# 3**R-97**

# Annual Groundwater Monitoring Report

# Date: 2006

2006 QUARTERLY MONITORING REPORT CONOCOPHILLIPS SHEPHARD & KELSEY #I BLOOMFIELD, NM OCD # 3R0097







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JANUARY 2007

# QUARTERLY GROUNDWATER MONITORING REPORT

# CONOCOPHILLIPS SHEPHARD & KELSEY #I BLOOMFIELD, NEW MEXICO

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. 6690009.100

January 4, 2007

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

# 1.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed on November 16, 2006, at the ConocoPhillips Shephard & Kelsey #1 Site in Bloomfield, New Mexico, by Tetra Tech, Inc (Tetra Tech).

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 a gas production well and associated equipment and installations. The location and general features 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 tank and one at a presumed downgradient location. Both locations were below laboratory detection limits for benzene, toluene, ethylbenzene, and xylenes (BTEX) and total petroleum hydrocarbons (TPH) laboratory analyses. Onsite returned to the site on November 11, 1996, advanced two additional test holes immediately adjacent to the tank, and discovered impacts in soil and groundwater northeast of the tank. On February 13, 1996 soils were excavated from the former pit area until delineation was achieved to a practical extent due to site equipment placement, and confirmatory samples were obtained.

Monitoring wells (MW-NE, DG I, SB-12, UG I, UG 2, and DG-MW) were subsequently installed at the site. All monitoring wells had reached compliance with the exception of SB-12, with concentrations below the New Mexico Water Quality Control Commission (NMWQCC) standard until the November 21, 2005 sampling event the benzene concentration was below the laboratory detection limit and the NMWQCC standard; however in the May 2006 sampling, benzene in SB-12 was slightly above the standard at 12 mg/L. The last two sampling events, August 2006 and November 2006, have yielded concentrations lower than laboratory detection limits.

On November 16, 2006 Tetra Tech was onsite to conduct a quarterly groundwater sampling event. Groundwater elevation measurements were taken at all wells, except DG-MW, which could not be located. A groundwater sample from SB-12 was collected and shipped to Lancaster Laboratories in Lancaster, Pennsylvania to be analyzed for the presence of BTEX.

# 2.0 METHODOLOGY AND RESULTS

The following describes the groundwater monitoring methodology and results:

# 2.1 Groundwater Monitoring Methodology

On November 16, 2006 groundwater elevation measurements were recorded in monitor wells. Table I presents the well specifications and groundwater levels. A groundwater elevation contour map cannot be created for this sampling event because the monitoring well casings have been modified at the landowner's request.

Approximately 2 gallons of water were purged from SB-12 before sampling. The purged water was placed in the on site waste water tank. A 1.5-inch dedicated, clear, poly-vinyl, disposable bailer was used to collect the groundwater sample. The groundwater sample containers were placed in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Lancaster Laboratories located in Lancaster, Pennsylvania. The sample was analyzed for the presence of BTEX by Environmental Protection Agency (EPA) Method 8260B.

# 2.2 Groundwater Sampling Analytical Results

Analysis of groundwater collected from SB-12 shows concentrations of BTEX are below laboratory detection limits. Table 2 presents the historical laboratory analytical results for the well. The laboratory analytical report is included as Appendix A.

# 3.0 CONCLUSIONS

The November 16, 2006 sample represents the second consecutive quarter of results below the New Mexico Groundwater Standards for the site. Tetra Tech will continue to sample SB-12 quarterly with the next event taking place during February 2007. If you have any questions or require additional information please contact Kelly Henderson at Tetra Tech at 505-237-8440 or kelly.henderson@tetratech.com.

