3R - 097

MONITORING REPORT

04/10/2008



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6121 Indian School Rd. NE Suite 200 Albuquerque, NM 87110 (505) 237-8440

TETRA TECH, INC.

April 10, 2008

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 Semi-Annual Report Flora Vista, New Mexico
(2) ConocoPhillips Shephard & Kelsey #1 2007 Quarterly Report Bloomfield, New Mexico
(3) ConocoPhillips Federal #15 2007 Annual Report Farmington, New Mexico
(4) ConocoPhillips B Com #1E 2007 Annual Report Farmington, New Mexico

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

Kelly E. Blanchard Project Manager/Geologist

Enclosures (4)

2007 QUARTERLY MONITORING REPORT CONOCOPHILLIPS SHEPHARD & KELSEY #I BLOOMFIELD, NM OCD # 3R0097

3R097







FEBRUARY 2008

QUARTERLY GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS SHEPHARD & KELSEY #I BLOOMFIELD, NEW MEXICO

OCD # 3R0097

Prepared for:



420 South Keeler Avenue Bartlesville, OK 74004

Prepared by:



TETRA TECH, INC.

6121 Indian School Rd NE, Suite 200 Albuquerque, NM 87110 Tetra Tech Project No. 8690041.100

February 20, 2008

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- 3. Groundwater Elevation Contour Map

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- 2. Groundwater Laboratory Analytical Data Summary

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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 by Tetra Tech, Inc. (Tetra Tech) on November 6, 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 natural 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 November 2007 sample collected from SB-12 represents the sixth 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 (μ g/L), which is slightly above the NMWQCC standard of 10 μ g/L. Ethylbenzene and xylenes were detected at concentrations of 1 μ g/L and 3 μ g/L, respectively.

August and November 2006 sampling events

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

Quarterly Groundwater Monitoring Report Shephard & Kelsey #1, Bloomfield, New Mexico

February 2007 sampling event

Ethylbenzene and xylenes were detected at concentrations of 3 μ g/L and 1 μ g/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.

August 2007 sampling event

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

2.0 METHODOLOGY AND RESULTS

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

2.1 Groundwater Monitoring Methodology

Groundwater Elevation Measurements

On November 6, 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. Groundwater elevation measurements for monitor wells UG-1 and DG-1 were not used in the formation of the contour map due to possible errors associated with broken casings. Table 1 presents the monitor well specifications and groundwater level data. A groundwater elevation contour map is presented in Figure 3.

Groundwater sampling

Groundwater samples were collected from monitor well SB-12 during this sampling event. Approximately 2 gallons of water, or three well volumes, were purged from the well before sampling. A 1.5-inch dedicated, clear, poly-vinyl, disposable bailer was 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 November 2007 analysis of groundwater collected shows concentrations of BTEX were below laboratory detection limits in monitor well SB-12. 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 November 6, 2007 sampling event represents the sixth consecutive quarter of results indicating concentrations of BTEX in monitor well SB-12 below NMWQCC standards. Based on the work performed at

Quarterly Groundwater Monitoring Report Shephard & Kelsey #1, Bloomfield, New Mexico

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this site, Tetra Tech recommends continuation of quarterly sampling until eight consecutive quarters of results below NMWQCC standards are attained. If you have any questions or require additional information please contact Kelly Blanchard at Tetra Tech at 505-237-8440 or kelly.blanchard@tetratech.com.

FIGURES

I. Site Location Map

2. Site Layout Map

3. Groundwater Elevation Contour Map

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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

