

3R - 097

**QUARTERLY
MONITORING
REPORT**

11/28/2007



TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200

Albuquerque, NM 87110

(505) 237-8440

RECEIVED

2007 NOV 30 PM 2 19

November 28, 2007

Mr. Glen von Gonten
State of New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: (1) ConocoPhillips Nell Hall #1 2007 Quarterly Report

Flora Vista, New Mexico

(2) ConocoPhillips Shephard & Kelsey #1 2007 Quarterly Report

Bloomfield, New Mexico

320090

320097 ✓

Dear Mr. von Gonten:

Enclosed please find a copy of the above-referenced documents as compiled by Tetra Tech, Inc., formerly Maxim Technologies, for these Farmington area sites.

Please do not hesitate to contact me at (505) 237-8440 if you have any questions or require additional information.

Sincerely,

Kelly E. Blanchard

Project Manager/Geologist

Enclosures (2)

**QUARTERLY GROUNDWATER
MONITORING REPORT**

**CONOCOPHILLIPS
SHEPHARD & KELSEY #1
BLOOMFIELD, NEW MEXICO**

3R0097

OCD # 3R0097

Prepared for:



600 North Dairy Ashford
Houston, TX 77079

Prepared by:



TETRA TECH, INC.

6121 Indian School Rd NE, Suite 200
Albuquerque, NM 87110
Tetra Tech Project No. 7690028.100

November 28, 2007

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QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS SHEPHARD & KELSEY #1, BLOOMFIELD, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on August 20, 2007, at the ConocoPhillips Shephard & Kelsey #1 Site in Bloomfield, New Mexico.

The site is located on the southwest side of Bloomfield, New Mexico, south of Highway 64 and the San Juan River. The site consists of an abandoned gas production well. All associated equipment and installations at the site have been removed. The location and general layout of the Shephard & Kelsey #1 site are shown on Figures 1 and 2, respectively.

In response to landowner concerns following a hydrocarbon release, On Site Technologies (Onsite) conducted a site investigation in the area of a former unlined earthen pit and existing production tank used to store separator waste water. On September 30, 1996, Onsite advanced two test holes with a hand auger to the shallow groundwater table located approximately 3.5 to 4 feet below ground surface (bgs). One test hole was advanced adjacent to the production tank and one at a presumed downgradient location. Samples collected from both test holes were below laboratory detection limits for benzene, toluene, ethylbenzene, xylenes (BTEX), and total petroleum hydrocarbons (TPH). Onsite returned to the site on November 11, 1996, and advanced two additional test holes immediately adjacent to the tank and discovered impacts in both the soil and groundwater on the northeast side of the tank. On February 13, 1997, soils were excavated from the former pit area until delineation of contamination was achieved (to a practical extent due to site equipment placement); confirmatory samples were then collected.

Monitoring wells (MW-NE, DG 1, SB-12, UG 1, UG 2, and DG-MW) were subsequently installed at the site. With the exception of monitor well SB-12, all monitoring wells have reached compliance with concentrations below the New Mexico Water Quality Control Commission (NMWQCC) standards and are no longer sampled. The August 2007 sample collected from SB-12 represents the fifth consecutive quarter of results below the NMWQCC standards for the well.

Results from recent sampling events for monitor well SB-12 are summarized below.

May 2006 sampling event

Benzene was detected at a concentration of 12 micrograms per liter ($\mu\text{g/L}$), which is slightly above the NMWQCC standard of 10 $\mu\text{g/L}$. Ethylbenzene and xylenes were detected at concentrations of 1 $\mu\text{g/L}$ and 3 $\mu\text{g/L}$, respectively.

August and November 2006 sampling events

No BTEX constituents were detected. All concentrations were lower than laboratory detection limits.

February 2007 sampling event

Ethylbenzene and xylenes were detected at concentrations of 3 µg/L and 1 µg/L, respectively. Benzene and toluene were not detected.

May 2007 sampling event

Ethylbenzene was detected at a concentration of 2 µg/L. Benzene, toluene, and xylenes were not detected.

2.0 METHODOLOGY AND RESULTS

The following subsections describe the groundwater monitoring methodology and sampling analytical results.

2.1 Site Survey

Because the monitoring well casings were recently modified at the landowner's request, a site survey was conducted on August 20, 2007 in order to determine the new top of casing elevations.