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# FIGURES

I. Site Location Map

2. Site Layout Map







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



# TABLES

I. Well Specifications and Groundwater Elevations

2. Groundwater Laboratory Analytical Data Summary

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

Well ID	ID         Total Depth (ft. bgs)         Screen Interval (ft)         *Elevati (ft.) (TC           NE         5.42         4         100           1         9.05         4         100.81           12         11.31         4         99.01           1         9.83         4         101.71           2         9.84         4         101.21	*Elevation (ft.) (TOC)	Date Measured	Groundwater Level (ft TOC)	Relative Groundwater Elevation (ft TOC)			
	Total Depth (ft. bgs)         Screen Interval (ft)         *Elevati (ft.) (TO           IE         5.42         4         100           II         9.05         4         100.89           II         9.83         4         101.71           II         9.83         4         101.71           II         9.84         4         101.23		5/10/2005	5.25	94.75			
				11/21/2005	5.92	94.08		
	E 40	otal Depth (ft. bgs)         Screen Interval (ft)         *Elevati (ft.) (TC)           5.42         4         100           9.05         4         100.81           11.31         4         99.01           9.83         4         101.7           9.84         4         101.2	100	2/17/2006	6.1	93.9		
WWW-INE	0.42	al Depth         Screen Interval (ft)         *Elevat (ft.) (TC           5.42         4         100           9.05         4         100.8           11.31         4         99.0           9.83         4         101.7           9.84         4         101.7	100	5/16/2006	6.4	93.6		
		Screen Interval (ft)         *Eleval (ft.) (ft)           4         100           4         100.8           4         100.8           4         99.0           4         101.7           4         101.7           4         101.7           4         101.7		8/1/2006	7.24***	92.76		
	D       Total Depth (ft. bgs)       Screen Interval (ft)       *El. (ft. ft. ft. ft. ft. ft. ft. ft. ft. ft.		11/16/2006	6.51****	unknown			
		I Depth       Screen Interval (ft)       *Eleva (ft.) (T         5.42       4       100         5.42       4       100         9.05       4       100         1.31       4       99.0         9.83       4       101.         9.84       4       101.		5/10/2005	5.55	95.34		
	=       5.42       4       100         9.05       4       100.89         11.31       4       99.01		11/21/2005	5.95	94.94			
DC 4	(ft. bgs)       (ft)       (ft.) (TC         5.42       4       100         9.05       4       100         11.31       4       99.07         9.83       4       101.7	100.00	2/17/2006	5.84	95.05			
DGT	9.05 4 100.4		100.69	5/16/2006	5.9	94.99		
				8/1/2006	6.73	94.16		
	<b>31</b> 9.05 4 100.89		11/16/2006	5.45****	unknown			
				5/10/2005	5.03	93.98		
				11/21/2005	6.01	34         95.05           9         94.99           73         94.16           ****         unknown           03         93.98           01         93           76         93.25           73         93.28		
CD 42	11.21	11.31 4 99.0		2/17/2006	5.76	93.25		
3D-12	11.51	4	99.01	5/16/2006	5.73	93.28		
	. T.	4 99.		8/1/2006	7.08	91.93		
	6			11/16/2006	5.78****	unknown		
				5/10/2005	4.02**	unknown		
	1000			11/21/2005	5**	unknown		
110.4	0.02		101 71	101 71 2/17/2006 4.82**		unknown		
001	9.03	4	101.71	5/16/2006	5.15**	unknown		
				8/1/2006	6.32***	unknown		
	4. 2.	1		11/16/2006	5.35****	unknown		
				5/10/2005	5.79	95.44		
	St. 10			11/21/2005	5.42	95.81		
116.2	0.94	4	101 22	2/17/2006	5.33	95.9		
002	9.84 4 101.23	5/16/2006	5.13	96.1				
		8/1/2006	6.41	94.82				
1	1.1.1			11/16/2006	5.18****	unknown		
DG-MW	5.42	4	unknown	could	not locate	unknown		

ft. = Feet

TOC = Top of casing

bgs = below ground surface

\* Relative Elevation

\*\* Groundwater depth anomolous due to broken casing

\*\*\*Casing has been repaired and extended - Measurement was made to approximate old casing

\*\*\*\*Casing has been repaired and cut down

Well ID	Date	Benzene (μg/L)	Toluene (μg/L) Ethylbenzene (μg/L)		Xylenes (μg/L)
	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
SB-12	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
1.1.1	11/16/2006	<0.5	<0.7	<0.8	<0.8
NMWQC	C Standards	10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)

