0.914
	GW-074926-091912-JP-MW-1	9/19/2012	(orig)	1.52	0.414	< 0.020	2.49		19.0	0.86
	GW-074926-121312-CM-MW-1	12/13/2012	(orig)	2.02	0.809	< 0.025	5.02		23.8	0.75
	GW-074926-032013-CM-MW-1	3/20/2013	(orig)	0.182	0.0406	< 0.002	0.0914		9.39	1.08
	GW-074926-061213-JR-MW1	6/12/2013	(orig)	0.698	0.160	< 0.001	0.873		12.8	1.12
	GW-074926-091113-CM-MW1	9/11/2013	(orig)	1.050	0.831	< 0.020	5.100		18.0	1.050
	GW-074926-121313-CM-MW-1	12/13/2013	(orig)	0.591	0.670	0.0015	1.790		25.4	0.88
	GW-074926-031914-CK-MW-1	3/19/2014	(orig)	0.0822	0.0393	< 0.001	0.271			0.896
	GW-074926-061714-CK-MW-1 GW-074926-091814-CB-MW-1	6/17/2014 9/18/2014	(orig) (orig)	0.522 0.849	0.189 0.299	< 0.001 < 0.001	0.398 <b>1.230</b>		17.4 23.4	1.01
		12/18/2014	(Orig)		as obstructed					1.01
	MW-2	10/21/2008	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	115		
	MW-2	1/28/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	ND	ND	ND
	MW-2	9/30/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	123	0.0223	< 0.005
	MW-2	6/11/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	156	< 0.02	< 0.005
	MW-2	9/27/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	179	< 0.02	< 0.005
	GW-74926-062411-PG-05	6/24/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	176	0.191	< 0.015
	GW-074926-092911-CM-006	9/29/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	151	< 0.05	< 0.005
	GW-074926-121411-CB-MW-2	12/14/2011	(orig)	0.00031 J	0.0002 J	< 0.001	0.0022 J	135	0.0133 J	0.0022 J
	GW-074926-3912-CB-MW-2 GW-074926-060712-CB-MW-2	3/9/2012 6/7/2012	(orig)	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.003 < 0.003		< 0.05 0.0822	< 0.005 0.0052
MW-2	GW-074926-060712-CB-MW-2	9/19/2012	(orig) (orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.0822	< 0.0052
	GW-074926-121312-CM-MW-2	12/13/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		<0.05	< 0.005
	GW-074926-032013-CM-MW-2	3/20/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.05	< 0.005
	GW-074926-061213-JR-MW2	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.0665	< 0.005
	GW-074926-091113-CM-MW2	9/11/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.005
	GW-074926-121313-CM-MW-2	12/13/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.005
	GW-074926-031914-CK-MW-2	3/19/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	0.0242
	GW-074926-061714-CK-MW-2	6/17/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.005
	GW-074926-091814-CB-MW-2	9/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.0656	< 0.005
	GW-074926-121814-CM-MW-2	12/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.709	0.0055

### GROUNDWATER ANALYTICAL RESULTS SUMMARY CONOCOPHILLIPS COMPANY FLORA VISTA NO. 1 SAN JUAN COUNTY, NEW MEXICO

							Xylenes		Iron	Manganese
			Sample	Benzene	Ethylbenze	Toluene	(total)	Sulfate	(dissolved)	(dissolved)
Well ID	Sample ID	Date	Туре	(mg/L)	ne (mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
	NMWQCC Groundwater Quali			0.01	0.75	0.75	0.62	600	1	0.2
	MW-3	10/21/2008	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	93		
	MW-3	1/28/2009	(orig)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	ND 144	ND 0.0E43	ND < 0.00F
	MW-3 MW-3	9/30/2009 6/10/2010	(orig) (orig)	< 0.0005 < 0.0005	< 0.0005 < 0.001	< 0.0005 < 0.001	< 0.0005 < 0.001	122	0.0543 0.0425	< 0.005 < 0.005
	MW-3	9/27/2010	(orig)	< 0.0003	< 0.001	< 0.001	< 0.001	170	< 0.02	< 0.005
	MW-3	12/14/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	142	< 0.02	< 0.005
	MW-3	3/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001	119	< 0.02	< 0.005
	GW-74926-062411-PG-03	6/24/2011	(orig)	< 0.0010	< 0.0010	< 0.0010	< 0.0030	127	0.189	< 0.015
	GW-074926-092911-CM-007	9/29/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003	160	< 0.05	0.0063
	GW-074926-121411-CB-MW-3 GW-074926-3912-CB-MW-3	12/14/2011 3/9/2012	(orig)	< 0.001 < 0.001	< 0.001 < 0.001	< 0.001 < 0.001	< 0.003 < 0.003	136	0.0288 J < 0.05	0.0207 < 0.005
MW-3	GW-074926-3912-CB-WW-3	6/7/2012	(orig) (orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.05	< 0.005
	GW-074926-091912-JP-MW-3	9/19/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.05	< 0.005
	GW-074926-121312-CM-MW-3	12/13/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.0605	0.026
	GW-074926-032013-CM-MW-3	3/20/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.05	0.0149
	GW-074926-061213-JR-MW3	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		0.189	0.0094
	GW-074926-091113-CM-MW3 GW-074926-121313-CM-MW-3	9/11/2013 12/13/2013	(orig) (orig)	< 0.001	< 0.001 < 0.001	< 0.001	< 0.003 < 0.003		< 0.050 < 0.050	< 0.005 0.013
	GW-074926-031914-CK-MW-3	3/19/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.015
	GW-074926-061714-CK-MW-3	6/17/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.005
	GW-074926-091814-CB-MW-3	9/18/2014	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		< 0.050	< 0.005
		12/18/2014	Well	was found t	to be covered	in standin	g water fro	m recent	inclement w	eather.
	MW-4	10/21/2008	(orig)	0.039	0.031	< 0.0005	0.18	90.1		
	MW-4	1/28/2009	(orig)	0.66	0.064	< 0.0005	0.583	ND	ND	ND
	MW-4	9/30/2009	(orig)	0.34	0.054	< 0.0005	0.572	48.9	0.148	4.48
	MW-4 MW-4	6/10/2010 9/27/2010	(orig) (orig)	0.14 0.033	0.027 0.041	< 0.001 < 0.001	0.252 0.274	53.3 92.5	0.0566 <b>1.22</b>	4.65 4.34
	MW-4	12/14/2010	(orig)	0.13	0.093	< 0.001	0.899	67.5	1.75	4.69
	MW-4	3/17/2011	(orig)	0.017	0.018	< 0.001	0.1966	83	0.0852	4.46
	GW-74926-062411-PG-04	6/24/2011	(orig)	0.0296	0.0371	< 0.0010	0.472	130	1.5	4.9
	GW-074926-092911-CM-008 GW-074926-092911-CM-010	9/29/2011 9/29/2011	(orig) (Duplicate)	0.0392	0.0039 0.0035	< 0.001 < 0.001	0.0536 0.0483	96.1	2.55	4.1
	GW-074926-092911-CW-010	12/14/2011	(orig)	0.101	0.0443	< 0.001	0.378	81.2	2.62	4.58
	GW-074926-121411-CB-DUP	12/14/2011	(Duplicate)	0.104	0.0437	< 0.005	0.372			
	GW-074926-3912-CB-MW-4	3/9/2012	(orig)	0.0264	0.0066	< 0.001	0.0651		2.46	4.73
	GW-074926-3912-CB-DUP	3/9/2012	(Duplicate)	0.0234	0.0056	< 0.001	0.058			
	GW-074926-060712-CB-MW-4 GW-074926-060712-CB-DUP	6/7/2012 6/7/2012	(orig) (Duplicate)	0.044	0.0245 0.0124	< 0.001 < 0.001	0.303 0.155		2.07	4.02
	GW-074926-091912-JP-MW-4	9/19/2012	(orig)	0.0029	0.0124	< 0.001	0.0576		1.93	4.5
	GW-074926-091912-JP-DUP	9/19/2012	(Duplicate)	0.0028	0.0045	< 0.001	0.0551			
MW-4	GW-074926-121312-CM-MW-4	12/13/2012	(orig)	0.0941	0.0399	< 0.002	0.385		2.92	4.9
	GW-074926-121312-CM-DUP	12/13/2012	(Duplicate)	0.197	0.0712	< 0.001	0.550		1.82	4.37
	GW-074926-032012-CM-MW-4 GW-074926-032012-CM-DUP	3/20/2013 3/20/2013	(orig) (Duplicate)	0.0035 0.0034	0.0020 0.0022	< 0.001 < 0.001	0.0211 0.0212		1.82	4.37
	GW-074926-061213-JR-MW4	6/12/2013	(orig)	0.0588	0.0509	< 0.005	0.545		1.53	4.29
	GW-074926-061213-JR-DUP	6/12/2013	(Duplicate)	0.0215	0.0213	< 0.001	0.218			
	GW-074926-091113-CM-MW4	9/11/2013	(orig)	0.0166	0.0231	< 0.001	0.226		3.100	4.350
	GW-074926-091113-CM-DUP	9/11/2013	(Duplicate)	0.0156	0.0162	< 0.001	0.158			
	GW-074926-121313-CM-MW-4	12/13/2013	(orig)	0.0362	0.0199	< 0.001	0.169		2.7	4.8
	GW-074926-121313-CM-DUP GW-074926-031914-CK-MW-4	12/13/2013 3/19/2014	(Duplicate) (orig)	<b>0.0357</b> < 0.001	0.0185 < 0.001	< 0.001	0.160 0.0046		1.33	4.19
	GW-074926-031914-CK-DUP	3/19/2014	(Duplicate)	< 0.001	< 0.001	< 0.001	0.0040			
	GW-074926-061714-CK-MW-4	6/17/2014	(orig)	0.0069	< 0.001	< 0.001	< 0.003		2.68	4.01
	GW-074926-061714-CK-DUP	6/17/2014	(Duplicate)	0.0063	< 0.001	< 0.001	< 0.003			
	GW-074926-091814-CB-MW-4		(orig)	< 0.001	< 0.001	< 0.001			3.43	4.63
	GW-074926-091814-CB-DUP	9/18/2014	(Duplicate)	0.0018	< 0.001	< 0.001	< 0.003			
	GW-074926-121814-CM-MW-4		(orig)	0.0398	0.0062	< 0.001	0.0486		4.020	4.460
	GW-074926-121814-CM-DUP	12/18/2014	(Duplicate)	0.0296	0.0048	< 0.001	0.0354			
	DW-1	12/16/2009	(orig)	< 0.001	< 0.001	< 0.001	< 0.001			
D)44.4	RS-74926-062411-CB-01	6/24/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.003			
DW-1	GW-074926-072712-JK-DW-17	7/27/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003			
	DW-074926-061213-JR-32	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		 No sc	
		12/18/2014			contact land			sampling	. No respons	e.
	#34	6/10/2010	(orig)	< 0.001	< 0.001	< 0.001	< 0.001			
DV4 2	Domestic #34	3/17/2011	(orig)	< 0.001	< 0.001	< 0.001	< 0.001			
DW-2	GW-074926-061712-CB-DW34	6/7/2012	(orig)	< 0.001	< 0.001	< 0.001	< 0.003			
	DW-074926-061213-JR-34	6/12/2013	(orig)	< 0.001	< 0.001	< 0.001	< 0.003		the winter :	onths
		12/18/2014	Atte	iiibi io sam	ple well but l	andowner	ııau Sılut W	en in ior	the winter m	UIIIIS.