2.2 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

On August 20, 2007, groundwater elevation measurements were recorded in monitor wells DG-1, SB-12, UG-1, UG-2, DG-MW, and MW-1. A groundwater elevation measurement could not be taken from monitor well MW-NE due to damage to the casing. Table 1 presents the monitor well specifications and groundwater level data. A groundwater elevation contour map is presented in Figure 3.

Groundwater sampling

Monitor wells MW-1, DG-MW, SB-12, UG-1, UG-2, and DG-1 were sampled during this event to prepare for closure of this site. Approximately 2 gallons of water, or three well volumes, were purged from each monitor well before sampling. Clear, 1.5-inch diameter, poly-vinyl, disposable bailers were used to collect the groundwater samples. The groundwater samples were contained in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Lancaster Laboratories located in Lancaster, Pennsylvania. The samples were analyzed for the presence of BTEX using Environmental Protection Agency (EPA) Method 8260B.

2.3 Groundwater Sampling Analytical Results

The August 2007 analysis of groundwater collected shows concentrations of benzene and toluene were below laboratory detection limits in all wells. Ethylbenzene and xylenes were detected in monitor well DG-MW at concentrations of 0.9 µg/L and 7 µg/L, respectively. Both concentration are below the NMWQCC standards. All other wells were non-detect for ethylbenzene and xylenes. Table 2 presents the historical laboratory analytical results. The field groundwater sampling forms are presented in Appendix A. The laboratory analytical report is included as Appendix B.

3.0 CONCLUSIONS

The August 20, 2007 sampling event represents the fifth consecutive quarter of results indicating concentrations of BTEX in monitor well SB-12 below NMWQCC standards. All other wells sampled during this event also had concentrations below NMWQCC standards for BTEX. Based on the historical groundwater sample results at this site, Tetra Tech recommends no further action is required. Upon your review and approval of this report, Tetra Tech, on behalf of ConocoPhillips, requests closure for the Shephard and Kelsey #1 site. All monitoring wells at the site will be plugged and abandoned following receipt of your approval. If you have any questions or require additional information please contact Kelly Henderson at Tetra Tech at 505-237-8440 or kelly.henderson@tetrattech.com.