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

NMWQCC = New Mexico Water Quality Control Commission

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

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

**NE=Not Extablished** 

NA = Not Analyzed

BDL = Below laboratory detection limits

<0.5 = Below laboratory detection limit of 0.7 ug/L

<0.7 = Below laboratory detection limit of 0.7 ug/L

<0.8 = Below laboratory detection limit of 0.7 ug/L

# APPENDIX A

Field Groundwater Sampling Form

TOJECT Name	e Shephard & Kelsev #1					Page	1	of	1
Project No	1156690009								
Project Name Project No. Site Location Site/Well No. Veather Description of leight of MP / Total Sounded leld Vet Durging Equip Time 1424 1427 1430 Sampling Equi	Placefield NM			11.42					
	Bioomneid, NW	Coded/		_					
ite/Well No.	SB-12	Replicat	e No.		Date	1-3	11/16	/2006	1
/eather	sunny 60°	Time Sa Began	mpling 142	20	Time Sar Complete	mpling ed		1500	-
		E	VACUATION D	АТА					
escription o	of Measuring Point (MP) T	op of Casing							
eight of MP	Above/Below Land Surface	э		MP Elevation	de	Ur	nknown		
otal Sounde	ed Depth of Well Below MP	1	2.3	Water-Level Ele	evation	SIL	Unkr	own	3
eld	Depth to Water Below	MP 5	.78	Diameter of Cas	sing		2		
/et	Water Column in V	Nell 6	52	Gallons Pumper	d/Bailed		3.	12	
			.02	i noi to Gampin			0.	12	-
uraina Faui	Gallons per F Gallons in \ pment 1.5" Disposable	Foot 0.	.16 .04	Sampling Pump (feet below land	Intake Set surface)	tting	N/	A	
urging Equi	Gallons per F Gallons in V pment <u>1.5" Disposable</u>	Foot 0. Well 1. Polyvinyl Ba SAMPLING	.16 .04 .iller DATA/FIELD F	Sampling Pump (feet below land	Intake Set surface)	tting	N/	<u>A</u>	
urging Equi Time 1424	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2	Foot 0. Well 1. Polyvinyl Ba SAMPLING pH 7.17	16 .04 .iller DATA/FIELD F Conductivity 1307	Sampling Pump (feet below land PARAMETERS TDS in ppm 625	Intake Set surface) Othe	r	N/	A	
Time 1424 1427	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature <u>55.2</u> 55.3	Foot 0.	16 .04 iller DATA/FIELD F Conductivity 1307 1335	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658	Intake Set surface) Othe	r	N/	A	
Urging Equi Time 1424 1427 1430	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature <u>55.2</u> 55.3 56	Foot 0.	16 .04 .iller DATA/FIELD F Conductivity 1307 1335 1299	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627	Intake Set surface) Othe	r	N/	A	
Urging Equi	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature <u>55.2</u> 55.3 56	Foot 0.	16 .04 .iller DATA/FIELD F Conductivity 1307 1335 1299	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627	Othe	r	N	A	
Time 1424 1427 1430	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2 55.3 56 1 1 1 1 1	Foot 0.	16 .04 .iller DATA/FIELD F Conductivity 1307 1335 1299	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 627	Othe	r	N	A	
Time 1424 1427 1430 ampling Eq <u>Cons</u>	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2 55.3 56 uipment <u>1</u> stituents Sampled	Foot 0.	16 .04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er	Othe	r Pres	N	<u>e</u>	
urging Equi	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2 55.3 56 uipment <u>1</u> stituents Sampled BTEX	Foot 0.	16 .04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as	Othe	r Pres	N/ servativ	<u>e</u>	
urging Equi	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2 55.3 56 uipment <u>1</u> stituents Sampled BTEX	Foot 0.	16 .04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as	Othe	r Pres	N/ servativ HCI	<u>e</u>	
urging Equi	Gallons per F Gallons in V pment <u>1.5" Disposable</u> Temperature <u>55.2</u> 55.3 56 uipment <u>1</u> stituents Sampled BTEX	Foot 0.	16 .04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Bail container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as	Othe	r	N/ servativ HCI	<u>e</u>	
urging Equi	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature 55.2 55.3 56 uipment <u>1</u> stituents Sampled BTEX	Foot 0.	16 04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile Container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as	Othe	r Pres	N/ servativ HCI	<u>e</u>	
Time 1424 1427 1430 ampling Eq <u>Cons</u> emarks	Gallons per F Gallons in N pment <u>1.5" Disposable</u> Temperature <u>55.2</u> <u>55.3</u> <u>56</u> uipment <u>1</u> stituents Sampled BTEX Bailed dry after about 2 g	Foot 0.	16 .04 iiler DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as ediment in it.	Othe	r Pres	N/ servativ HCI	<u>e</u>	
urging Equi	Gallons per F Gallons in N pment <u>1.5" Disposable</u> <u>Temperature</u> <u>55.2</u> <u>55.3</u> <u>56</u> uipment <u>1</u> stituents Sampled <u>BTEX</u> <u>Bailed dry after about 2 g</u> rsonnel Jennifer Berlin,	Foot 0. Well 1. Polyvinyl Ba SAMPLING pH 7.17 7.37 4.49 .5" Disposab C gallons. Wate Ana Moreno	16 04 iller DATA/FIELD F Conductivity 1307 1335 1299 le Polyvinyl Baile container Descri 3 - 40 mL voa	Sampling Pump (feet below land PARAMETERS TDS in ppm 625 658 627 er ption as ediment in it.	Othe	r Pres	N/ servativ	<u>e</u>	

 $1 \frac{1}{2}" = 0.10 \qquad 2 \frac{1}{2}" = 0.24 \qquad 3" \frac{1}{2} = 0.50$ R:\Share\Maxim Forms\Field Forms\Shephard and Kelsey SB-12 Water Sampling Field Form Entered Data

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

#### 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 1014979. Samples arrived at the laboratory on Monday, November 20, 2006. The PO# for this group is 4506560639 and the release number is KINGER.