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Weil ID	Total Depth (ft. bgs)	Screen interval (ft)	Elevation ⁽¹⁾ (ft.) (TOC)	Date Measured	Groundwater Level (ft TOC)	Relative Groundwater Elevation (ft TOC)			
				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			
	5.40	4	100.75	8/1/2006	7.24 ⁽³⁾	92.76			
INIAA-INS	0.42	4	100.75	11/16/2006	6.51 ⁽⁴⁾	unknown			
				2/21/2007	6.04 ⁽⁴⁾	unknown			
								5/14/2007	unknown
				8/20/2007	6.710	94.040			
				11/6/2007	5.870	94.880			
				5/10/2005	5.550	94.68			
				11/21/2005	5.950	94.94			
			100.23	2/17/2006	5.840	94.39			
				5/16/2006	5.900	94.33			
				8/1/2006	6.730	93.5			
DG-1	9.05	4		11/16/2006	5.45(4)	unknown			
				2/21/2007	5 ⁽⁴⁾	unknown			
				5/14/2007	4.89 ⁽⁴⁾	unknown			
				8/20/2007	6.530	93.700			
				11/6/2007	5 8 ⁽²⁾	unknown			
				5/10/2005	5.030	94.97			
			100	11/21/2005	6.010	93			
				2/17/2006	5.760	94.24			
				5/16/2006	5.730	94.27			
	11.31			8/1/2006	7.080	02.02			
SB-12		4		11/16/2006	5 78 ⁽⁴⁾	<u>1000000</u>			
				2/21/2007	6.4 ⁽⁴⁾	unknown			
				5/14/2007	5.32 ⁽⁴⁾	unknown			
					8/20/2007	7.060	92.940		
				11/6/2007	6.310	93.690			
				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-1	9.83	4	100.49	11/16/2006	5 35 ⁽⁴⁾	unknown			
				2/21/2007	4.81 ⁽⁴⁾	unknown			
				5/14/2007	4.01	unknown			
				8/20/2007	6.230	94 260			
				11/6/2007	5 45 ⁽²⁾	unknown			
		[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			
				8/1/2006	6.410	93.99			
UG-2	9.84	4	100.4	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			
		1	1	11/6/2007	5,650	94 750			
				could	not locate				
DG-MW	5 42		100.67	8/20/2007	6 71	03.06			
DG-MW	0.72	1		0/20/2007	0.71	50.50			

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

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

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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
	10/6/2003	6.1	BDL	30	182
	1/30/2004	12	BDL	16	74.2
SB-12	4/26/2004	45	BDL	21	100
i	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
	11/6/2007	< 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)

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

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

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APPENDIX A

Field Groundwater Sampling Form

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	Shephard & Kelsey #1					Page	1	_ of _	
Project No.	1158690041								
Site Location	Bloomfield, NM								
Site/Well No.	SB-12	Coded/ Replica	te No.		Date			11	/6/
Weather	sunny, 65°	Time S Began	ampling	12:00	Time Sa Comple	amplin ted	g		
	<u></u>	E	EVACUATION D	ΑΤΑ	·				
Description of	Measuring Point (MP)	p of Casin	g						_
Height of MP	Above/Below Land Surface		·	MP Elevation			•		
Total Sounded	d Depth of Well Below MP	12.3 bg	s	Water-Level El	evation				
Held	Depth to Water Below M	/IP	6.31	Diameter of Ca	sing	2 inc	hes		_
Wet	Water Column in W	ell	6.28	Prior to Sampli	ng	3 gal	lons; bai	led dry	
	Gallons per Fo	oot	0.16						
	Gallons in W	ell	1.0048	(feet below land	d surface)	etting			
Time	Temperature	pH 7.55	Conductivity 2874	ORP -139.6	TDS ((g/L) 75	DO 3.62		
12:54	10.01								
12:54								_	
12:54									
12:54 Sampling Equ	ipment Ba	iler							
12:54 Sampling Equ <u>Const</u>	ipment Ba	iler	Container Descri	ption		P	reservati	ve	
12:54 Sampling Equ <u>Const</u> BTEX	ipment Ba	iler <u>(</u> 3 VOA	Container Descri	iption	HCI	 P	reservati	ve	
12:54 Sampling Equ <u>Const</u> BTEX	ipment Ba	iler 3 VOA	Container Descri	ption	HCI	<u>P</u>	reservati	ve	
12:54 Sampling Equ <u>Const</u> BTEX	ipment Ba	iler 	Container Descri	iption	HCI	 P	reservati	<u>ve</u>	
12:54 Sampling Equ <u>Const</u> BTEX Remarks	ipment Ba	iler <u>3</u> VOA	Container Descri s	ption	HCI	<u>P</u>	reservati	ve	
12:54 Sampling Equ <u>Const</u> BTEX Remarks Sampling Pers	ipment Ba ituents Sampled Duplicate sample collected sonnel Mitch Crooks an	iler <u>3 VOA</u> d; water gra	Container Descri	iption	HCI	P	reservati	<u>ve</u>	

APPENDIX B

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Laboratory Report



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Analysis 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 1064413. Samples arrived at the laboratory on Wednesday, November 07, 2007. The PO# for this group is 4506560639 and the release number is LAUCK.