FIGURES

- I. Site Location Map
2. Site Layout Map
3. Groundwater Elevation Contour Map



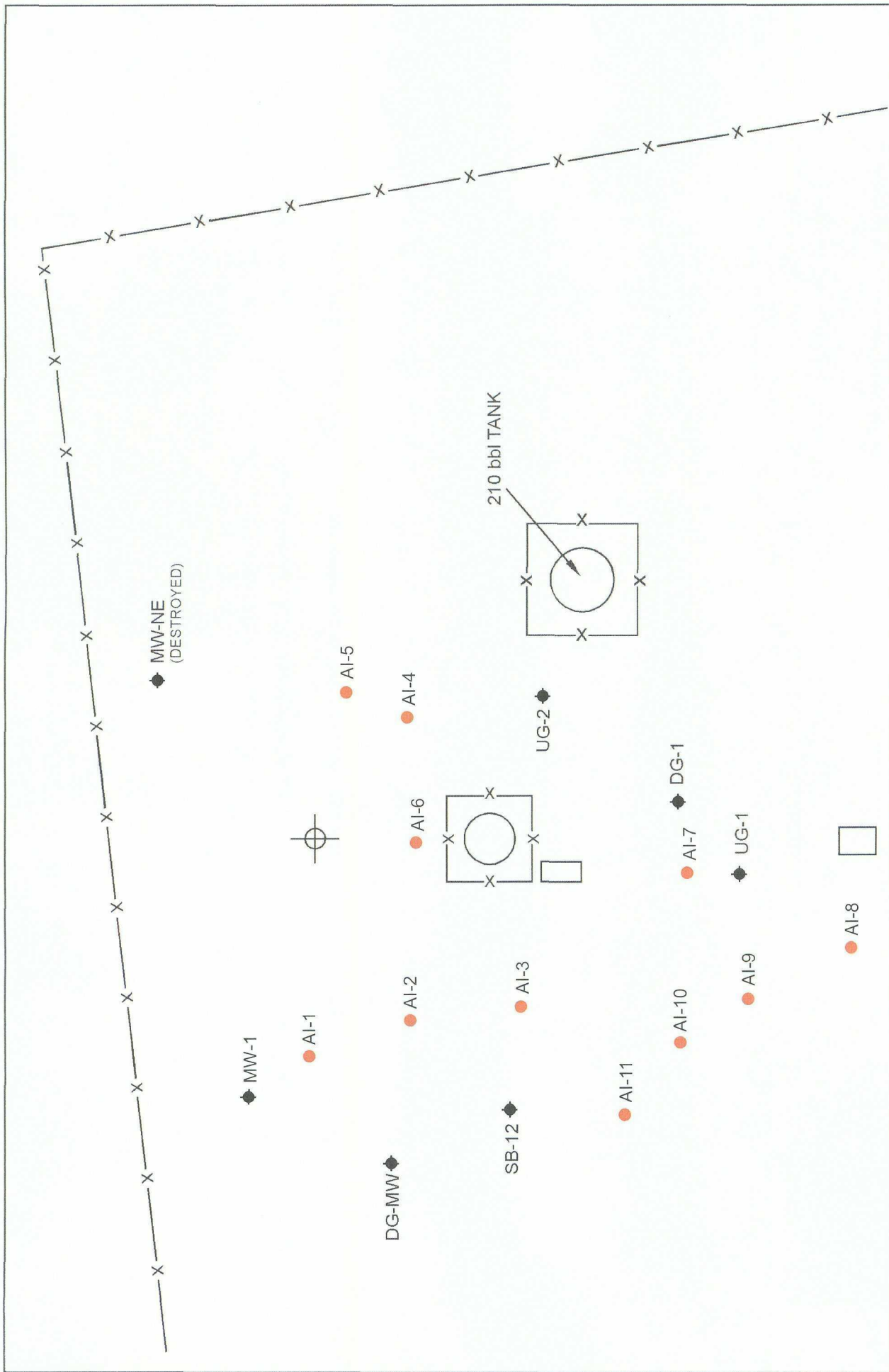
0 $\frac{1}{2}$ 1 mile

★ = Approximate Site Location



TETRA TECH, INC.

FIGURE 1.
SITE LOCATION MAP
CONOCOPHILLIPS
SHEPARD & KELSEY #1
Bloomfield, New Mexico