Client Description SB-12 Grab Water Sample Trip Blank Water Sample Lancaster Labs Number 4920888 4920889

ELECTRONIC Tetra COPY TO

Tetra Tech, Inc

Attn: Kelly Henderson





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

Respectfully Submitted,

Ins And

Marla S. Lord Senior Specialist



# **Analysis Report**

Account Number: 11288

Bartlesville OK 74005

ConocoPhillips

PO Box 2200

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#### Lancaster Laboratories Sample No. WW 4920888

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

Collected:11/16/2006 15:00 by JB

Submitted: 11/20/2006 09:20 Reported: 11/27/2006 at 10:17 Discard: 12/28/2006

KEL12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
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.

CAT		Laboratory	Chro	Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/23/2006 01:44	Sara E Wolf	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2006 01:44	Sara E Wolf	1

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



# **Analysis Report**

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#### Lancaster Laboratories Sample No. WW 4920889

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

Collected: n.a.

Submitted: 11/20/2006 09:20 Reported: 11/27/2006 at 10:17 Discard: 12/28/2006 Account Number: 11288

ConocoPhillips PO Box 2200 Bartlesville OK 74005

#### KELTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
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	Chro	nicle		
CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/23/2006 02:10	Sara E Wolf	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2006 02:10	Sara E Wolf	1





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# Quality Control Summary

Client Name: ConocoPhillips Reported: 11/27/06 at 10:18 AM Group Number: 1014979

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 <u>Result</u>	Blank MDL**	Blank LOQ	Report Units	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	RPD Max
Batch number: P063261AA	Sample n	umber(s):	4920888-49	20889					
Benzene	N.D.	0.5	5.	ug/l	97		85-117		
Toluene	N.D.	0.7	5.	ug/l	92		85-115		
Ethylbenzene	N.D.	0.8	5.	ug/l	90		82-119		
Xylene (Total)	N.D.	0.8	5.	ug/l	92		83-113		

#### 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

	MS	MSD	MS/MSD		RPD	BKG	DUP	DUP	Dup RPD
Analysis Name	%REC	%REC	Limits	RPD	MAX	Conc	Conc	RPD	Max
Batch number: P063261AA	Sample	e number	(s): 49208	88-4920	889 UNS	PK: P92158	9		
Benzene	102	102	83-128	0	30				
Toluene	97	95	83-127	2	30				
Ethylbenzene	97	96	82-129	2	30				
Xylene (Total)	98	96	82-130	2	30				

#### 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 N Batch numb	ame: UST-Unleaded waters er: P063261AA	DY 8260B		
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4920888	98	95	87	91
4920889	98	94	88	87
Blank	99	97	88	88
LCS	98	96	87	91
MS	99	95	88	91
MSD	98	95	87	91
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.

# ConocoPhilips Analysis Request/Chain of Custody

Labora	atories	050	020				Ao	ct. #: !	112	88	Gr	oup #	I numbe	of cont	ainers in	Sample	#: <u>49</u>	400	g.	-89
site #: Shephard	skekeg# (wno #	45065	60630	1	Т	Matr	ix	Anat	yses	Reque	eserva	tion	ier each Codes	analysis	1	T	Pres	ervative	Code	IS ulfate
Site Address: Bloor	nfield						1.17										N = HNO3	B=	NaOH	1
ConocoPhillips PM: <u>P</u>	aul Taylor c	ompany Code: _		-	. [										1		S = H2SO	4 0=	Other	
Core Work Order#: 000	010109318-000	Total Lab Budg	et # 396	200 XX		tabl														
Consultant/Office: Fe	ch Tech Tel	tra Tech									11				12					
Consultant Prj. Mgr: K	elly Henderso	n	125412.00			-	=				11				-					
Consultant Phone #: 50	5-237-8440:97	5-2567ax #:		-	-	-		X												
Sampler Jennifer B	erling Ana Ho	reno			oste		Air	4									*			
ample Identification		Date Collected	Time Collected	Grab	Comp	Water	OID	0								F	Remarks			
513-12		11/10/06	1500	*		X	1	X												
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Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

# 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
С	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meg	milliequivalents	kg	kilogram(s)
q	gram(s)	mg	milligram(s)
ug	microgram(s)	Ĩ.	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 limit of quantitation, 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**

- A TIC is a possible aldol-condensation product
- B Analyte was also detected in the blank
- C Pesticide result confirmed by GC/MS
- D Compound quatitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- J Estimated value
- N Presumptive evidence of a compound (TICs only)
- P Concentration difference between primary and
- confirmation columns >25%
- U Compound was not detected
- X,Y,Z Defined in case narrative

#### **Inorganic Qualifiers**

- B Value is <CRDL, but ≥IDL
- E Estimated due to interference
- M Duplicate injection precision not met
- N Spike amount not within control limits
- S Method of standard additions (MSA) used for calculation
- U Compound was not detected
- W Post digestion spike out of control limits
  - Duplicate analysis not within control limits
  - Correlation coefficient for MSA < 0.995

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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