- Notes:

  1. MW = monitoring well

  2. NMWQCC = New Mexico Water Quality Control Commission
- 3. Constituents in **BOLD** are in excess of NMWQCC groundwater quality standards
- 4. mg/L = milligrams per liter (parts per million)
- 5. < 1.0 = Below laboratory detection limit of 1.0 mg/L
- 6. ND = not detected
- 7. -- = not analyzed

## Appendix A

**Groundwater Laboratory Analytical Reports** 







April 03, 2014

Jeff Walker COP Conestoga-Rovers & Associa 6121 Indian School Rd. NE Ste 200 Albuquerque, NM 87110

RE: Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

#### Dear Jeff Walker:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

alice.flanagan@pacelabs.com

**Project Manager** 

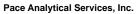
Alice Flanagan

**Enclosures** 

cc: Angela Bown, COP Conestoga-Rovers & Associa

Christine Matthews, CRA





9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665



#### **CERTIFICATIONS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

**Kansas Certification IDs** 

9608 Loiret Boulevard, Lenexa, KS 66219 WY STR Certification #: 2456.01 Arkansas Certification #: 13-012-0 Illinois Certification #: 003097 lowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407-13-4 Utah Certification #: KS000212013-3 Illinois Certification #: 003097

(913)599-5665



#### **SAMPLE SUMMARY**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60165433001	GW-074926-031914-CK-MW-1	Water	03/19/14 17:40	03/21/14 08:30
60165433002	GW-074926-031914-CK-MW-2	Water	03/19/14 17:35	03/21/14 08:30
60165433003	GW-074926-031914-CK-MW-3	Water	03/19/14 17:25	03/21/14 08:30
60165433004	GW-074926-031914-CK-MW-4	Water	03/19/14 17:10	03/21/14 08:30
60165433005	GW-074926-031914-CK-DUP	Water	03/19/14 08:00	03/21/14 08:30
60165433006	TB-074926-031914-CK-1	Water	03/19/14 08:00	03/21/14 08:30

#### **REPORT OF LABORATORY ANALYSIS**



# **SAMPLE ANALYTE COUNT**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60165433001	GW-074926-031914-CK-MW-1	EPA 5030B/8260	JTS	8
60165433002	GW-074926-031914-CK-MW-2	EPA 6010	JGP	2
		EPA 5030B/8260	JTS	8
60165433003	GW-074926-031914-CK-MW-3	EPA 6010	JGP	2
		EPA 5030B/8260	JTS	8
60165433004	GW-074926-031914-CK-MW-4	EPA 6010	JGP	2
		EPA 5030B/8260	JTS	8
60165433005	GW-074926-031914-CK-DUP	EPA 5030B/8260	JTS	8
60165433006	TB-074926-031914-CK-1	EPA 5030B/8260	JTS	8





### **PROJECT NARRATIVE**

074926 FLORA VISTA NO 1 Project:

Pace Project No.: 60165433

Method: **EPA 6010** 

Description: 6010 MET ICP, Dissolved

Client: COP Conestoga-Rovers & Associates, Inc. NM

Date: April 03, 2014

### **General Information:**

3 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### **Additional Comments:**



### **PROJECT NARRATIVE**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Method: EPA 5030B/8260 Description: 8260 MSV

Client: COP Conestoga-Rovers & Associates, Inc. NM

Date: April 03, 2014

### **General Information:**

6 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/60338

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/60433

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

## **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: GW-074926-031914-CK- MW-1	Lab ID: 60165433	<b>6001</b> Collected: 03/19/1	4 17:40	Received: 0	3/21/14 08:30	Matrix: Water			
Parameters	Results U	nits Report Limit	DF	Prepared	Analyzed	CAS No.	Qual		
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	<b>82.2</b> ug/L	1.0	1		03/31/14 12:19	71-43-2			
Ethylbenzene	<b>39.3</b> ug/L	1.0	1		03/31/14 12:19	100-41-4			
Toluene	ND ug/L	1.0	1		03/31/14 12:19	108-88-3			
Xylene (Total)	<b>271</b> ug/L	3.0	1		03/31/14 12:19	1330-20-7			
Surrogates									
4-Bromofluorobenzene (S)	98 %	80-120	1		03/31/14 12:19	9 460-00-4			
1,2-Dichloroethane-d4 (S)	95 %	80-120	1		03/31/14 12:19	17060-07-0			
Toluene-d8 (S)	99 %	80-120	1		03/31/14 12:19	2037-26-5			
Preservation pH	1.0	0.10	1		03/31/14 12:19	)			



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: GW-074926-031914-CK- MW-2	Lab ID: 601654330	<b>02</b> Collected: 03/19/1	4 17:35	Received: 03	/21/14 08:30 N	Matrix: Water	
Parameters	Results Un	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EF	A 6010 Preparation Met	nod: EP/	A 3010			
Iron, Dissolved	ND ug/L	50.0	1	03/28/14 11:00	04/01/14 17:12	7439-89-6	
Manganese, Dissolved	<b>24.2</b> ug/L	5.0	1	03/28/14 11:00	04/01/14 17:12	7439-96-5	
8260 MSV	Analytical Method: EF	A 5030B/8260					
Benzene	ND ug/L	1.0	1		03/26/14 23:50	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		03/26/14 23:50	100-41-4	
Toluene	ND ug/L	1.0	1		03/26/14 23:50	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		03/26/14 23:50	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	96 %	80-120	1		03/26/14 23:50	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %	80-120	1		03/26/14 23:50	17060-07-0	
Toluene-d8 (S)	99 %	80-120	1		03/26/14 23:50	2037-26-5	
Preservation pH	1.0	0.10	1		03/26/14 23:50		



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: GW-074926-031914-CK- MW-3	Lab ID: 60165433	3003 Collected: 03/19/	14 17:25	Received: 03	3/21/14 08:30 N	Matrix: Water	
Parameters	Results L	Inits Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: E	EPA 6010 Preparation Met	hod: EP	A 3010			
Iron, Dissolved	ND ug/L	50.0	1	03/28/14 11:00	04/01/14 17:15	7439-89-6	
Manganese, Dissolved	ND ug/L	5.0	1	03/28/14 11:00	04/01/14 17:15	7439-96-5	
8260 MSV	Analytical Method: E	EPA 5030B/8260					
Benzene	ND ug/L	1.0	1		03/27/14 00:06	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		03/27/14 00:06	100-41-4	
Toluene	ND ug/L	1.0	1		03/27/14 00:06	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		03/27/14 00:06	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	97 %	80-120	1		03/27/14 00:06	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %	80-120	1		03/27/14 00:06	17060-07-0	
Toluene-d8 (S)	99 %	80-120	1		03/27/14 00:06	2037-26-5	
Preservation pH	1.0	0.10	1		03/27/14 00:06		



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: GW-074926-031914-CK- MW-4	Lab ID: 60165433	<b>3004</b> Collected: 03/19	/14 17:10	Received: 03	3/21/14 08:30 N	Matrix: Water	
Parameters	Results L	Jnits Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: E	EPA 6010 Preparation Me	thod: EP	A 3010			
Iron, Dissolved	<b>1330</b> ug/L	250	5	03/28/14 11:00	04/02/14 15:17	7439-89-6	
Manganese, Dissolved	<b>4190</b> ug/L	25.0	5	03/28/14 11:00	04/01/14 16:55	7439-96-5	
8260 MSV	Analytical Method: E	EPA 5030B/8260					
Benzene	ND ug/L	1.0	1		03/27/14 00:22	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		03/27/14 00:22	100-41-4	
Toluene	ND ug/L	1.0	1		03/27/14 00:22	108-88-3	
Xylene (Total)	<b>4.6</b> ug/L	3.0	1		03/27/14 00:22	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	98 %	80-120	1		03/27/14 00:22	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %	80-120	1		03/27/14 00:22	17060-07-0	
Toluene-d8 (S)	99 %	80-120	1		03/27/14 00:22	2037-26-5	
Preservation pH	1.0	0.10	1		03/27/14 00:22		



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: GW-074926-031914-CK- DUP	Lab ID: 6016543300	O5 Collected: 03/19/1	4 08:00	Received: 03	3/21/14 08:30 I	Matrix: Water			
Parameters	Results Unit	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual		
8260 MSV	Analytical Method: EPA 5030B/8260								
Benzene	ND ug/L	1.0	1		03/31/14 12:35	71-43-2			
Ethylbenzene	ND ug/L	1.0	1		03/31/14 12:35	100-41-4			
Toluene	ND ug/L	1.0	1		03/31/14 12:35	108-88-3			
Xylene (Total)	<b>4.9</b> ug/L	3.0	1		03/31/14 12:35	1330-20-7			
Surrogates									
4-Bromofluorobenzene (S)	93 %	80-120	1		03/31/14 12:35	460-00-4			
1,2-Dichloroethane-d4 (S)	91 %	80-120	1		03/31/14 12:35	17060-07-0			
Toluene-d8 (S)	106 %	80-120	1		03/31/14 12:35	2037-26-5			
Preservation pH	1.0	0.10	1		03/31/14 12:35	5			



# **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Sample: TB-074926-031914-CK-1	Lab ID: 60165433006	6 Collected: 03/19/1	4 08:00	Received: 03	3/21/14 08:30 N	/latrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		03/27/14 00:55	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		03/27/14 00:55	100-41-4	
Toluene	ND ug/L	1.0	1		03/27/14 00:55	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		03/27/14 00:55	1330-20-7	
Surrogates	_						
4-Bromofluorobenzene (S)	95 %	80-120	1		03/27/14 00:55	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %	80-120	1		03/27/14 00:55	17060-07-0	
Toluene-d8 (S)	99 %	80-120	1		03/27/14 00:55	2037-26-5	
Preservation pH	1.0	0.10	1		03/27/14 00:55		

Qualifiers





### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

QC Batch: MPRP/26638 Analysis Method: EPA 6010

QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved

Associated Lab Samples: 60165433002, 60165433003, 60165433004

METHOD BLANK: 1351484 Matrix: Water

Associated Lab Samples: 60165433002, 60165433003, 60165433004

Parameter Units Blank Reporting
Result Limit Analyzed

 Iron, Dissolved
 ug/L
 ND
 50.0
 04/01/14 15:36

 Manganese, Dissolved
 ug/L
 ND
 5.0
 04/02/14 10:43

LABORATORY CONTROL SAMPLE: 1351485

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Iron, Dissolved ug/L 10000 10800 108 80-120 ug/L Manganese, Dissolved 1000 1070 107 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1351486 1351487

MSD MS 60165424001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Iron, Dissolved ug/L ND 10000 10000 9890 9740 98 96 75-125 2 20 Manganese, Dissolved ug/L 832 1000 1000 1860 1760 102 93 75-125 5 20



### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

QC Batch: MSV/60338 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60165433002, 60165433003, 60165433004, 60165433006

METHOD BLANK: 1350438 Matrix: Water
Associated Lab Samples: 60165433002, 60165433003, 60165433004, 60165433006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/26/14 20:35	
Ethylbenzene	ug/L	ND	1.0	03/26/14 20:35	
Toluene	ug/L	ND	1.0	03/26/14 20:35	
Xylene (Total)	ug/L	ND	3.0	03/26/14 20:35	
1,2-Dichloroethane-d4 (S)	%	100	80-120	03/26/14 20:35	
4-Bromofluorobenzene (S)	%	97	80-120	03/26/14 20:35	
Toluene-d8 (S)	%	97	80-120	03/26/14 20:35	

LABORATORY CONTROL SAMPLE:	1350439					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	20	20.6	103	80-120	
Ethylbenzene	ug/L	20	21.3	106	80-121	
Toluene	ug/L	20	20.5	102	80-122	
Xylene (Total)	ug/L	60	63.8	106	80-121	
1,2-Dichloroethane-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			99	80-120	



### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

QC Batch: MSV/60433 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60165433001, 60165433005

METHOD BLANK: 1352732 Matrix: Water

Associated Lab Samples: 60165433001, 60165433005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/31/14 09:31	
Ethylbenzene	ug/L	ND	1.0	03/31/14 09:31	
Toluene	ug/L	ND	1.0	03/31/14 09:31	
Xylene (Total)	ug/L	ND	3.0	03/31/14 09:31	
1,2-Dichloroethane-d4 (S)	%	94	80-120	03/31/14 09:31	
4-Bromofluorobenzene (S)	%	98	80-120	03/31/14 09:31	
Toluene-d8 (S)	%	101	80-120	03/31/14 09:31	

LABORATORY CONTROL SAMPLE:	:: 1352733							
		Spike	LCS	LCS	% Rec			
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers		
Benzene	ug/L	20	18.5	92	80-120			
Ethylbenzene	ug/L	20	21.1	105	80-121			
Toluene	ug/L	20	22.8	114	80-122			
Xylene (Total)	ug/L	60	65.6	109	80-121			
1,2-Dichloroethane-d4 (S)	%			92	80-120			
4-Bromofluorobenzene (S)	%			92	80-120			
Toluene-d8 (S)	%			110	80-120			



### **QUALIFIERS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### **BATCH QUALIFIERS**

Batch: MSV/60338

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/60433

Date: 04/03/2014 08:56 AM

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.



# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60165433

Date: 04/03/2014 08:56 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60165433002	GW-074926-031914-CK-MW-2	EPA 3010	MPRP/26638	EPA 6010	ICP/20257
60165433003	GW-074926-031914-CK-MW-3	EPA 3010	MPRP/26638	EPA 6010	ICP/20257
60165433004	GW-074926-031914-CK-MW-4	EPA 3010	MPRP/26638	EPA 6010	ICP/20257
60165433001	GW-074926-031914-CK-MW-1	EPA 5030B/8260	MSV/60433		
60165433002	GW-074926-031914-CK-MW-2	EPA 5030B/8260	MSV/60338		
60165433003	GW-074926-031914-CK-MW-3	EPA 5030B/8260	MSV/60338		
60165433004	GW-074926-031914-CK-MW-4	EPA 5030B/8260	MSV/60338		
60165433005	GW-074926-031914-CK-DUP	EPA 5030B/8260	MSV/60433		
60165433006	TB-074926-031914-CK-1	EPA 5030B/8260	MSV/60338		



# Sample Condition Upon Receipt ESI Tech Spec Client

# WO#:60165433

Client Name: COP CRA_N M		Optional
Courier: Fed Ex U UPS USPS Client Commercial Page	ce Other O	Proj Due Date:
Tracking #: 56 89 1281 4603 Pace Shipping Label Us	sed? Yes ☑ No □	Proj Name:
Custody Seal on Cooler/Box Present: Yes   ✓ No   Seals intact: Yes	s 🗹 No 🗆	
Packing Material: Bubble Wrap □ Bubble Bags □ Foam ☑	None □ Other ☑	745
Thermometer Used: 1239 / T-194 Type of Ice: Well Blue	e None   Samples received of	on ice, cooling process has begun.
Cooler Temperature: 3.0 (circle	Date and init	ials of person examining
Temperature should be above freezing to 6°C	contents: _3	1/2//17 Km
Chain of Custody present:   ✓ Yes □No □N/A		
Chain of Custody filled out:   ✓ Yes □No □N/A	2.	
Chain of Custody relinquished:   ✓ Yes □No □N/A	3,	
Sampler name & signature on COC: ☐Yes ☐No ☐N/A	4.	
Samples arrived within holding time:   ☐Yes □No □N/A	5.	
Short Hold Time analyses (<72hr):	5,	
Rush Turn Around Time requested:	7.	
Sufficient volume:	3,	
Correct containers used:   ✓ Yes □ No □ N/A		
Pace containers used:	9.	
Containers intact:	10.	(*)
Unpreserved 5035A soils frozen w/in 48hrs? □Yes □No ☑N/A	11.	
Filtered volume received for dissolved tests?	12.	
Sample labels match COC:		
Includes date/time/ID/analyses Matrix: WT	13.	
All containers needing preservation have been checked.   ✓ Yes □No □N/A	3	
All containers needing preservation are found to be in compliance with EPA recommendation.	14.	
Exceptions: (OA, coliform, TOC, O&G, WI-DRO (water),	Initial when Lo	ot # of added
Trip Blank present: ☑Yes ☐No ☐N/A	completed	eservative
0.000	15.	
Headspace in VOA vials ( >6mm):		
	16.	
	17. List State:	
Client Notification/ Resolution: Copy COC to Client? Y	Field Data Required?	Y / N
	/	Log: Record start and finish times
Person Contacted: Date/Time:	when t	inpacking cooler, if >20 min,
Comments/ Resolution:	Start:	k sample temps.
	Start.	
Project Manager Review:	Date: 3/24/14 Temp	

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

		17 M	DRINKING WATER	H						(10165433	123	BRICKS WD	2	E	M	ale						SNOITIONS	>		-	Cooler (Y/I	-4
of			DRIN	OTHER						(gall	# #	(BP3)	-	<b>→</b>								SAMPLE CONDITIONS	>-		peje	Ice (Y/V)	
Page:			ATER						(N/Y) <del>6</del>	Residual Chlorin	<u> </u>	-				4	_	+	+		_	S	7		uc	Received o	-
- Pa		NCY	GROUND WATER	RCRA		Σ	23	2222			F												₩ 6		0	Temp in	-
		RY AGE	ր ը	L R	_		ered (Yil)															TIME	08,30			t l	
		REGULATORY AGENCY	NPDES	TSU	Site Location	STATE	nalysis Filte															DATE	3/21/14			1/08/	
		2					Requested Analysis Filtered (Y/N)		Fe & Min	bevlossid 010		×	×	×								LIATION	19.451 155			DATE Signed	(MM/DD/YY):
							Re	↑n/A		Analysis Tes	3 ×	×	بر	χ χ	×	×		9.16	0.5	1/01/5		SY / AFFIL	2			DAT	(MIN
	Si				nagan					Va <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Methanol Teth												ACCEPTED BY , AFFILIATION	WH C			Andex	
ion:	ePayables				Alice Flanagan	5514, 22		Preservatives	IN US	A <sup>g</sup> OH HCI HNO <sup>3</sup>	M	2	64	13	3	<u>^</u>						+03 1971	3			AX/	2
Section C Invoice Information:		Company Name:	ess:	Pace Quote Reference:	1			b d		Jupreserved												TIME	08			ACE !	M
Sec	Attention:	Com	Address:	Pace	Pace	Pace				SAMPLE TEMP AT (	-	4	7	-,>	Μ	M				-			0501 f		TURE .	R. R.	3
									4B	U Z	C4:71	735	735	01:10	1	1						DATE	3/30/14		SAMPLER NAME AND SIGNATURE	PRINT Name of SAMPLER:	
								СТЕР	COMPOSITE END/GRAB	TAG	11/101/	119/14	119/14	3/19/18	119/14	1						-	Cech		NAME A	SINT Name	
		Bown		32	-			COLLECTED	E E	u H	3	3	3,		~						71	RELINQUISHED BY I AFFILIATION	10		AMPLER	F	
ion:	athews	Jeff Walker, Angela Bown		4517664592	Flora Vista No. 1	60			COMPOSITE	H A C		F.										ED BY I AF	2		65	1 1	
Section B Required Project Information:	Report To: Christine Mathews	ff Walker			Flora	074926		_		ව) BAYT BJAMA8	+		0	2	9	9	t					HSIDONI					
Section B Required Proje	or To: CF	1		Purchase Order No.:	Project Name:	Project Number:			see valld codes	) ANATRIX CODE	3	とな	IM E	7	M	5	+	+		-		RE	3				
Sec	Rep	O Copy To:				Proje		Valid Matrix Codes	ATER DW TER WW SL	W AA TO ST	MWI	- MW-	CK- MW-		- DUP	_											
		;, Ste 20		78	84-4932			Valid Mat	DRINKING WATER WATER WASTE WATER PRODUCT SOIL/SOLID OIL	WIPE AIR - CTRER TISSUE	- CK-	1 CK	1	t- CK-	- CK	-3-											
		ol Rd NE	87110	orld.com	Fax: (505)884-4932	standard		5			-031914.	41,180	-031914	031914	-03:414	031914						MMENTS					
tion:	COP CRA NM	6121 Indian School Rd NE, Ste 200	Albequerque, NM 87110	@cra				Information	i.	Sample IDs MUST BE UNIQUE		5		074936-031	074976-1	-924476-						ADDITIONAL COMMENTS					
Section A Required Client Information:	COPC	6121	Albequ	cmathe	(505)884-0672	Requested Due Date/TAT:		Section D Required Client Information		Sample IDs	6w-074926	600074936	50mg	5W-07	6w-07	TB-02						ADD					
ection A equired C	Сотрапу:	Address:		Email To:	Phone: (5	ednested		<u> </u>		# W31				4 6	5 6	9	7	60	o ;	1 5	12				F	Page 19	of '





July 02, 2014

Christine Matthews CRA 6121 Indian School Rd NE Suite 200 Albuquerque, NM 87110

RE: Project: 074926 Flora Vista No.1 Pace Project No.: 60171759

### Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on June 18, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan

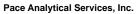
alice.flanagan@pacelabs.com

**Project Manager** 

**Enclosures** 

cc: Angela Bown, COP Conestoga-Rovers & Associa Jeff Walker, COP Conestoga-Rovers & Associa





9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665



# **CERTIFICATIONS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

**Kansas Certification IDs** 

9608 Loiret Boulevard, Lenexa, KS 66219 WY STR Certification #: 2456.01 Arkansas Certification #: 13-012-0 Illinois Certification #: 003097 lowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407-13-4 Utah Certification #: KS000212013-3 Illinois Certification #: 003097



# **SAMPLE SUMMARY**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60171759001	GW-074926-061714-CK-MW-1	Water	06/17/14 09:45	06/18/14 08:20
60171759002	GW-074926-061714-CK-MW-2	Water	06/17/14 09:35	06/18/14 08:20
60171759003	GW-074926-061714-CK-MW-3	Water	06/17/14 10:15	06/18/14 08:20
60171759004	GW-074926-061714-CK-MW-4	Water	06/17/14 10:05	06/18/14 08:20
60171759005	GW-074926-061714-CK-DUP	Water	06/17/14 00:00	06/18/14 08:20
60171759006	TRIP BLANK	Water	06/17/14 11:00	06/18/14 08:20



# **SAMPLE ANALYTE COUNT**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60171759001	GW-074926-061714-CK-MW-1	EPA 6010	JGP	2
		EPA 5030B/8260	PRG	8
60171759002	GW-074926-061714-CK-MW-2	EPA 6010	JGP	2
		EPA 5030B/8260	PRG	8
60171759003	GW-074926-061714-CK-MW-3	EPA 6010	JGP	2
		EPA 5030B/8260	PRG	8
60171759004	GW-074926-061714-CK-MW-4	EPA 6010	JGP	2
		EPA 5030B/8260	PRG	8
60171759005	GW-074926-061714-CK-DUP	EPA 5030B/8260	PRG	8
60171759006	TRIP BLANK	EPA 5030B/8260	PRG	8

Lenexa, KS 66219 (913)599-5665



### **PROJECT NARRATIVE**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Method: EPA 6010

Description: 6010 MET ICP, Dissolved

Client: COP Conestoga-Rovers & Associates, Inc. NM

Date: July 02, 2014

### **General Information:**

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

## Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### **Additional Comments:**