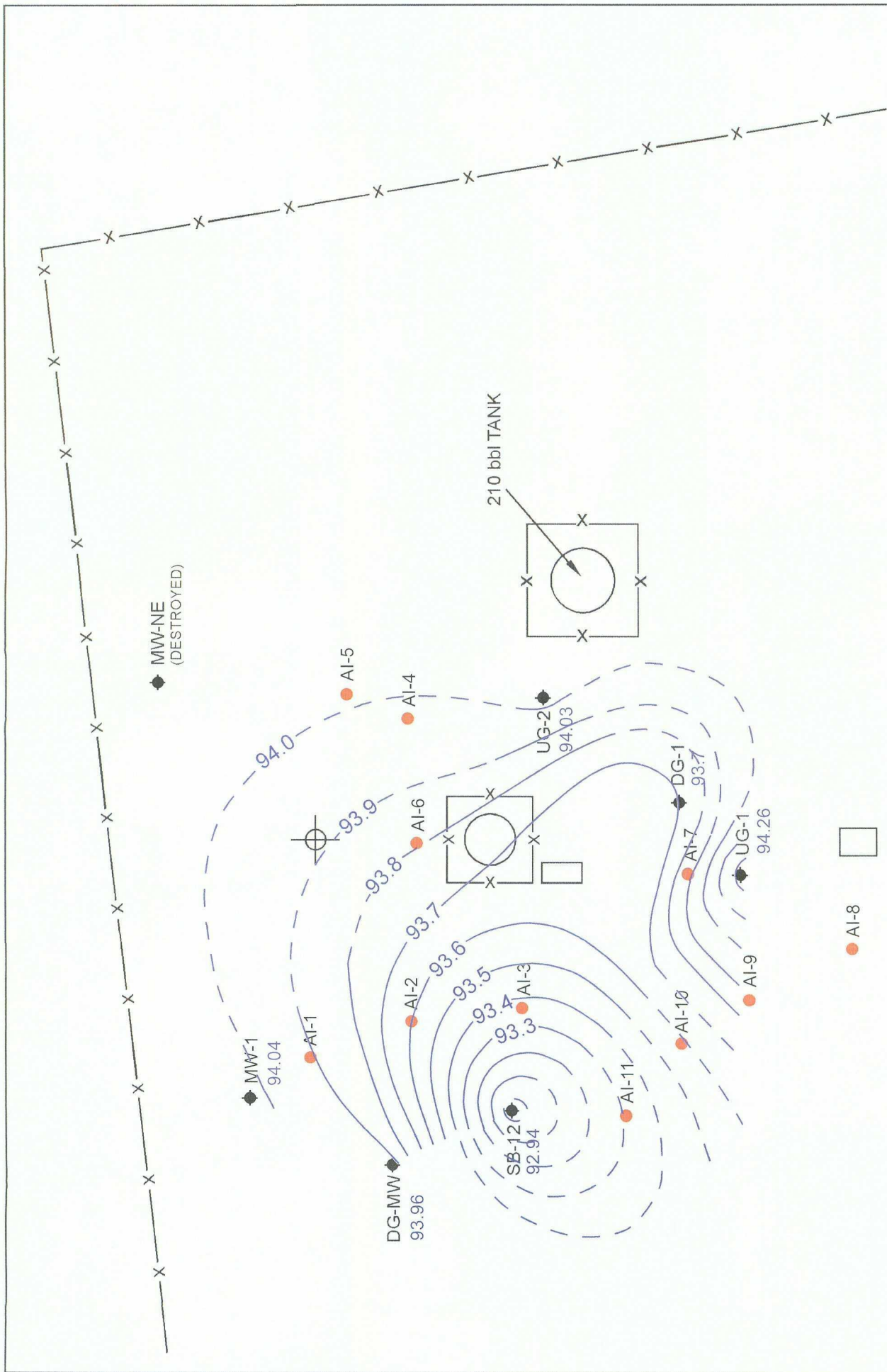
LEGEND

- SHEPHARD KELSEY #1 WELLHEAD
- MONITORING WELL
- AIR INJECTION WELL

FIGURE 2:
CONOCOPHILLIPS
SHEPHARD KELSEY #1
SITE LAYOUT MAP



TETRA TECH, INC.



- LEGEND**
- SHEPHARD KELSEY #1 WELLHEAD
 - MONITORING WELL
 - AIR INJECTION WELL

FIGURE 3:
 CONOCOPHILLIPS
 SHEPHARD KELSEY #1
 GROUNDWATER ELEVATION
 CONTOUR MAP (8/20/2007)

0 50
Feet

GROUNDWATER ELEVATION
 CONTOUR (INTERVAL 0.5FT.)
 (INFERRED)



TETRA TECH, INC.

TABLES

1. Well Specifications and Groundwater Elevations
2. Groundwater Laboratory Analytical Data Summary

Table 1. ConocoPhillips Shephard & Kelsey #1 Monitoring Well Specifications and Groundwater Elevation Table