<u>Client Description</u> SB-12 Grab Water Sample Duplicate Grab Water Sample Trip Blank Water Sample Lancaster Labs Number 5206181 5206182 5206183

ELECTRONIC Tetra Tech COPY TO Attn: Kelly Blanchard

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

Respectfully Submitted,

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Christine Dulaney Senior Specialist



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2425 New Holland



Analysis Report

Bartlesville OK 74005

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Page 1 of 1

Lancaster Laboratories Sample	No. I	WW	5206181		
SB-12 Grab Water Sample Site# 6083 Shephard&Kelsey #1, NM		•			
Collected:11/06/2007 12:30	by M	с		Account Number:	11288
Submitted: 11/07/2007 09:30 Reported: 11/13/2007 at 13:16				ConocoPhillips PO Box 2200	

Reported: 11/13/2007 at 13:16 Discard: 12/14/2007

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ALC: NO.

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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		1		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/10/2007 11:37	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2007 11:37	Stephanie A Selis	1

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





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Page 1 of 1

Lancaster Laboratories Sample	No. WW	5206182		
Duplicate Grab Water Sample Site# 6083 Shephard&Kelsey #1, NM				
Collected:11/06/2007 13:00	by MC		Account Number:	11288
Submitted: 11/07/2007 09:30 Reported: 11/13/2007 at 13:16 Discard: 12/14/2007			ConocoPhillips PO Box 2200 Bartlesville OK	74005

SHPFD

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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.

 \mathbf{i}

		Laboratory	Chro	nicle		
CAT		1		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/10/2007 11:59	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2007 11:59	Stephanie A Selis	1



Analysis Report

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Lancaster Laboratories Sample No. WW 5206183

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

Collected:11/06/2007 13:25

Submitted: 11/07/2007 09:30 Reported: 11/13/2007 at 13:16 Discard: 12/14/2007 Account Number: 11288

ConocoPhillips PO Box 2200 Bartlesville OK 74005

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Service Services

CAT			As Received	As Received Method	As Received Limit of		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit*	Quantitation	Units	Factor
023 <u>0</u> 0	GC/MS Volatiles			1.			
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	C Analysis I							
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor		
02300	GC/MS Volatiles	SW-846 8260B	1	11/10/2007 10:52	Stephanie A Selis	1		
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2007 10:52	Stephanie A Selis	1		





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Page 1 of 1

Quality Control Summary

Client Name: ConocoPhillips Reported: 11/13/07 at 01:16 PM Group Number: 1064413

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 LOO	Report <u>Units</u>	LCS <u>%REC</u>	LCSD <u>%REC</u>	LCS/LCSD <u>Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: L073141AA	Sample nu	mber(s): 5	206181-52	06183					
Benzene	N.D.	0.5	5.	uq/1	90	89	78-119	1	30
Toluene	N.D.	0.7	5.	ug/1	92	91	85-115	1	30
Ethylbenzene	N.D.	0.8	5.	ug/l	94	93	82-119	0	30
Xylene (Total)	N.D.	0.8	5.	ug/l	89	89	83-113	0	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 <u>%REC</u>	MSD <u>%rec</u>	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: L073141AA	Sample n	umber(s)	: 5206181-	520618	3 UNSPR	C: P206164			
Benzene	133 (2)		83-128					1	
Toluene	104		83-127						
Ethylbenzene	117		82-129						
Xylene (Total)	119		82-130						

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 M Batch numb	Name: GC/MS Volatiles Der: L073141AA					
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene		
5206181	105	97	104	104		
5206182	105	95	104	101		
5206183	104	97	105	101		
Blank	104	97	104	99		
LCS	105	99	107	105		
LCSD	105	98	106	105		
MS	106	98	104	104		
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 unspiked result was more than four times the spike added.

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Al ancactor						2011				6 T	530	- 1819	83	X
Laboratories	0083	-u -u.			MCCL #	Analy	ses Reque	List k List k ssted box u	Xal number nder each a	of containers natysis.	in the	i		
11-1 - 1-C	AOC#:	0608	5		Matrix			reservatio	n Codes			H = HCI	rvative Code T = Thiost	s lífate
DIGOMATELE DA ASAP		State	Nw N		5	0						N = HNO3 S = H2SO4	B = NaOF O = Other	
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Lancaster Laboratories Explanation of Symbols and Abbreviations

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

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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)
meq	milliequivalents	kg	kilogram(s)
g	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 <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

- 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 \geq 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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