### **PROJECT NARRATIVE**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Method: EPA 5030B/8260 Description: 8260 MSV

Client: COP Conestoga-Rovers & Associates, Inc. NM

Date: July 02, 2014

### **General Information:**

6 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/62442

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

QC Batch: MSV/62490

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

## **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: GW-074926-061714-CK- MW-1	Lab ID: 60171759001	Collected: 06/17/14	9:45	Received: 06	/18/14 08:20 N	Matrix: Water	
Parameters	Results Units	Report Limit I	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Method	I: EPA	3010			
Iron, Dissolved	<b>17400</b> ug/L	50.0	1	06/19/14 18:40	06/20/14 11:10	7439-89-6	
Manganese, Dissolved	<b>896</b> ug/L	5.0	1	06/19/14 18:40	06/20/14 11:10	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>522</b> ug/L	5.0	5		06/24/14 06:56	71-43-2	
Ethylbenzene	<b>189</b> ug/L	1.0	1		06/21/14 07:29	100-41-4	
Toluene	ND ug/L	1.0	1		06/21/14 07:29	108-88-3	
Xylene (Total) Surrogates	<b>398</b> ug/L	3.0	1		06/21/14 07:29	1330-20-7	
4-Bromofluorobenzene (S)	104 %	80-120	1		06/21/14 07:29	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %	80-120	1		06/21/14 07:29	17060-07-0	
Toluene-d8 (S)	105 %	80-120	1		06/21/14 07:29	2037-26-5	
Preservation pH	1.0	0.10	1		06/21/14 07:29	1	



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: GW-074926-061714-CK- MW-2	Lab ID: 60171759002	2 Collected: 06/17/14	09:35	Received: 06	i/18/14 08:20 I	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Metho	d: EPA	A 3010			
Iron, Dissolved	ND ug/L	50.0	1	06/19/14 18:40	06/20/14 11:14	7439-89-6	
Manganese, Dissolved	ND ug/L	5.0	1	06/19/14 18:40	06/20/14 11:14	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		06/24/14 06:41	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		06/24/14 06:41	100-41-4	
Toluene	ND ug/L	1.0	1		06/24/14 06:41	108-88-3	
Xylene (Total) Surrogates	ND ug/L	3.0	1		06/24/14 06:41	1330-20-7	
4-Bromofluorobenzene (S)	97 %	80-120	1		06/24/14 06:41	460-00-4	
1,2-Dichloroethane-d4 (S)	99 %	80-120	1		06/24/14 06:41	17060-07-0	
Toluene-d8 (S)	98 %	80-120	1		06/24/14 06:41	2037-26-5	
Preservation pH	1.0	0.10	1		06/24/14 06:41		



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: GW-074926-061714-CK- MW-3	Lab ID: 6017175900	3 Collected: 06/17/14	10:15	Received: 06	/18/14 08:20 <b>N</b>	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Metho	od: EPA	A 3010			
Iron, Dissolved	ND ug/L	50.0	1	06/19/14 18:40	06/20/14 11:17	7439-89-6	
Manganese, Dissolved	ND ug/L	5.0	1	06/19/14 18:40	06/20/14 11:17	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		06/24/14 13:48	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		06/24/14 13:48	100-41-4	
Toluene	ND ug/L	1.0	1		06/24/14 13:48	108-88-3	
Xylene (Total) Surrogates	ND ug/L	3.0	1		06/24/14 13:48	1330-20-7	
4-Bromofluorobenzene (S)	98 %	80-120	1		06/24/14 13:48	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %	80-120	1		06/24/14 13:48	17060-07-0	
Toluene-d8 (S)	100 %	80-120	1		06/24/14 13:48	2037-26-5	
Preservation pH	1.0	0.10	1		06/24/14 13:48	1	



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: GW-074926-061714-CK- MW-4	Lab ID: 60171759004	1 Collected: 06/17/14	10:05	Received: 06	5/18/14 08:20 N	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Method	d: EPA	A 3010			
Iron, Dissolved	<b>2680</b> ug/L	50.0	1	06/19/14 18:40	06/20/14 11:20	7439-89-6	
Manganese, Dissolved	<b>4010</b> ug/L	5.0	1	06/19/14 18:40	06/20/14 11:20	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>6.9</b> ug/L	1.0	1		06/24/14 14:02	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		06/24/14 14:02	100-41-4	
Toluene	ND ug/L	1.0	1		06/24/14 14:02	108-88-3	
Xylene (Total) Surrogates	ND ug/L	3.0	1		06/24/14 14:02	1330-20-7	
4-Bromofluorobenzene (S)	104 %	80-120	1		06/24/14 14:02	460-00-4	
1,2-Dichloroethane-d4 (S)	93 %	80-120	1		06/24/14 14:02	17060-07-0	
Toluene-d8 (S)	101 %	80-120	1		06/24/14 14:02	2037-26-5	
Preservation pH	1.0	0.10	1		06/24/14 14:02		



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: GW-074926-061714-CK- DUP	Lab ID: 6017175900	05 Collected: 06/17/1	4 00:00	Received: 0	6/18/14 08:20	Matrix: Water	
Parameters	Results Unit	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	A 5030B/8260					
Benzene	<b>6.3</b> ug/L	1.0	1		06/24/14 14:17	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		06/24/14 14:17	100-41-4	
Toluene	ND ug/L	1.0	1		06/24/14 14:17	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		06/24/14 14:17	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	107 %	80-120	1		06/24/14 14:17	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %	80-120	1		06/24/14 14:17	17060-07-0	
Toluene-d8 (S)	102 %	80-120	1		06/24/14 14:17	2037-26-5	
Preservation pH	1.0	0.10	1		06/24/14 14:17	•	



# **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Sample: TRIP BLANK	Lab ID: 6017175900	6 Collected: 06/17/1	Collected: 06/17/14 11:00		6/18/14 08:20 N	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		06/24/14 10:28	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		06/24/14 10:28	100-41-4	
Toluene	ND ug/L	1.0	1		06/24/14 10:28	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		06/24/14 10:28	1330-20-7	
Surrogates	_						
4-Bromofluorobenzene (S)	96 %	80-120	1		06/24/14 10:28	460-00-4	
1,2-Dichloroethane-d4 (S)	97 %	80-120	1		06/24/14 10:28	17060-07-0	
Toluene-d8 (S)	96 %	80-120	1		06/24/14 10:28	2037-26-5	
Preservation pH	1.0	0.10	1		06/24/14 10:28		



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

QC Batch: MPRP/27707 Analysis Method: EPA 6010

QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved

Associated Lab Samples: 60171759001, 60171759002, 60171759003, 60171759004

METHOD BLANK: 1397030 Matrix: Water

Associated Lab Samples: 60171759001, 60171759002, 60171759003, 60171759004

Blank Reporting

 Parameter
 Units
 Result
 Limit
 Analyzed
 Qualifiers

 olved
 ug/L
 ND
 50.0
 06/20/14 10:08

 Iron, Dissolved
 ug/L
 ND
 50.0
 06/20/14 10:08

 Manganese, Dissolved
 ug/L
 ND
 5.0
 06/20/14 10:08

LABORATORY CONTROL SAMPLE: 1397031

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Iron, Dissolved ug/L 10000 10300 103 80-120 Manganese, Dissolved ug/L 1000 946 95 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1397032 1397033

	601	71658001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD .	RPD	Qual
Iron, Dissolved	ug/L	ND	10000	10000	9970	9970	99	99	75-125	0	20	
Manganese, Dissolved	ug/L	1.2 mg/L	1000	1000	2070	2080	92	92	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

QC Batch: MSV/62442 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60171759001

METHOD BLANK: 1397700 Matrix: Water

Associated Lab Samples: 60171759001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	 ug/L	ND	1.0	06/21/14 02:59	
Toluene	ug/L	ND	1.0	06/21/14 02:59	
Xylene (Total)	ug/L	ND	3.0	06/21/14 02:59	
1,2-Dichloroethane-d4 (S)	%	98	80-120	06/21/14 02:59	
4-Bromofluorobenzene (S)	%	101	80-120	06/21/14 02:59	
Toluene-d8 (S)	%	96	80-120	06/21/14 02:59	

LABORATORY CONTROL SAMPLE: 1397701

Date: 07/02/2014 06:10 PM

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L		20.1	101	80-121	
Toluene	ug/L	20	19.5	98	80-122	
Xylene (Total)	ug/L	60	61.9	103	80-121	
1,2-Dichloroethane-d4 (S)	%			93	80-120	
4-Bromofluorobenzene (S)	%			97	80-120	
Toluene-d8 (S)	%			99	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

QC Batch: MSV/62490 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60171759001, 60171759002

METHOD BLANK: 1399395 Matrix: Water

Associated Lab Samples: 60171759001, 60171759002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND ND	1.0	06/24/14 02:39	
Ethylbenzene	ug/L	ND	1.0	06/24/14 02:39	
Toluene	ug/L	ND	1.0	06/24/14 02:39	
Xylene (Total)	ug/L	ND	3.0	06/24/14 02:39	
1,2-Dichloroethane-d4 (S)	%	93	80-120	06/24/14 02:39	
4-Bromofluorobenzene (S)	%	96	80-120	06/24/14 02:39	
Toluene-d8 (S)	%	98	80-120	06/24/14 02:39	

LABORATORY CONTROL SAMPLE:	1399396					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L		20.1	100	80-120	
Ethylbenzene	ug/L	20	19.4	97	80-121	
Toluene	ug/L	20	18.9	95	80-122	
Xylene (Total)	ug/L	60	60.5	101	80-121	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			94	80-120	
Toluene-d8 (S)	%			96	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Toluene-d8 (S)

Date: 07/02/2014 06:10 PM

QC Batch: MSV/62511 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60171759003, 60171759004, 60171759005, 60171759006

METHOD BLANK: 1399851 Matrix: Water

%

Associated Lab Samples: 60171759003, 60171759004, 60171759005, 60171759006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	06/24/14 09:30	
Ethylbenzene	ug/L	ND	1.0	06/24/14 09:30	
Toluene	ug/L	ND	1.0	06/24/14 09:30	
Xylene (Total)	ug/L	ND	3.0	06/24/14 09:30	
1,2-Dichloroethane-d4 (S)	%	92	80-120	06/24/14 09:30	
4-Bromofluorobenzene (S)	%	95	80-120	06/24/14 09:30	
Toluene-d8 (S)	%	100	80-120	06/24/14 09:30	

LABORATORY CONTROL SAMPLE:	1399852					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	20	20.8	104	80-120	
Ethylbenzene	ug/L	20	20.8	104	80-121	
Toluene	ug/L	20	19.9	99	80-122	
Xylene (Total)	ug/L	60	63.3	106	80-121	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			95	80-120	

MATRIX SPIKE & MATRIX SP	IKE DUPLICAT	E: 13991	69		1399170							
			MS	MSD								
	60	171956003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	ND	20	20	20.9	21.3	105	107	37-157	2	32	
Ethylbenzene	ug/L	ND	20	20	21.7	21.9	108	110	31-160	1	32	
Toluene	ug/L	ND	20	20	21.2	21.3	106	106	35-157	0	37	
Xylene (Total)	ug/L	ND	60	60	66.4	66.2	111	110	34-156	0	37	
1,2-Dichloroethane-d4 (S)	%						99	96	80-120			
4-Bromofluorobenzene (S)	%						96	95	80-120			
Toluene-d8 (S)	%						102	97	80-120			
Preservation pH		1.0			1.0	1.0				0		

96

80-120

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALIFIERS**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### **BATCH QUALIFIERS**

Batch: MSV/62442

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/62490

Date: 07/02/2014 06:10 PM

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.