Well ID	Total Depth (ft. bgs)	Screen Interval (ft)	Elevation ⁽¹⁾ (ft.) (TOC)	Date Measured	Groundwater Level (ft TOC)	Relative Groundwater Elevation (ft TOC)
MW-NE	5.42	4	100.75	5/10/2005	5.250	95.5
				11/21/2005	5.920	94.08
				2/17/2006	6.100	94.65
				5/16/2006	6.400	94.35
				8/1/2006	7.24 ⁽³⁾	92.76
				11/16/2006	6.51 ⁽⁴⁾	unknown
				2/21/2007	6.04 ⁽⁴⁾	unknown
				5/14/2007	unknown	unknown
DG-1	9.05	4	100.23	8/20/2007	6.710	94.040
				5/10/2005	5.550	94.68
				11/21/2005	5.950	94.94
				2/17/2006	5.840	94.39
				5/16/2006	5.900	94.33
				8/1/2006	6.730	93.5
				11/16/2006	5.45 ⁽⁴⁾	unknown
				2/21/2007	5 ⁽⁴⁾	unknown
SB-12	11.31	4	100	5/14/2007	4.89 ⁽⁴⁾	unknown
				8/20/2007	6.530	93.700
				5/10/2005	5.030	94.97
				11/21/2005	6.010	93
				2/17/2006	5.760	94.24
				5/16/2006	5.730	94.27
				8/1/2006	7.080	92.92
				11/16/2006	5.78 ⁽⁴⁾	unknown
UG-1	9.83	4	100.49	2/21/2007	6.4 ⁽⁴⁾	unknown
				5/14/2007	5.32 ⁽⁴⁾	unknown
				8/20/2007	7.060	92.940
				5/10/2005	4.02 ⁽²⁾	unknown
				11/21/2005	5 ⁽²⁾	unknown
				2/17/2006	4.82 ⁽²⁾	unknown
				5/16/2006	5.15 ⁽²⁾	unknown
				8/1/2006	6.32 ⁽³⁾	unknown
UG-2	9.84	4	100.4	11/16/2006	5.35 ⁽⁴⁾	unknown
				2/21/2007	4.81 ⁽⁴⁾	unknown
				5/14/2007	4.84 ⁽⁴⁾	unknown
				8/20/2007	6.230	94.260
				5/10/2005	5.790	94.61
				11/21/2005	5.420	95.81
				2/17/2006	5.330	95.07
				5/16/2006	5.130	95.27
DG-MW	5.42	4	100.67	8/1/2006	6.410	93.99
				11/16/2006	5.18 ⁽⁴⁾	unknown
				2/21/2007	4.71 ⁽⁴⁾	unknown
				5/14/2007	4.62 ⁽⁴⁾	unknown
				8/20/2007	6.370	94.030
				could not locate		unknown
				8/20/2007	6.71	93.96

ft = Feet

TOC = Top of casing

bgs = below ground surface

⁽¹⁾ Elevation relative to MW-NE TOC

⁽²⁾ Groundwater depth anomolous due to broken casing

⁽³⁾ Casing has been repaired and extended

⁽⁴⁾ Casing has been repaired and cut down

Table 2. ConocoPhillips Shephard & Kelsey #1 Groundwater Analytical Results Summary

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
SB-12	6/14/2001	42	5.5	72	370
	9/19/2001	111	BDL	120	810
	12/13/2001	28	BDL	63	322.9
	3/12/2002	64	BDL	56	211.4
	6/19/2002	130	BDL	76	380
	9/17/2002	40	BDL	51	245.1
	3/20/2003	53	10	41	213
	6/11/2003	370	BDL	19	53.8
	10/6/2003	6.1	BDL	30	182
	1/30/2004	12	BDL	16	74.2
	4/26/2004	45	BDL	21	100
	5/10/2005	24	<0.7	18	140
	11/21/2005	<0.5	<0.7	14	68
	2/17/2006	7	<0.7	4	12
	5/16/2006	12	<0.7	1	3
	8/1/2006	<0.5	<0.7	<0.8	<0.8
	11/16/2006	<0.5	<0.7	<0.8	<0.8
	2/21/2007	<0.5	<0.7	3	1
	5/14/2007	<0.5	<0.7	2	<0.8
	8/20/2007	<0.5	<0.7	<0.8	<0.8
MW-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
DG-MW	8/20/2007	<0.5	<0.7	0.9	7
UG-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
UG-2	8/20/2007	<0.5	<0.7	<0.8	<0.8
DG-1	8/20/2007	<0.5	<0.7	<0.8	<0.8
NMWQCC Standards		10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)

NMWQCC = New Mexico Water Quality Control Commission

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

BDL = Below laboratory detection limits; detection limit not specified

<x = Below laboratory detection limits

APPENDIX A

Field Groundwater Sampling Form



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 1 of 6Project No. 1157690028Site Location Bloomfield, NMSite/Well No. MW-1Coded/
Replicate No. _____Date 8/20/2007Weather sunny and hotTime Sampling
Began 2:30 PMTime Sampling
Completed 2:45 PM

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 10.35 bgs Water-Level Elevation _____Held _____ Depth to Water Below MP 6.71 Diameter of Casing 2 inchesWet _____ Water Column in Well 3.64 Gallons Pumped/Bailed
Prior to Sampling 1.5 gallonsGallons per Foot 0.16Gallons in Well 0.58 Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
14:40	18.89	7.65	3389	-61	2.15	5.1

Sampling Equipment BailerConstituents Sampled Container Description PreservativeBTEX 3 VOAs HCl

Remarks _____

Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 2 of 6Project No. 1157690028Site Location Bloomfield, NMSite/Well No. DG-MWCoded/
Replicate No. _____Date 8/20/2007Weather sunny and hotTime Sampling
Began 14:45Time Sampling
Completed 14:55

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation _____

Total Sounded Depth of Well Below MP 10.5 bgs

Water-Level Elevation _____

Held _____ Depth to Water Below MP 6.71Diameter of Casing 2 inchesWet _____ Water Column in Well 3.79Gallons Pumped/Bailed
Prior to Sampling 1 gallon; bailed dryGallons per Foot 0.16Gallons in Well 0.61Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
14:50	18.79	7.15	5021	-225	3.155	3.37

Sampling Equipment BailerConstituents SampledContainer DescriptionPreservativeBTEX 3 VOAs HCl

Remarks _____

Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 3 of 6Project No. 1157690028Site Location Bloomfield, NMSite/Well No. SB-12Coded/
Replicate No. _____Date 8/20/2007Weather sunny and hotTime Sampling
Began 15:00Time Sampling
Completed 15:10

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 12.3 bgs Water-Level Elevation _____Held _____ Depth to Water Below MP 7.06 Diameter of Casing 2 inchesWet _____ Water Column in Well 5.24 Gallons Pumped/Bailed
Prior to Sampling 3 gallons; bailed dryGallons per Foot 0.16Gallons in Well 0.838 Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
15:03	18.43	7.38	3054	1822	1.985	3.07

Sampling Equipment BailerConstituents SampledContainer DescriptionPreservativeBTEX 3 VOAs HCl

Remarks Duplicate sample collected at 15:10Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 4 of 6Project No. 1157690028Site Location Bloomfield, NM

Site/Well No.	<u>UG-2</u>	Coded/ Replicate No.	<u></u>	Date	<u>8/20/2007</u>
Weather	<u>sunny and hot</u>	Time Sampling Began	<u>15:20</u>	Time Sampling Completed	<u>15:25</u>

EVACUATION DATA

Description of Measuring Point (MP) Top of CasingHeight of MP Above/Below Land Surface MP Elevation Total Sounded Depth of Well Below MP 10.9 bgs Water-Level Elevation Held Depth to Water Below MP 6.37 Diameter of Casing 2 inchesWet Water Column in Well 4.53 Gallons Pumped/Bailed Prior to Sampling 4 gallons; recharged while bailingGallons per Foot 0.16Gallons in Well 0.72Sampling Pump Intake Setting
(feet below land surface) Purging Equipment

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
15:20	20.85	7.1	3946	-76.6	2.566	5.33

Sampling Equipment Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCl

Remarks Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 5 of 6Project No. 1157690028Site Location Bloomfield, NMSite/Well No. UG-1Coded/
Replicate No. _____Date 8/20/2007Weather sunny and hotTime Sampling
Began 15:26Time Sampling
Completed 15:40

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____

MP Elevation _____

Total Sounded Depth of Well Below MP 14.2 bgs

Water-Level Elevation _____

Held _____ Depth to Water Below MP 6.23Diameter of Casing 2 inchesWet _____ Water Column in Well 7.97Gallons Pumped/Bailed
Prior to Sampling 3.8-4 gallons; bailed dryGallons per Foot 0.16Gallons in Well 1.275Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
15:35	20.63	7.05	4194	-72.4	2.726	4.82

Sampling Equipment Bailer

Constituents Sampled	Container Description	Preservative
BTEX	3 VOAs	HCl

Remarks _____

Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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



WATER SAMPLING FIELD FORM

Project Name Shephard & Kelsey #1Page 6 of 6Project No. 1157690028Site Location Bloomfield, NMSite/Well No. DG-1Coded/
Replicate No. _____Date 8/20/2007Weather sunny and hotTime Sampling
Began 15:45Time Sampling
Completed 15:54

EVACUATION DATA

Description of Measuring Point (MP) Top of Casing

Height of MP Above/Below Land Surface _____ MP Elevation _____

Total Sounded Depth of Well Below MP 9.9 bgs Water-Level Elevation _____Held _____ Depth to Water Below MP 6.53 Diameter of Casing 2 inchesWet _____ Water Column in Well 3.37 Gallons Pumped/Bailed
Prior to Sampling 1.75 gallons; bailed dryGallons per Foot 0.16Gallons in Well 0.54 Sampling Pump Intake Setting
(feet below land surface) _____