# **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 074926 Flora Vista No.1

Pace Project No.: 60171759

Date: 07/02/2014 06:10 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60171759001	GW-074926-061714-CK-MW-1	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171759002	GW-074926-061714-CK-MW-2	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171759003	GW-074926-061714-CK-MW-3	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171759004	GW-074926-061714-CK-MW-4	EPA 3010	MPRP/27707	EPA 6010	ICP/20946
60171759001	GW-074926-061714-CK-MW-1	EPA 5030B/8260	MSV/62442		
60171759001	GW-074926-061714-CK-MW-1	EPA 5030B/8260	MSV/62490		
60171759002	GW-074926-061714-CK-MW-2	EPA 5030B/8260	MSV/62490		
60171759003	GW-074926-061714-CK-MW-3	EPA 5030B/8260	MSV/62511		
60171759004	GW-074926-061714-CK-MW-4	EPA 5030B/8260	MSV/62511		
60171759005	GW-074926-061714-CK-DUP	EPA 5030B/8260	MSV/62511		
60171759006	TRIP BLANK	EPA 5030B/8260	MSV/62511		



# Sample Condition Upon Receipt



Client Name: COP CRA NM				Optional
Courier: Fed Ex ☑ UPS □ USPS □ Client □ Com	mercial	□ Pa	ice  Other	Proj Due Date:
Tracking #: 6689 1285 1345 Pace S	hipping	Label L	Jsed? Yes □ No 🗹	Proj Name:
Custody Seal on Cooler/Box Present: Yes ☑ No ☐	Seals in	tact: Y	es 🖭 No 🗆	
Packing Material: Bubble Wrap □ Bubble Bags □		Foam	None ☐ Other ☐	rpic
Thermometer Used: T-239 / T-194 Type of	Ice: (V			ice, cooling process has begun.
Cooler Temperature: 3.0		(circle	Date and initial	s of person examining
Temperature should be above freezing to 6°C			contents:	CLATE GILAR
Chain of Custody present:		□N/A	1.	
Chain of Custody filled out:	s 🗆 No	□N/A	2.	
Chain of Custody relinquished:	s 🗆 No	□n/A	3.	
Sampler name & signature on COC:	s 🗆 No	□ N/A	4.	
Samples arrived within holding time:	s 🗆 No	□n/A	5.	
Short Hold Time analyses (<72hr): □Yes	s Prío	□n/A	6.	
Rush Turn Around Time requested:	s PNo	□n/a	7.	
Sufficient volume:	s 🗆 No	□n/a	8.	
Correct containers used:	s 🗆 No	□N/A		
Pace containers used:	s 🗆 No	□N/A	9.	
Containers intact:	s 🗆 No	□N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs? □Ye	s 🗆 No	<b>₽</b> NÍA	11.	
Filtered volume received for dissolved tests?	s 🗆 No	₽N/A	12.	
Sample labels match COC:	s 🗆 No	□n/a		
Includes date/time/ID/analyses Matrix: はて			13.	
•	s □No	□n/a		
All containers needing preservation are found to be in	s □No	□n/a		
compliance with EPA recommendation.  Exceptions VOA, coliform, TOC, O&G, WI-DRO (water),	FOLYW		14. Initial when Lot #	of added
Phenolics Trip Blank present:	s/ Leno		T T	ervative
La Ye	s 🗆 No	□n/A		
Pace Trip Blank lot # (if purchased): OS 914~38FD Headspace in VOA vials (>6mm):		_	15. 1 af 3 TB headopuce	
Ye	s 🗆 No	□n/a	Tago 15 resource	
			16.	
Project sampled in USDA Regulated Area: □Ye	s 🗆 No	ØN/A	17. List State:	
Client Notification/ Resolution: Copy COC to C	Client?	Y 1	Field Data Required? Y	/ N
Person Contacted: Date/Tin	ne:			
Comments/ Resolution:				
	_		1-1	
December 19 10 10 10 10 10 10 10 10 10 10 10 10 10			a Collatil	
Project Manager Review:			Date:	

a jindal rkequest Dodument The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. CHAIN-UF-CO

Pace Analytical

20 200 4 Pace Project No./ Lab I.D. 8 3  $\{N/Y\}$ DRINKING WATER Samples Intact SAMPLE CONDITIONS SCHOOLD LEBENS OTHER Cooler (Y/N) ğ Ý 3.0 Custody Sealed (N/Y) eo; Received on GROUND WATER Page: Residual Chlorine (Y/N) Q Jemp in °C m REGULATORY AGENCY ₹ RCRA Requested Analysis Filtered (Y/N) JME. Site Location STATE L NPDES DATE UST 81/0) ACCEPTED BY / AFFILIATION 6010 Dissolved Fe & Mn 8260 BTEX N/A Thealysis Test In Hanced 1/PHSI Other Nethanol Alice Flanagan Preservatives <sub>E</sub>O<sub>S</sub>S<sub>S</sub>BN ePayables NaOH 5514, 22 HCI Invoice !nformation: HOO3 Company Name OS2H Reference: Pace Project Section C Attention: Unpreserved ace Quote TIME Address: Manager. # OF CONTAINERS J SAMPLER NAME AND SIGNATURE SAMPLE TEMP AT COLLECTION PRINT Name of SAMPLER: DATE 10 TIM 0935 746 500 TIME C0111/11/11/20 COMPOSITE END/SRAB 製しる COLLECTED DATE RELINQUISHED BY / AFFILIATION Jeff Walker, Angela Bown TIME ourchase Order No.: 4517664592 COMPOSITE Flora Vista No. 1 Report To: Christine Mathews DATE Required Project Information: 074926 (G=GRAB C=COMP) SAMPLE TYPE Ø E L roject Number. MATRIX CODE (see valid codes to left) Project Name: Section B Copy To: 4 W -074926- DOI 714-CK - MW-4 -0749210, dayla- (L-MW-5 W-074926, 00174-CK-MW Valid Matrix Codes 323 S 의 AR M P TS DRINKING WATER (WATER WASTE WATER WASTE WATER WEDUCT BOOLGOOLD) 6121 Indian School Rd NE, Ste 200 - COUTH-CK-Fax: (505)884-4932 cmathews@craworld.com Albequerque, NM 87110 ADDITIONAL COMMENTS (A-Z, 0-91,-) Sample IDs MUST BE UNIQUE standard SAMPLE ID -01492 Required Client Information COP CRA NM -07492 Ç (505)884-0672 Required Client Information: Requested Due Date/TAT: Section D 3 July 1 Page 20 of 22 Email To: ddress: hone: 12 10 0 9 ÷ # MHLI 00

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1,5% per month for any invoices not paid within 30 days

SIGNATURE of SAMPLER:

F-ALL-Q-020rev.08, 12-Oct-2007

CATE Signed (MM/DD/YY):



### Sample Condition Upon Receipt ESI Tech Spec Client



Client Name: COP CPA NM	Optional
Courier: Fed Ex 🛣 UPS □ USPS □ Client □ Commercial □ Pace	Proj Due Date:
Tracking #: 5669 1265   446 Pace Shipping Label Use	ed? Yes □ No 🗷 Proj Name:
Custody Seal on Cooler/Box Present: Yes ♥ No □ Seals intact: Yes	⊁ No □
Packing Material: Bubble Wrap   Bubble Bags □ Foam □	None ☐ Other ☐
	None Samples received on ice, cooling process has begun.
Cooler Temperature: 4.2 (circle or	Date and initials of person examining contents: \( \sqrt{NO} \)
Temperature should be above freezing to 6°C	contents. <u>Vivo 10/10/11</u> 1/25
Chain of Custody present:	
Chain of Custody filled out: 57Yes No N/A 2.	
Chain of Custody relinquished:	
Sampler name & signature on COC:	
Samples arrived within holding time:	
Short Hold Time analyses (<72hr): □Yes ☑No □N/A 6.	
Rush Turn Around Time requested:	
Sufficient volume:	
Correct containers used:	
Pace containers used: Types \( \text{No} \) \( \text{DN/A} \) 9.	
Containers intact:	0.:
Unpreserved 5035A soils frozen w/in 48hrs?	1.
Filtered volume received for dissolved tests?	2.
Sample labels match COC:	
Includes date/time/ID/analyses Matrix: water 1	3.
All containers needing preservation have been checked. □Yes □No ☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	4
INO INC	hitial when Lot # of added preservative
Trip Blank present:	
Pace Trip Blank lot # (if purchased): 051914-3	5.
Headspace in VOA vials ( >6mm): □Yes ☑No □N/A	
1	6.
Project sampled in USDA Regulated Area:	.7. List State:
Client Notification/ Resolution: Copy COC to Client? Y //N	Field Data Required? Y / N
Person Contacted: Date/Time:	Temp Log: Record start and finish times when unpacking cooler, if >20 min,
Comments/ Resolution:	recheck sample temps
	Start: 1115 Start:
- AAC	End: 1125 End:
Project Manager Review: Date	ate: () (1/4 Temp: Temp:

The Chain-of-Custudy is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

REGULATORY AGENCY  REGULATORY AGENCY  Note:    Note:	Required C	lien	Required Project Information;	Invoice Information:	nation:			- 450		
CONTINUE CONTINUE CONTINUE   CONTINUE	Сопрапу		Report To: Christine Mathews	Attention:	ENFOS					
10   10   10   10   10   10   10   10	Address:	6121 Indian School Rd NE, Ste 200		Company Nar	me;	REGULATOR	Y AGENC			
The content of conte		Albequerque, NM 87110		Address:		L NPDES	GRO!	ND WATER	DRINKING	WATER
The Cooler of American Property of the Cooler of th	Email To:	cmathews@craworld.com	Purchase Order No.:	Pace Quote Reference:		TSU _	☐ RCRA	i	OTHER	
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SAMPLE ID	Request			Pace Profile #:		STATE				
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SAMPLEP NAME AND SIGNATURE  PRINT Name of SAMPLER:  DATE Signed  AMMONOVICE  SIGNATURE of SAMPLER:  DATE Signed  Fig. C. On SAMPLER:  F										
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SIGNATURE of SAMPLER:  AMMINISTRATORY.  The recommendation of SAMPLER:  Signed  AMMINISTRATORY.  The recommendation of SAMPLER:  Signed  AMMINISTRATORY.	age 2		PRINT Name					o bevi		les Inte
	22 of		SIGNATURE		DATE Signed (MM/DD/YY):			Rece		

F-ALL-Q-020rev.08, 12-Oct-2007

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.





October 03, 2014

Christine Matthews CRA 6121 Indian School Rd NE Suite 200 Albuquerque, NM 87110

RE: Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

### Dear Christine Matthews:

Enclosed are the analytical results for sample(s) received by the laboratory on September 20, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan

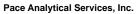
alice.flanagan@pacelabs.com

**Project Manager** 

**Enclosures** 

cc: Angela Bown, COP Conestoga-Rovers & Associa Angela Bown, Conestoga Rovers & Associates Chris Fetters, COP Conestoga-Rovers & Associa Jeff Walker, COP Conestoga-Rovers & Associa





Pace Analytical www.pacelabs.com

9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

### **CERTIFICATIONS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219 WY STR Certification #: 2456.01 Arkansas Certification #: 13-012-0 Illinois Certification #: 003097 lowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407 Utah Certification #: KS00021



### **SAMPLE SUMMARY**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60178509001	GW-074926-091814-MW-1	Water	09/18/14 10:30	09/20/14 08:15
60178509002	GW-074926-091814-MW-2	Water	09/18/14 09:40	09/20/14 08:15
60178509003	GW-074926-091814-MW-3	Water	09/18/14 09:40	09/20/14 08:15
60178509004	GW-074926-091814-MW-4	Water	09/18/14 10:20	09/20/14 08:15
60178509005	GW-074926-091814-DUP	Water	09/18/14 08:00	09/20/14 08:15
60178509006	TRIP BLANK	Water	09/18/14 15:00	09/20/14 08:15



### **SAMPLE ANALYTE COUNT**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60178509001	GW-074926-091814-MW-1	EPA 6010	TDS	2
		EPA 5030B/8260	PRG	8
60178509002	GW-074926-091814-MW-2	EPA 6010	TDS	2
		EPA 5030B/8260	PRG	8
60178509003	GW-074926-091814-MW-3	EPA 6010	TDS	2
		EPA 5030B/8260	PRG	8
60178509004	GW-074926-091814-MW-4	EPA 6010	TDS	2
		EPA 5030B/8260	PRG	8
60178509005	GW-074926-091814-DUP	EPA 5030B/8260	PRG	8
60178509006	TRIP BLANK	EPA 5030B/8260	PRG	8



### **PROJECT NARRATIVE**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Method: EPA 6010

Description: 6010 MET ICP, Dissolved
Client: CRA Conoco New Mexico
Date: October 03, 2014

### **General Information:**

4 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### **Additional Comments:**



### **PROJECT NARRATIVE**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Method: EPA 5030B/8260 Description: 8260 MSV

Client: CRA Conoco New Mexico

**Date:** October 03, 2014

### **General Information:**

6 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/64586

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

### **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: GW-074926-091814-MW-1	Lab ID: 60178509001	Collected: 09/18/14	10:30	Received: 09	/20/14 08:15 I	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Metho	d: EPA	A 3010			
Iron, Dissolved	<b>23400</b> ug/L	250	5	09/26/14 17:15	10/02/14 12:08	7439-89-6	
Manganese, Dissolved	<b>1010</b> ug/L	25.0	5	09/26/14 17:15	10/02/14 12:08	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>849</b> ug/L	10.0	10		09/25/14 17:23	71-43-2	
Ethylbenzene	<b>299</b> ug/L	10.0	10		09/25/14 17:23	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 05:37	108-88-3	
Xylene (Total)	<b>1230</b> ug/L	30.0	10		09/25/14 17:23	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	112 %	80-120	1		09/24/14 05:37	460-00-4	
1,2-Dichloroethane-d4 (S)	102 %	80-120	1		09/24/14 05:37	17060-07-0	
Toluene-d8 (S)	97 %	80-120	1		09/24/14 05:37	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 05:37	•	



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: GW-074926-091814-MW-2	Lab ID: 60178509002	Collected: 09/18/14	09:40	Received: 09	/20/14 08:15 N	fatrix: Water	
Parameters	Results Units	Report Limit I	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6	6010 Preparation Method	d: EPA	3010			
Iron, Dissolved	<b>65.6</b> ug/L	50.0	1	09/26/14 17:15	10/02/14 12:40	7439-89-6	
Manganese, Dissolved	ND ug/L	5.0	1	09/26/14 17:15	10/02/14 12:40	7439-96-5	
8260 MSV	Analytical Method: EPA 5	5030B/8260					
Benzene	ND ug/L	1.0	1		09/24/14 04:40	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		09/24/14 04:40	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 04:40	108-88-3	
Xylene (Total) Surrogates	ND ug/L	3.0	1		09/24/14 04:40	1330-20-7	
4-Bromofluorobenzene (S)	103 %	80-120	1		09/24/14 04:40	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %	80-120	1		09/24/14 04:40	17060-07-0	
Toluene-d8 (S)	95 %	80-120	1		09/24/14 04:40	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 04:40		



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: GW-074926-091814-MW-3	Lab ID: 60178509003	Collected: 09/18/14	09:40	Received: 09	/20/14 08:15 N	latrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	010 Preparation Metho	d: EPA	A 3010			
Iron, Dissolved	ND ug/L	50.0	1	09/26/14 17:15	10/02/14 12:42	7439-89-6	
Manganese, Dissolved	ND ug/L	5.0	1	09/26/14 17:15	10/02/14 12:42	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		09/24/14 04:55	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		09/24/14 04:55	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 04:55	108-88-3	
Xylene (Total) Surrogates	ND ug/L	3.0	1		09/24/14 04:55	1330-20-7	
4-Bromofluorobenzene (S)	103 %	80-120	1		09/24/14 04:55	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %	80-120	1		09/24/14 04:55	17060-07-0	
Toluene-d8 (S)	95 %	80-120	1		09/24/14 04:55	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 04:55		



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: GW-074926-091814-MW-4	Lab ID: 6017850900	4 Collected: 09/18/14	4 10:20	Received: 09	/20/14 08:15 N	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Meth	od: EP/	A 3010			
Iron, Dissolved	<b>3430</b> ug/L	250	5	09/26/14 17:15	10/02/14 12:15	7439-89-6	
Manganese, Dissolved	<b>4630</b> ug/L	25.0	5	09/26/14 17:15	10/02/14 12:15	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		09/24/14 05:09	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		09/24/14 05:09	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 05:09	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		09/24/14 05:09	1330-20-7	
Surrogates	_						
4-Bromofluorobenzene (S)	104 %	80-120	1		09/24/14 05:09	460-00-4	
1,2-Dichloroethane-d4 (S)	103 %	80-120	1		09/24/14 05:09	17060-07-0	
Toluene-d8 (S)	94 %	80-120	1		09/24/14 05:09	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 05:09		



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: GW-074926-091814-DUP	Lab ID: 6017850900	5 Collected: 09/18/1	4 08:00	Received: 09	9/20/14 08:15 N	/latrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>1.8</b> ug/L	1.0	1		09/24/14 05:23	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		09/24/14 05:23	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 05:23	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		09/24/14 05:23	1330-20-7	
Surrogates	_						
4-Bromofluorobenzene (S)	106 %	80-120	1		09/24/14 05:23	460-00-4	
1,2-Dichloroethane-d4 (S)	105 %	80-120	1		09/24/14 05:23	17060-07-0	
Toluene-d8 (S)	93 %	80-120	1		09/24/14 05:23	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 05:23		



### **ANALYTICAL RESULTS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Sample: TRIP BLANK	Lab ID: 6017850900	6 Collected: 09/18/1	4 15:00	Received: 09	9/20/14 08:15 <b>I</b>	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		09/24/14 03:01	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		09/24/14 03:01	100-41-4	
Toluene	ND ug/L	1.0	1		09/24/14 03:01	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		09/24/14 03:01	1330-20-7	
Surrogates	-						
4-Bromofluorobenzene (S)	99 %	80-120	1		09/24/14 03:01	460-00-4	
1,2-Dichloroethane-d4 (S)	104 %	80-120	1		09/24/14 03:01	17060-07-0	
Toluene-d8 (S)	93 %	80-120	1		09/24/14 03:01	2037-26-5	
Preservation pH	1.0	0.10	1		09/24/14 03:01		



### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

QC Batch: MPRP/29080 Analysis Method: EPA 6010

QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved

Associated Lab Samples: 60178509001, 60178509002, 60178509003, 60178509004

METHOD BLANK: 1449940 Matrix: Water

Associated Lab Samples: 60178509001, 60178509002, 60178509003, 60178509004

> Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Iron, Dissolved ug/L ND 50.0 10/02/14 11:34 Manganese, Dissolved ug/L ND 5.0 10/02/14 11:34

LABORATORY CONTROL SAMPLE: 1449941

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Iron, Dissolved ug/L 10000 9900 80-120 Manganese, Dissolved ug/L 1000 960 96 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1449942 1449943

Parameter	Units	60178510001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Iron, Dissolved Manganese, Dissolved	ug/L ug/L	216 18.8	10000 1000	10000 1000	9740 966	10300 989	95 95	101 97	75-125 75-125	5 2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

QC Batch: MSV/64586 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge Associated Lab Samples: 60178509001, 60178509002, 60178509003, 60178509004, 60178509005, 60178509006

METHOD BLANK: 1447818 Matrix: Water

Associated Lab Samples: 60178509001, 60178509002, 60178509003, 60178509004, 60178509005, 60178509006

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/24/14 02:33	
Ethylbenzene	ug/L	ND	1.0	09/24/14 02:33	
Toluene	ug/L	ND	1.0	09/24/14 02:33	
Xylene (Total)	ug/L	ND	3.0	09/24/14 02:33	
1,2-Dichloroethane-d4 (S)	%	107	80-120	09/24/14 02:33	
4-Bromofluorobenzene (S)	%	102	80-120	09/24/14 02:33	
Toluene-d8 (S)	%	93	80-120	09/24/14 02:33	

LABORATORY CONTROL SAMPLE	: 1447819					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L		21.3	106	80-120	
Ethylbenzene	ug/L	20	19.6	98	80-121	
Toluene	ug/L	20	20.2	101	80-122	
Xylene (Total)	ug/L	60	61.7	103	80-121	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			94	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

QC Batch: MSV/64640 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60178509001

METHOD BLANK: 1448937 Matrix: Water

Associated Lab Samples: 60178509001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	 ug/L	 ND	1.0	09/25/14 16:19	
Ethylbenzene	ug/L	ND ND	1.0	09/25/14 16:19	
Xylene (Total)	ug/L	ND	3.0	09/25/14 16:19	
1,2-Dichloroethane-d4 (S)	%	99	80-120	09/25/14 16:19	
4-Bromofluorobenzene (S)	%	99	80-120	09/25/14 16:19	
Toluene-d8 (S)	%	100	80-120	09/25/14 16:19	

Spike LCS LCS % Rec	
Parameter Units Conc. Result % Rec Limits	Qualifiers
Benzene ug/L 20 19.4 97 80-120	
Ethylbenzene ug/L 20 21.0 105 80-121	
Xylene (Total) ug/L 60 63.3 106 80-121	
1,2-Dichloroethane-d4 (S)	
4-Bromofluorobenzene (S) % 100 80-120	
Toluene-d8 (S) % 100 80-120	

MATRIX SPIKE & MATRIX S	PIKE DUPLI	CATE: 14489	39		1448940							_
			MS	MSD								
		60178755003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	ND	20	20	19.4	19.1	95	94	37-157	2	32	
Ethylbenzene	ug/L	ND	20	20	20.2	20.0	99	98	31-160	1	32	
Xylene (Total)	ug/L	ND	60	60	61.6	61.0	103	102	34-156	1	37	
1,2-Dichloroethane-d4 (S)	%						100	98	80-120			
4-Bromofluorobenzene (S)	%						103	102	80-120			
Toluene-d8 (S)	%						99	100	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALIFIERS**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### **BATCH QUALIFIERS**

[M5]

Batch: MSV/64586

Date: 10/03/2014 09:55 AM

A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.



### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 074926 FLORA VISTA NO 1

Pace Project No.: 60178509

Date: 10/03/2014 09:55 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60178509001	GW-074926-091814-MW-1	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178509002	GW-074926-091814-MW-2	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178509003	GW-074926-091814-MW-3	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178509004	GW-074926-091814-MW-4	EPA 3010	MPRP/29080	EPA 6010	ICP/21882
60178509001	GW-074926-091814-MW-1	EPA 5030B/8260	MSV/64586		
60178509001	GW-074926-091814-MW-1	EPA 5030B/8260	MSV/64640		
60178509002	GW-074926-091814-MW-2	EPA 5030B/8260	MSV/64586		
60178509003	GW-074926-091814-MW-3	EPA 5030B/8260	MSV/64586		
60178509004	GW-074926-091814-MW-4	EPA 5030B/8260	MSV/64586		
60178509005	GW-074926-091814-DUP	EPA 5030B/8260	MSV/64586		
60178509006	TRIP BLANK	EPA 5030B/8260	MSV/64586		



### Sample Condition Upon Receipt ESI Tech Spec Client



Client Name: COT CRA			Optional
Courier: Fed Ex 🗷 UPS 🗆 USPS 🗀 Client 🗀	Commercial □ Pa	ace □ Other □	Proj Due Date:
140 5774 000	Pace Shipping Label		Proj Name:
Custody Seal on Cooler/Box Present: Yes 🗷 No			
Packing Material: Bubble Wrap □ Bubble Ba			ther DC ZPCC
Thermometer Used: T-239 T-194 Ty	pe of Ice: Web BI	ue None   Samples rec	ceived on ice, cooling process has begun.
Cooler Temperature: \.\2	(circl	e one)	and initials of person examining
Temperature should be above freezing to 6°C		conte	nts: <u>JØ 4/20</u>
Chain of Custody present:	Yes No NA	1.	
Chain of Custody filled out:	MYes □No □N/A	2.	
Chain of Custody relinquished:	MYes □No □N/A	3,	
Sampler name & signature on COC;		4.	
Samples arrived within holding time:	<b>K</b> Yes □No □N/A	5.	
Short Hold Time analyses (<72hr):	□Yes <b>⊠</b> No □N/A	6.	
Rush Turn Around Time requested:	□Yes 120 No □N/A	7.	
Sufficient volume:	Maryes □No □N/A	8.	
Correct containers used:	☑Yes □No □N/A		
Pace containers used:	ĭXYes □No □N/A	9.	
Containers intact:		10.	
Unpreserved 5035A soils frozen w/in 48hrs?	□Yes □No <b>™</b> N/A	11.	
Filtered volume received for dissolved tests?	□Yes □No ØN/A	12.	3
Sample labels match COC:	ØYes □No □N/A		
Includes date/time/ID/analyses Matrix:	WT	13.	
All containers needing preservation have been checked.			
All containers needing preservation are found to be in compliance with EPA recommendation.	<b>K</b> Yes □No □N/A	14	
Exceptions: OA=coliform, TOC, O&G, WI-DRO (water), Phenolics	<b>Z</b> Yes □No	Initial when completed	Lot # of added preservative
Trip Blank present:	▼Yes □No □N/A		, Rus
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials ( >6mm):	□Yes 🗖No □N/A		
		16.	
Project sampled in USDA Regulated Area:	□Yes □No <b>⊠</b> Ń/A	17. List State:	
Client Notification/ Resolution: Copy C	OC to Client? Y /	N Field Data Requi	red? Y / N
Person Contacted: D	ate/Time:		Temp Log: Record start and finish times
Comments/ Resolution:			when unpacking cooler, if >20 min, recheck sample temps
			Start: \075 Start:
			End: \045 End:
Droject Manager Pavious	1	Data: 7/1	Temp: Temp:

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT, All relevant fields must be completed accurately

**Face Analytical** 

3 3 8 25 Z Pace Project No./ Lab I.D. 3 **DRINKING WATER** SAMPLE CONDITIONS OTHER οť ☐ GROUND WATER Page: Residual Chlorine (Y/N) 21 REGULATORY AGENCY  $\frac{\Sigma}{Z}$ RCRA Requested Analysis Filtered (Y/N) TIME ONS STATE NOSCH H Site Location NPDES DATE 02/6 UST 3) CCAH ACCEPTED BY / AFFILIATION 6010 Dissolved Fe & Mn **3560 BTEX** N/A Analysis Test Other Methanol Alice Flanagan Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> Preservatives ePayables NaOH 5514, 22 HCI Ż Invoice Information: Attention: ePa EONH Company Name: Reference:
Pace Project
Manager:
Pace Profile #: <sup>†</sup>OS<sup>z</sup>H Section C Onpreserved ace Quote TIME Address: # OF CONTAINERS SAMPLE TEMP AT COLLECTION DATE 840 194 0940 TIME COMPOSITE END/GRAB 0.8.14 9.9.4 DATE COLLECTED RELINQUISHED BY / AFFILIATION Jeff Walker, Angela Bown TIME COMPOSITE 4517664592 Flora Vista No. 1 Report To: Christine Mathews DATE Required Project Information: 074926 4 urchase Order No.: (G=GRAB C=COMP) SAMPLE TYPE 7 UT G Ĕ roject Number. MATRIX CODE Project Name: Section B CR.MW-2 Copy To: CB. 1120-4 Valid Matrix Codes D. RE OPTON 4.CB. MUST DRINKING WATER IN WATER WASTE WATER WASTE WATER SOLUSOLID 6121 Indian School Rd NE, Ste 200 Fax: (505)884-4932 OIL WIPE AIR OTHER TISSUE 3W-074926091814 CB 1200 074926 BaiRIA 09194 M000 18,074920.04121 Albequerque, NM 87110 cmathews@craworld.com ADDITIONAL COMMENTS (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE standard SAMPLE ID 15.PA FOWNE COP CRA NM Required Client Information 35074 Required Client Information: (505)884-0672 Requested Due Date/TAT: Section D Section A отрапу: Address: hone: 9 Ŧ 42 KO 6 # MBTI 00

F-ALL-Q-020rev\_08, 12-Oct-2007

(N/A)

Samples Intact

Cooler (Y/N) Custody Sealed

(N/Y) eol Received on

Temp in °C

0

DATE Signed (MM/DD/YY):

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

SAMPLER NAME AND SIGNATURE

SIGNATURE of SAMPLER: PRINT Name of SAMPLER:

Page 19 of 19





January 05, 2015

Christine Mathews CRA 6121 Indian School Rd NE Suite 200 Albuquerque, NM 87110

RE: Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

### **Dear Christine Mathews:**

Enclosed are the analytical results for sample(s) received by the laboratory on December 20, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alice Flanagan

Alice Flanagan

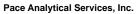
alice.flanagan@pacelabs.com

**Project Manager** 

**Enclosures** 

cc: Angela Bown, COP Conestoga-Rovers & Associa Angela Bown, Conestoga Rovers & Associates Chris Fetters, COP Conestoga-Rovers & Associa Jeff Walker, COP Conestoga-Rovers & Associa





Pace Analytical www.pacelabs.com

9608 Loiret Blvd. Lenexa, KS 66219 (913)599-5665

### **CERTIFICATIONS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219 WY STR Certification #: 2456.01 Arkansas Certification #: 13-012-0 Illinois Certification #: 003097 lowa Certification #: 118 Kansas/NELAP Certification #: E-10116 Louisiana Certification #: 03055 Nevada Certification #: KS000212008A Oklahoma Certification #: 9205/9935 Texas Certification #: T104704407 Utah Certification #: KS00021



### **SAMPLE SUMMARY**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60185120001	GW-074926-121814-CM-MW-4	Water	12/18/14 10:50	12/20/14 09:00
60185120002	GW-074926-121814-CM-MW-2	Water	12/18/14 11:10	12/20/14 09:00
60185120003	GW-074926-121814-CM-DUP	Water	12/18/14 00:00	12/20/14 09:00
60185120004	TB-074926-121814-CM-001	Water	12/18/14 11:20	12/20/14 09:00



### **SAMPLE ANALYTE COUNT**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60185120001	GW-074926-121814-CM-MW-4	EPA 6010	SMW	2
		EPA 5030B/8260	PRG	8
60185120002	GW-074926-121814-CM-MW-2	EPA 6010	SMW	2
		EPA 5030B/8260	PRG	8
60185120003	GW-074926-121814-CM-DUP	EPA 5030B/8260	PRG	8
60185120004	TB-074926-121814-CM-001	EPA 5030B/8260	PRG	8



### **PROJECT NARRATIVE**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Method: EPA 6010

**Description:** 6010 MET ICP, Dissolved Client: CRA Conoco New Mexico Date: January 05, 2015

### **General Information:**

2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Sample Preparation:

The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

### **Additional Comments:**



### **PROJECT NARRATIVE**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Method: EPA 5030B/8260 Description: 8260 MSV

Client: CRA Conoco New Mexico

**Date:** January 05, 2015

### **General Information:**

4 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

### **Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### **Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

### **Internal Standards:**

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: MSV/66753

S2: Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample reanalysis).

- GW-074926-121814-CM-MW-4 (Lab ID: 60185120001)
  - 4-Bromofluorobenzene (S)

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### **Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/66753

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

### **Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.



### **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

Sample: GW-074926-121814-CM- MW-4	Lab ID: 60185120001	Collected: 12/18/14	4 10:50	Received: 12	/20/14 09:00 I	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	6010 Preparation Meth	od: EPA	A 3010			
Iron, Dissolved	<b>4020</b> ug/L	50.0	1	12/23/14 10:30	12/29/14 13:59	7439-89-6	
Manganese, Dissolved	<b>4460</b> ug/L	5.0	1	12/23/14 10:30	12/29/14 13:59	7439-96-5	
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	<b>39.8</b> ug/L	1.0	1		12/29/14 23:05	71-43-2	
Ethylbenzene	<b>6.2</b> ug/L	1.0	1		12/29/14 23:05	100-41-4	
Toluene	ND ug/L	1.0	1		12/29/14 23:05	108-88-3	
Xylene (Total)	<b>48.6</b> ug/L	3.0	1		12/29/14 23:05	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	126 %	80-120	1		12/29/14 23:05	460-00-4	S2
1,2-Dichloroethane-d4 (S)	100 %	80-120	1		12/29/14 23:05	17060-07-0	
Toluene-d8 (S)	103 %	80-120	1		12/29/14 23:05	2037-26-5	
Preservation pH	1.0	0.10	1		12/29/14 23:05		



### **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

Sample: GW-074926-121814-CM- MW-2	Lab ID: 6018512000	O2 Collected: 12/18/1	4 11:10	Received: 12	2/20/14 09:00	Matrix: Water	
Parameters	Results Unit	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA	A 6010 Preparation Meth	nod: EP	A 3010			
Iron, Dissolved	<b>709</b> ug/L	50.0	1	12/23/14 10:30	12/29/14 14:01	7439-89-6	
Manganese, Dissolved	<b>5.5</b> ug/L	5.0	1	12/23/14 10:30	12/29/14 14:01	7439-96-5	
8260 MSV	Analytical Method: EPA	A 5030B/8260					
Benzene	ND ug/L	1.0	1		12/24/14 18:21	I 71-43-2	
Ethylbenzene	ND ug/L	1.0	1		12/24/14 18:21	I 100-41-4	
Toluene	ND ug/L	1.0	1		12/24/14 18:21	1 108-88-3	
Xylene (Total)	ND ug/L	3.0	1		12/24/14 18:21	1330-20-7	
Surrogates	•						
4-Bromofluorobenzene (S)	95 %	80-120	1		12/24/14 18:21	l 460-00-4	
1,2-Dichloroethane-d4 (S)	84 %	80-120	1		12/24/14 18:21	17060-07-0	
Toluene-d8 (S)	99 %	80-120	1		12/24/14 18:21	2037-26-5	
Preservation pH	1.0	0.10	1		12/24/14 18:21		



### **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

Sample: GW-074926-121814-CM- DUP	Lab ID: 6018512000	03 Collected: 12/18/1	4 00:00	Received: 1	12/20/14 09:00 I	Matrix: Water	
Parameters	Results Unit	ts Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	A 5030B/8260					
Benzene	<b>29.6</b> ug/L	1.0	1		12/29/14 23:19	71-43-2	
Ethylbenzene	<b>4.8</b> ug/L	1.0	1		12/29/14 23:19	100-41-4	
Toluene	ND ug/L	1.0	1		12/29/14 23:19	108-88-3	
Xylene (Total)	<b>35.4</b> ug/L	3.0	1		12/29/14 23:19	1330-20-7	
Surrogates							
4-Bromofluorobenzene (S)	115 %	80-120	1		12/29/14 23:19	460-00-4	
1,2-Dichloroethane-d4 (S)	101 %	80-120	1		12/29/14 23:19	17060-07-0	
Toluene-d8 (S)	102 %	80-120	1		12/29/14 23:19	2037-26-5	
Preservation pH	1.0	0.10	1		12/29/14 23:19	1	