Purging Equipment _____

SAMPLING DATA/FIELD PARAMETERS

Time	Temperature	pH	Conductivity	ORP	TDS (g/L)	DO
15:50	22.08	7.2	1952	-194.6	0.037	8.77

Sampling Equipment BailerConstituents Sampled Container Description PreservativeBTEX 3 VOAs HCl

Remarks _____

Sampling Personnel Kelly Blanchard and Ana Moreno

Well Casing Volumes

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

APPENDIX B

Laboratory Report



2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1052903. Samples arrived at the laboratory on Thursday, August 23, 2007. The PO# for this group is 4506560639 and the release number is TAYLOR.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-1 Grab Water Sample	5136314
DG-MW Grab Water Sample	5136315
SB-12 Grab Water Sample	5136316
UG-2 Grab Water Sample	5136317
UG-1 Grab Water Sample	5136318
DG-1 Grab Water Sample	5136319
Duplicate Grab Water Sample	5136320
Trip Blank Water Sample	5136321

ELECTRONIC Tetra Tech
COPY TO

Attn: Kelly Blanchard



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300

Respectfully Submitted,

A handwritten signature in cursive script, reading "Maria S. Lord".

Maria S. Lord
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 5136314

MW-1 Grab Water Sample
Site# 6083
Shepherd&Kelsey #1, NM

Collected: 08/20/2007 14:30 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKL01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 20:11	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 20:11	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Lancaster Laboratories Sample No. WW 5136315

DG-MW Grab Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 14:45 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLDM

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	0.9	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	7.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02300	GC/MS Volatiles	SW-846 8260B	1	08/29/2007 12:50	Lauren C Marzario	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/29/2007 12:50	Lauren C Marzario	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136316

SB-12 Grab Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 15:00 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKL12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 20:58	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 20:58	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136317

UG-2 Grab Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 15:20 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLU2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 21:22	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 21:22	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136318

UG-1 Grab Water Sample
Site# 6083
Shepherd&Kelsey #1, NM

Collected: 08/20/2007 15:26 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLU1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 21:45	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 21:45	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136319

DG-1 Grab Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 15:45 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 06:40	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 06:40	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136320

Duplicate Grab Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 15:10 by AM

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Dilution Factor
			Trial#	Date and Time	Analyst	
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 07:03	Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 07:03	Matthew F Regan	1

*=This limit was used in the evaluation of the final result



Analysis Report

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Lancaster Laboratories Sample No. WW 5136321

Trip Blank Water Sample
Site# 6083
Shephard&Kelsey #1, NM

Collected: 08/20/2007 15:55

Account Number: 11288

Submitted: 08/23/2007 09:30
Reported: 09/04/2007 at 07:58
Discard: 10/05/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

SKLTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	As Received	Units	Dilution Factor
				Method Detection Limit*	Limit of Quantitation		
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	N.D.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.8	5.	ug/l	1

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis			Analyst	Dilution Factor
			Trial#	Date and Time			
02300	GC/MS Volatiles	SW-846 8260B	1	08/28/2007 07:27		Matthew F Regan	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	08/28/2007 07:27		Matthew F Regan	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: ConocoPhillips
Reported: 09/04/07 at 07:58 AM

Group Number: 1052903

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: T072392AA	Sample number(s): 5136319-5136321								
Benzene	N.D.	0.5	5.	ug/l	104	104	78-119	0	30
Toluene	N.D.	0.7	5.	ug/l	98	97	85-115	1	30
Ethylbenzene	N.D.	0.8	5.	ug/l	91	88	82-119	3	30
Xylene (Total)	N.D.	0.8	5.	ug/l	91	91	83-113	1	30
Batch number: T072401AA	Sample number(s): 5136314,5136316-5136318								
Benzene	N.D.	0.5	5.	ug/l	106	105	78-119	1	30
Toluene	N.D.	0.7	5.	ug/l	94	96	85-115	2	30
Ethylbenzene	N.D.	0.8	5.	ug/l	86	86	82-119	0	30
Xylene (Total)	N.D.	0.8	5.	ug/l	88	89	83-113	1	30
Batch number: T072411AA	Sample number(s): 5136315								
Benzene	N.D.	0.5	5.	ug/l	108	107	78-119	1	30
Toluene	N.D.	0.7	5.	ug/l	95	92	85-115	3	30
Ethylbenzene	N.D.	0.8	5.	ug/l	87	86	82-119	2	30
Xylene (Total)	N.D.	0.8	5.	ug/l	88	88	83-113	1	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: T072392AA	Sample number(s): 5136319-5136321 UNSPK: P133868								
Benzene	120		83-128						
Toluene	105		83-127						
Ethylbenzene	97		82-129						
Xylene (Total)	99		82-130						
Batch number: T072401AA	Sample number(s): 5136314,5136316-5136318 UNSPK: P138575								
Benzene	106		83-128						
Toluene	92		83-127						
Ethylbenzene	85		82-129						
Xylene (Total)	86		82-130						
Batch number: T072411AA	Sample number(s): 5136315 UNSPK: P134746								
Benzene	112		83-128						
Toluene	96		83-127						
Ethylbenzene	89		82-129						
Xylene (Total)	90		82-130						

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: ConocoPhillips
Reported: 09/04/07 at 07:58 AM

Group Number: 1052903

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: GC/MS Volatiles

Batch number: T072392AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5136319	112	98	95	99
5136320	111	99	95	101
5136321	111	100	94	99
Blank	106	98	99	101
LCS	104	100	101	105
LCSD	103	99	100	104
MS	107	102	99	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: GC/MS Volatiles

Batch number: T072401AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5136314	113	100	96	101
5136316	113	99	95	103
5136317	111	99	95	101
5136318	112	100	94	99
Blank	108	97	95	101
LCS	106	101	98	103
LCSD	103	99	98	104
MS	106	100	97	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: GC/MS Volatiles

Batch number: T072411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5136315	108	98	96	102
Blank	109	97	95	101
LCS	107	98	97	105
LCSD	108	100	98	103
MS	108	97	97	106
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The background result was more than four times the spike added.

ConocoPhillips Analysis Request/Chain of Custody



Lancaster Laboratories

For Lancaster Labs Use ONLY Acct. #:

11288

Group # 1052903

SCR#:

5136314-21

005429

Site #: <u>6083</u> AOC#: <u>06093</u> Site City: <u>Bloomfield NM</u> State: <u>NM</u> Enfos PO# <u>4506560639</u> ConocoPhillips PM: <u>Terry Lamech</u> Samplers Name: <u>Ana Moreano, Kelly Anderson</u>		Analyses Requested <input type="checkbox"/> List total number of containers in the box under each analysis. Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other	
Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/> Composite		Turnaround Time Requested in Business Days (TAT) (Circle One): STD. 5 day 48 hour 24 hour Other	
Sample Identification <u>MN-16-1 in</u> <u>OG-MW</u> <u>SB-12</u> <u>UG-2</u> <u>UG-1</u> <u>OG-1</u> <u>Duplicate</u> <u>Trip Blank</u>		Date Collected Time Collected <u>8-20-07 14:30</u> <u>8-20-07 14:45</u> <u>8-20-07 15:00</u> <u>8-20-07 15:20</u> <u>8-20-07 15:26</u> <u>8-20-07 15:45</u> <u>8-20-07 15:10</u> <u>8-20-07 15:55</u>	
Relinquished by: <u>W. Anderson</u> Date: <u>8-22-07 12:30</u> Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by Commercial Carrier: _____ Date: _____ Time: _____ UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other <input type="checkbox"/> Temperature Upon Receipt <u>3.3°</u> C°		Consultant Information: Office City: _____ State: _____ Project Manager: _____ Phone Number: _____ Fax: _____ Email: _____ Electronic Data Deliverables (Circle One) Yes / No Format _____ Reporting Requirements (Circle One) Standard Reports/QC Summary Full Validation (LLI Type I) NJ Regulatory NJ Reduced NY ASP-A NY ASP-B Other _____	

Lancaster Laboratories Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
C	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	l	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml
<	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

U.S. EPA data qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike amount not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
J	Estimated value	U	Compound was not detected
N	Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
P	Concentration difference between primary and confirmation columns >25%	*	Duplicate analysis not within control limits
U	Compound was not detected	+	Correlation coefficient for MSA <0.995
X,Y,Z	Defined in case narrative		

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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