### **ANALYTICAL RESULTS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

Sample: TB-074926-121814-CM-001	Lab ID: 60185120004	Collected: 12/18/1	4 11:20	Received: 12	2/20/14 09:00 I	Matrix: Water	
Parameters	Results Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA	5030B/8260					
Benzene	ND ug/L	1.0	1		12/24/14 15:39	71-43-2	
Ethylbenzene	ND ug/L	1.0	1		12/24/14 15:39	100-41-4	
Toluene	ND ug/L	1.0	1		12/24/14 15:39	108-88-3	
Xylene (Total)	ND ug/L	3.0	1		12/24/14 15:39	1330-20-7	
Surrogates	_						
4-Bromofluorobenzene (S)	101 %	80-120	1		12/24/14 15:39	460-00-4	
1,2-Dichloroethane-d4 (S)	81 %	80-120	1		12/24/14 15:39	17060-07-0	
Toluene-d8 (S)	95 %	80-120	1		12/24/14 15:39	2037-26-5	
Preservation pH	1.0	0.10	1		12/24/14 15:39	)	



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

QC Batch Method:

Date: 01/05/2015 09:56 AM

QC Batch: MPRP/30290

MPRP/30290 Analysis Method: EPA 6010
EPA 3010 Analysis Description: 6010 MET Dissolved

Associated Lab Samples: 60185120001, 60185120002

METHOD BLANK: 1499240 Matrix: Water

Associated Lab Samples: 60185120001, 60185120002

Blank Reporting

Parameter Units Result Limit Analyzed Qualifiers

Iron, Dissolved ug/L ND 50.0 12/29/14 13:25

Manganese, Dissolved ug/L ND 5.0 12/29/14 13:25

LABORATORY CONTROL SAMPLE: 1499241

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Iron, Dissolved ug/L 10000 9370 94 80-120 Manganese, Dissolved 1000 968 97 80-120 ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1499242 1499243

MSD MS 60185128002 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual Iron, Dissolved ug/L ND 10000 10000 9310 9240 93 92 75-125 20 Manganese, Dissolved ug/L 1370 1000 1000 2290 2290 93 93 75-125 0 20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

QC Batch: MSV/66697 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60185120002, 60185120004

METHOD BLANK: 1499450 Matrix: Water

Associated Lab Samples: 60185120002, 60185120004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND ND	1.0	12/24/14 15:09	
Ethylbenzene	ug/L	ND	1.0	12/24/14 15:09	
Toluene	ug/L	ND	1.0	12/24/14 15:09	
Xylene (Total)	ug/L	ND	3.0	12/24/14 15:09	
1,2-Dichloroethane-d4 (S)	%	83	80-120	12/24/14 15:09	
4-Bromofluorobenzene (S)	%	94	80-120	12/24/14 15:09	
Toluene-d8 (S)	%	98	80-120	12/24/14 15:09	

LABORATORY CONTROL SAME	PLE: 1499451					
Б	11.5	Spike	LCS	LCS	% Rec	0 ""
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	20	20.6	103	80-120	
Ethylbenzene	ug/L	20	19.4	97	80-120	
Toluene	ug/L	20	20.0	100	80-120	
Xylene (Total)	ug/L	60	61.6	103	80-120	
1,2-Dichloroethane-d4 (S)	%			82	80-120	
4-Bromofluorobenzene (S)	%			93	80-120	
Toluene-d8 (S)	%			94	80-120	

MATRIX SPIKE & MATRIX S	PIKE DUPLICA	ATE: 14994	52		1499453							
			MS	MSD								
	6	0184922004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	<0.50	20	20	21.3	22.4	106	112	46-155	5	13	
Ethylbenzene	ug/L	< 0.50	20	20	19.5	22.3	97	111	51-148	13	14	
Toluene	ug/L	< 0.50	20	20	20.2	22.0	101	110	47-149	9	16	
Xylene (Total)	ug/L	<1.5	60	60	60.3	69.3	101	115	39-158	14	15	
1,2-Dichloroethane-d4 (S)	%						82	84	80-120			
4-Bromofluorobenzene (S)	%						96	96	80-120			
Toluene-d8 (S)	%						97	97	80-120			
Preservation pH		1.0			1.0	1.0				0		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALITY CONTROL DATA**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

QC Batch: MSV/66753 Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge

Associated Lab Samples: 60185120001, 60185120003

METHOD BLANK: 1500711 Matrix: Water

Associated Lab Samples: 60185120001, 60185120003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND ND	1.0	12/29/14 18:54	
Ethylbenzene	ug/L	ND	1.0	12/29/14 18:54	
Toluene	ug/L	ND	1.0	12/29/14 18:54	
Xylene (Total)	ug/L	ND	3.0	12/29/14 18:54	
1,2-Dichloroethane-d4 (S)	%	102	80-120	12/29/14 18:54	
4-Bromofluorobenzene (S)	%	102	80-120	12/29/14 18:54	
Toluene-d8 (S)	%	98	80-120	12/29/14 18:54	

LABORATORY CONTROL SAMPLI	E: 1500712					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	20	21.1	105	80-120	
Ethylbenzene	ug/L	20	21.1	106	80-120	
Toluene	ug/L	20	21.0	105	80-120	
Xylene (Total)	ug/L	60	63.2	105	80-120	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			105	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



### **QUALIFIERS**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

### **DEFINITIONS**

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD - Relative Percent Difference** 

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### **BATCH QUALIFIERS**

Batch: MSV/66753

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### **ANALYTE QUALIFIERS**

Date: 01/05/2015 09:56 AM

Surrogate recovery outside laboratory control limits due to matrix interferences (confirmed by similar results from sample re-analysis).



### **QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 074926 Flora Vista No. 1

Pace Project No.: 60185120

Date: 01/05/2015 09:56 AM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60185120001 60185120002	GW-074926-121814-CM-MW-4 GW-074926-121814-CM-MW-2	EPA 3010 EPA 3010	MPRP/30290 MPRP/30290		ICP/22647 ICP/22647
60185120001	GW-074926-121814-CM-MW-4	EPA 5030B/8260	MSV/66753		
60185120002	GW-074926-121814-CM-MW-2	EPA 5030B/8260	MSV/66697		
60185120003	GW-074926-121814-CM-DUP	EPA 5030B/8260	MSV/66753		
60185120004	TB-074926-121814-CM-001	EPA 5030B/8260	MSV/66697		



### Sample Condition Upon Receipt ESI Tech Spec Client



Client Name: LOS CRA NM				Optional
Courier: Fed Ex P UPS USPS Client C	ommercial  Pa	ice  Other		Proj Due Date:
Tracking #: 6262 2064 4805 Pag	e Shipping Label U	lsed? Yes □	No 🔛	Proj Name:
Custody Seal on Cooler/Box Present: Yes No 🗆				
Packing Material: Bubble Wrap   ■ Bubble Bags	□ Foam	□ None □	Other □	
			ples received on	ice, cooling process has begun.
Cooler Temperature: 3.3	(circle	e one)	Date and initia	Is of person examining
Temperature should be above freezing to 6°C		r	contents:	12/10/14 10
Chain of Custody present:	Yes No N/A	1,		
Chain of Custody filled out:	IYes □No □N/A	2.		
Chain of Custody relinquished:	Yes □No □N/A	3.		
Sampler name & signature on COC:	ŽYes □No □N/A	4,		
Samples arrived within holding time:	PYes □No □N/A	5.		
Short Hold Time analyses (<72hr):	JYes - ØNO □N/A	6.		
Rush Turn Around Time requested:	JYes ⊠No □N/A	7.		
Sufficient volume:	ZYes □No □N/A	8.		
Correct containers used:	Íyes □No □N/A			
Pace containers used:	ZYes □No □N/A	9.		
Containers intact:	aYes □No □N/A	10.		
Unpreserved 5035A soils frozen w/in 48hrs?	JYes □No PN/A	11.		
Filtered volume received for dissolved tests?	Tyes □No ☑N/A	12		
Sample labels match COC:	¶Yes □No □N/A			
Includes date/time/ID/analyses Matrix: wat	D-y	13.		
All containers needing preservation have been checked.	JYes □No - No			
All containers needing preservation are found to be in compliance with EPA recommendation.	□Yes □No ÆN/A	14.		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	∄Yes □No	Initial when completed		of added
Trip Plank procent:	ear of the state	A T	,	or a constant
Pace Trip Blank lot # (if purchased): 12414-3		15.		
Headspace in VOA vials ( >6mm):	JYes PANO □N/A	,		
	<u> </u>	16.		
Project sampled in USDA Regulated Area:	Yes □No 7/2N/A	17. List State		
Client Notification/ Resolution: Copy COC	to Client? Y /	N Field Data	a Required? Y	' / N
Person Contacted: Date	/Time:			g: Record start and finish times
Comments/ Resolution:				packing cooler, if >20 min, sample temps
			Start:	1055 Start:
			End:	1102 End;
Project Manager Review: AAF		Date: 12/22/14	Temp:	Temp:

### Pace Analytical

## CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

8 84 20 8 Pace Project No / Lab I.D. DRINKING WATER SAMPLE CONDITIONS OTHER ₽ 2 Mark) 2/ Part 名のでれ GROUND WATER Page: Residual Chlorine (Y/N) S S Σ REGULATORY AGENCY RCRA Requested Analysis Filtered (Y/N) D1/19/21 STATE Site Location NPDES DATE UST ACCEPTED BY / AFFILIATION 6010 Dissolved Fe & Mn 3260 BTEX JasoT sisylsnA J N/A Other Methanol Alice Flanagan Preservatives Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> NaOH 7801, 22 НСІ 4 CRA Invoice Information EONH Company Name Manager. Pace Profile #: POS2H Reference: Pace Project Section C TIME Unpreserved ace Quote Attention: ddress: # OF CONTAINERS SAMPLE TEMP AT COLLECTION DATE 7 TIME COMPOSITE END/GRAB 1218114 Diginal Price D1814 ひもら DATE COLLECTED RELINQUISHED BY / AFFILIATION TIME Jeff Walker, Angela Bown COMPOSITE Flora Vista No. Report To: Christine Mathews 4071736 DATE Section B Required Project Information: roject Number: 074926 3 SAMPLE TYPE (G=GRAB C=COMP) urchase Order No.: (see valid codes to left) **BUOD XIMTAM** roject Name: Copy To: 4) 1976-121814-rm-47-14 SODE Valld Matrix Codes 3 2 8 T S S Y S F S DRINKING WATER DE WATER V WASTE WATER V PRODUCT F SOIL/SOLID UN-MO-18121-92640-6121 Indian School Rd NE, Ste 200 -MO-11814-02010-Fax: (505)884-4932 MATRIX cmathews@craworld.com ADDITIONAL COMMENTS Albequerque, NM 87110 (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE SAMPLE ID Required Client Information CRA COP NM Required Client Information: (505)884-0672 Requested Due Date/TAT: Section D Email To: \ddress: 9 1-12 9 1 6 # WELL

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1,5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev 08, 12-Oct-2007

(N/Y)

Samples Intact

Cooler (Y/N)

Custody Seale

(N/X) eol Received on

O° ni qmeT

0

DATE Signed (MM/DD/YY):

SIGNATURE of SAMPLER

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SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: