

3R - 090

**MONITORING
REPORT**

04/10/2008



TETRA TECH, INC.

RECEIVED

2008 APR 11 PM 1 57

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

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
Project Manager/Geologist

Enclosures (4)

3R090

SEMI-ANNUAL GROUNDWATER MONITORING REPORT
CONOCOPHILLIPS
NELL HALL #1
FLORA VISTA, NM
OCD # 3R0090

RECEIVED

2009 APR 11 PM 1 57




ConocoPhillips



TETRA TECH, INC.

DECEMBER 2007

GROUNDWATER MONITORING REPORT

CONOCOPHILLIPS NELL HALL #1 FLORA VISTA, NEW MEXICO OCD # 3R0090

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. 7690022.100

December 8, 2007

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GROUNDWATER MONITORING REPORT NELL HALL #1, FLORA VISTA, NEW MEXICO

1.0 INTRODUCTION

This report presents the results of the semi-annual groundwater monitoring event conducted on November 6, 2007 at the ConocoPhillips Nell Hall #1 Site in Flora Vista, New Mexico, by Tetra Tech, Inc. (Tetra Tech).

The site is located northeast of Farmington, New Mexico on Flora Vista Road in Flora Vista, New Mexico approximately 2 miles west of Aztec, New Mexico. The site consists of a gas production well and associated equipment and installations. The location and general features of the Nell Hall #1 site are shown on Figures 1 and 2, respectively.

The environmental investigation at this site began with the attempted closure of an unlined dehydrator discharge pit in the early 1990's. Soil and groundwater impacts were discovered and three monitoring wells were installed. Due to an ongoing drought, the wells became dry. Souder Miller and Associates installed three additional monitoring wells to greater depths on February 17 and 18, 2004. MW-4 and MW-6 were installed to 35 feet below ground surface (bgs) with 30 feet of slotted screen and MW-5 was installed to 39 feet bgs with 35 feet of slotted screen.

On November 6, 2007 Tetra Tech was onsite to conduct a groundwater sampling event. Groundwater samples from MW-4, MW-5, and MW-6 were collected and shipped to Lancaster Laboratories in Lancaster, Pennsylvania to be analyzed for the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX), sulfate, nitrate, phosphate, and ferrous iron.

2.0 METHODOLOGY AND RESULTS

The following describes the groundwater monitoring methodology and results:

2.1 Groundwater Monitoring Methodology

On November 6, monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 were checked for the presence of water. Monitoring wells MW-4, MW-5, and MW-6 were purged of three volumes of water and sampled. A 1.5-inch clear, poly-vinyl, disposable bailer was used to purge each well and to collect the groundwater sample. The purge water generated during the event was disposed of in the waste water tank located on site (Figure 2). The groundwater samples were placed 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 by Environmental Protection Agency

(EPA) Method 8260B, sulfate and nitrate by EPA Method 300.0, phosphate by EPA Method 365.1, and ferrous iron by Standard Method 20, 3500-Fe B Modified.

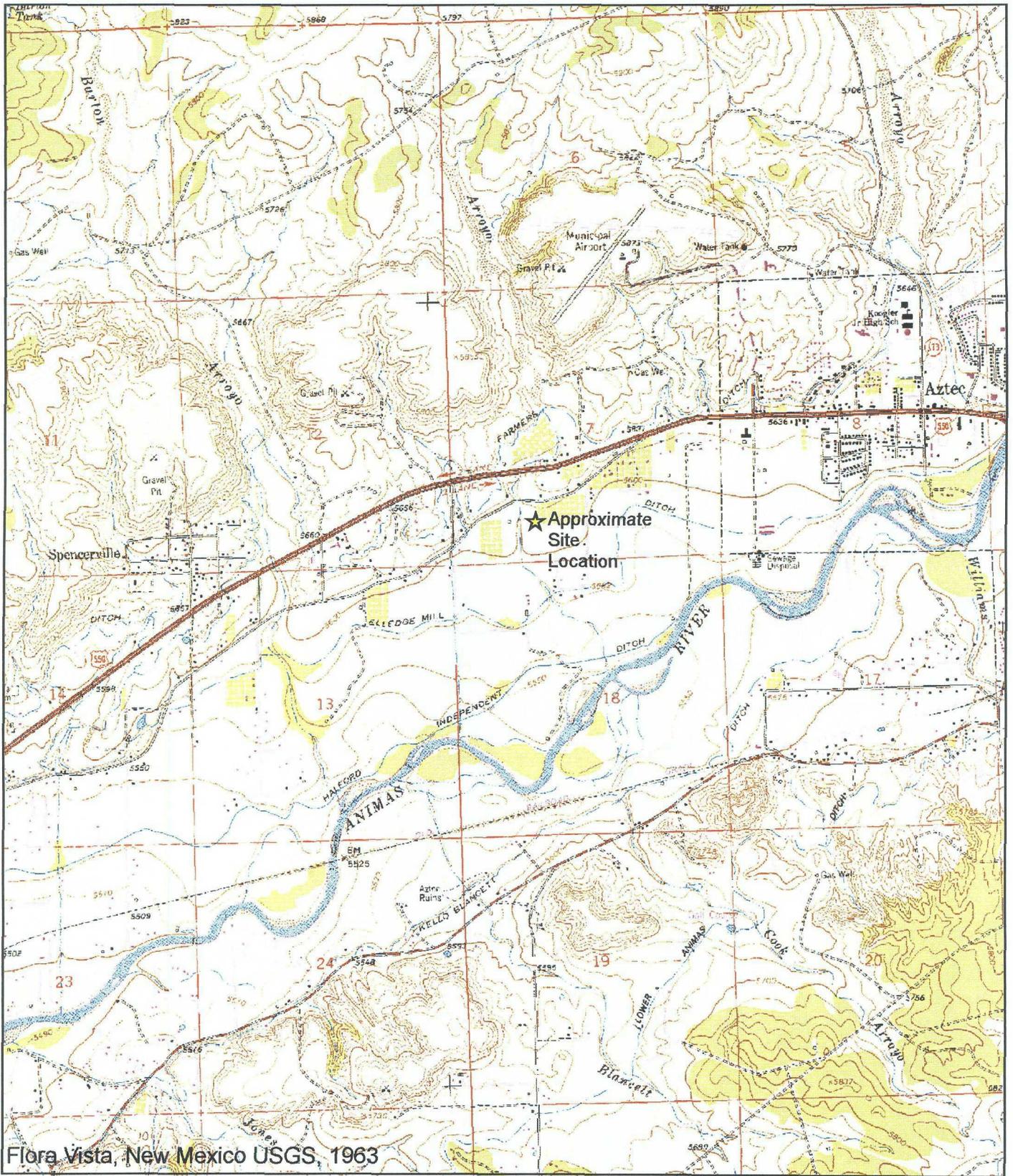
A groundwater elevation contour map was created using the November 6, 2007 groundwater elevation data (Figure 3). Table 1 presents the well specifications, historical groundwater levels, and the top of casing survey results used to calculate the groundwater elevations at the site.

2.2 Groundwater Sampling Analytical Results

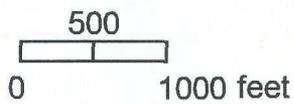
During the November 6, 2007 sampling event, the samples collected from MW-4 and MW-5 were below laboratory detection limits and New Mexico Water Quality Control Commission (NMWQCC) standards for BTEX and ferrous iron. Samples collected from MW-4 were also below laboratory detection limits for phosphate. Samples collected from MW-6 contained benzene and ferrous iron concentrations above NMWQCC standards of 15 micrograms per liter ($\mu\text{g/L}$) and 3.6 milligrams per liter (mg/L), respectively. All other constituents of concern (COCs) were below the NMWQCC standards. Table 2 summarizes historical laboratory analytical results for groundwater sampling events. The November 2007 laboratory analytical results report is included as Appendix A.

3.0 CONCLUSIONS

Tetra Tech will conduct the next groundwater sampling event during March 2008. During 2008, Tetra Tech plans to conduct semi-annual groundwater sampling at the site during months when the water levels have historically been low. Recently, COCs have been detected in groundwater samples exclusively during these times. Please contact Kelly Blanchard at 505-237-8440 or kelly.blanchard@tetratech.com if you have any questions or require additional information.

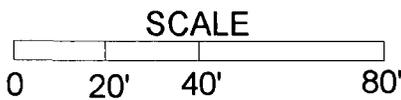
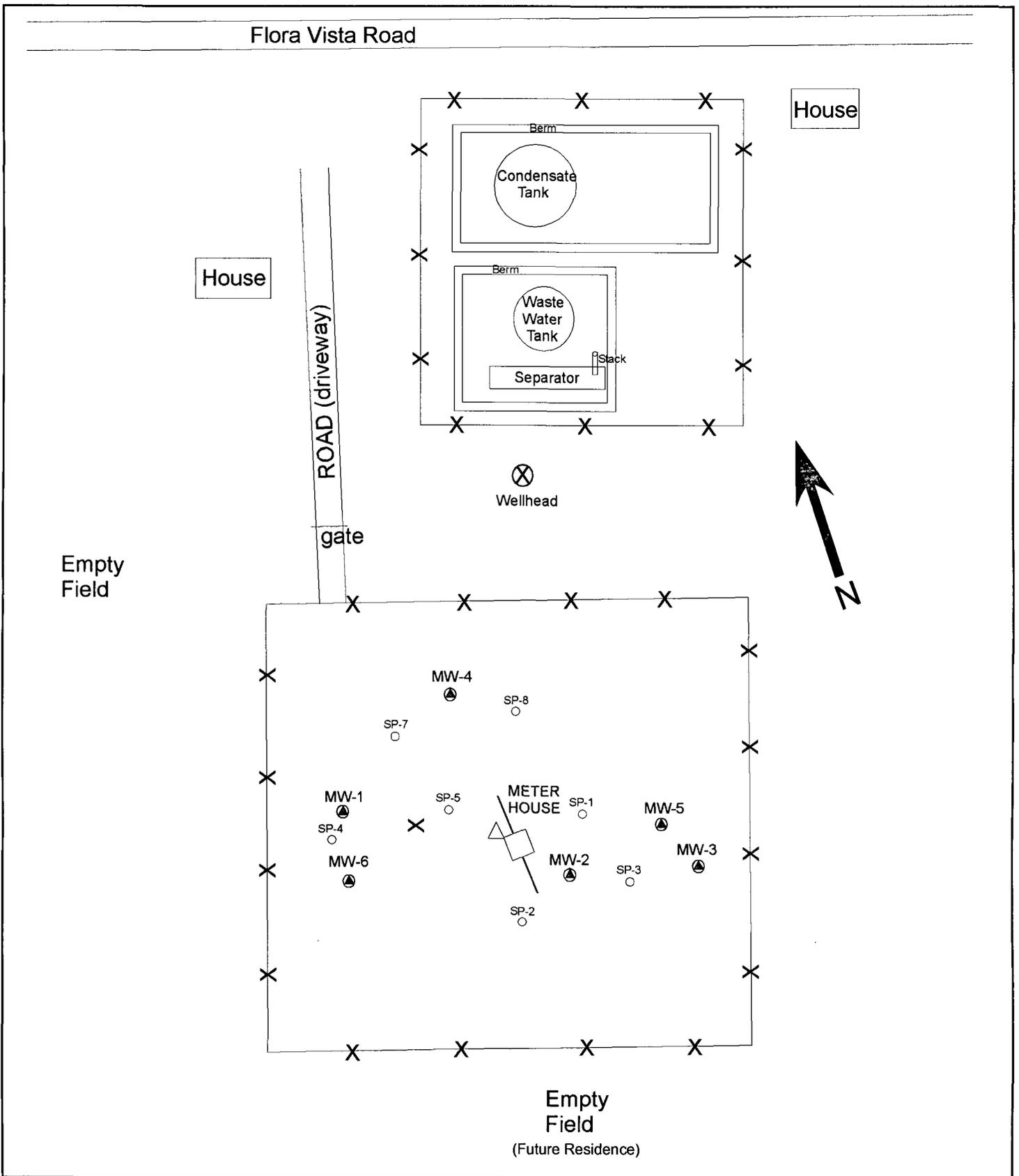


TETRA TECH, INC.



★ = Site Location

Figure 1. Site Location Map
 ConocoPhillips Nell Hall #1 Site
 Flora Vista, New Mexico



TETRA TECH, INC.

LEGEND

- MW-2 - Monitoring Well Locations
- SP-3 - Sparge Point Locations
- Survey Control Point
- Fence

NOTE: SP-1 Removed.

FIGURE 2.
CONOCOPHILLIPS
NELL HALL #1 SITE MAP

Flora Vista Road

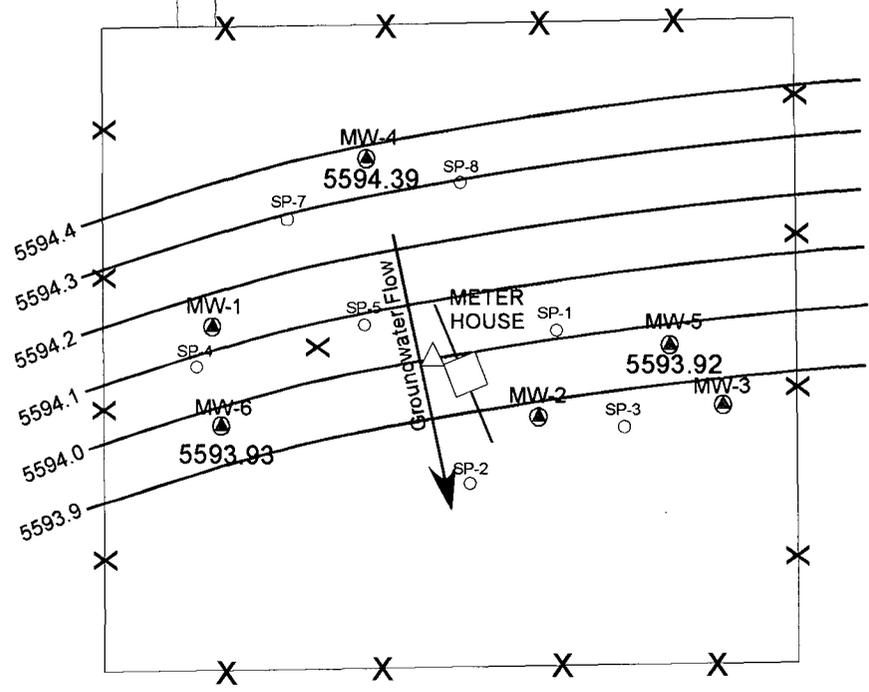
House

House

ROAD (driveway)

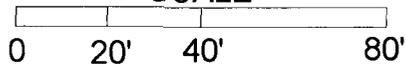
Wellhead

Empty Field



Empty Field
(Future Residence)

SCALE



TETRA TECH, INC.

LEGEND

- MW-2 - Monitoring Well Locations
- SP-3 - Sparge Point Locations
- Survey Control Point
- Fence
- Groundwater Contour

NOTE: SP-1 Removed.

FIGURE 3.
CONOCOPHILLIPS
NELL HALL #1
GROUNDWATER ELEVATION
CONTOUR MAP (11/6/2007)

Table 1. ConocoPhillips Nell Hall #1 Monitoring Well Specifications and Groundwater Elevation Table

Well ID	Date Installed	Total Depth (ft. bgs)	Screen Interval (ft)	Elevation (ft. msl) (TOC)	Date Measured	Groundwater Level (ft TOC)	Groundwater Elevation (ft msl)
MW-4	2/18/2004	35	5-35	5614.87	3/8/2004	36.04	5578.83
					7/19/2004	8.44	5606.43
					10/27/2004	19.69	5595.18
					12/27/2004	27.58	5587.29
MW-4	2/18/2004	35	5-35	5614.87	5/10/2005		dry
					11/22/2005	23.93	5590.94
					11/15/2006	21.02	5593.85
					2/19/2007	34.40	5580.47
					8/22/2007	18.18	5596.69
					11/6/2007	20.48	5594.39
					3/8/2004	37.19	5578.67
MW-5	2/17/2004	39	4-39	5615.86	7/19/2004	9.38	5606.48
					10/27/2004	21.07	5594.79
					12/27/2004	28.99	5586.87
					5/10/2005	39.79	5576.07
					11/22/2005	25.23	5590.63
					11/15/2006	22.51	5593.35
					2/19/2007	35.31	5580.55
					8/22/2007	19.45	5596.41
					11/6/2007	21.94	5593.92
					3/8/2004	36.27	5579.17
MW-6	2/18/2004	35	5-35	5615.44	7/19/2004	9.43	5606.01
					10/27/2004	19.33	5596.11
					12/27/2004	28.62	5586.82
					5/10/2005		dry
					11/22/2005	25.02	5590.42
					11/15/2006	21.12	5594.32
					2/19/2007	34.82	5580.62
8/22/2007	19.41	5596.03					
11/6/2007	21.51	5593.93					

msl = Mean sea level
 TOC = Top of casing
 bgs = below ground surface

Table 2. ConocoPhillips Nell Hall #1 Groundwater Analytical Results Summary

Well ID	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	Nitrate (mg/L)	Sulfate (mg/L)	Ferrous Iron (mg/L)	Phosphate (mg/L)	
MW-4	3/8/2004	13	12	64	1,400	NA	NA	NA	NA	
	7/19/2004	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	
	10/27/2004	11	8	21	130	NA	NA	NA	NA	
	12/27/2004	<2.5	<2.5	<2.5	<0.5	NA	NA	NA	NA	
	5/11/2005	dry								
	11/22/2005	<0.5	<0.7	<0.8	<0.8	<0.40	105	2.7	<0.25	
	11/15/2006	<0.5	<0.7	<0.8	<0.8	<0.25	110	0.083	<0.25	
	2/21/2007	<0.5	<0.7	<0.8	<0.8	<0.25	59.6	1.6	0.28	
	8/22/2007	<0.5	<0.7	<0.8	<0.8	<0.25	96.5	0.04	<0.25	
	11/6/2007	<0.5	<0.7	<0.8	<0.8	3.3	111	<0.008	0.17	
MW-5	3/8/2004	1.1	<0.5	1	17	NA	NA	NA	NA	
	7/19/2004	<0.5	0.55	<0.5	0.72	NA	NA	NA	NA	
	10/27/2004	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	
	12/27/2004	<0.5	<0.5	<0.5	<1.0	NA	NA	NA	NA	
	5/11/2005	<0.5	<0.7	<0.8	<0.8	2.3	139	<0.0080	1.2	
	11/22/2005	<0.5	<0.7	<0.8	<0.8	<0.40	38	<0.0080	0.43	
	11/15/2006	<0.5	<0.7	<0.8	<0.8	2.3	77.9	<0.0080	<0.25	
	2/21/2007	<0.5	<0.7	<0.8	<0.8	1.3	83.3	<0.0080	0.28	
	8/22/2007	<0.5	<0.7	<0.8	<0.8	5.6	125	<0.0080	<0.25	
	11/6/2007	<0.5	<0.7	<0.8	<0.8	4	59	<0.0080	<0.25	
MW-6	7/19/2004	<0.5	<0.5	0.98	2.6	NA	NA	NA	NA	
	10/27/2004	0.4	0.3	0.5	2.1	NA	NA	NA	NA	
	12/27/2004	45	6.8	14	71.7	NA	NA	NA	NA	
	5/11/2005	dry								
	11/22/2005	10	0.7	16	150	<0.40	3.4	7.7	2.8	
	11/15/2006	<0.5	<0.7	<0.8	<0.8	<0.25	41.3	0.19	<0.25	
	2/21/2007	540	<1	76	810	<0.25	1.8	6.4	9.0	
	8/22/2007	<0.5	<0.7	<0.8	<0.8	<0.25	12.6	0.95	<0.25	
	11/6/2007	15	<0.7	47	390	<0.25	5.6	3.6	0.1	
	NMWQCC Standards	10 (µg/L)	750 (µg/L)	750 (µg/L)	620 (µg/L)	10 (mg/L)	600 (mg/L)	1 (mg/L)	NE	

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 Established
 NA = Not Analyzed



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 1064364. Samples arrived at the laboratory on Wednesday, November 07, 2007. The PO# for this group is 4506560640 and the release number is LAUCK.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-4 Grab Water Sample	5205918
MW-5 Grab Water Sample	5205919
MW-6 Grab Water Sample	5205920
Duplicate Grab Water Sample	5205921
Trip Blank Water Sample	5205922

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 that reads "Christine Dulaney".

Christine Dulaney
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

Lancaster Laboratories Sample No. WW 5205918

MW-4 Grab Water Sample
Site# 6084
Nell Hall #1, NM

Collected: 11/06/2007 14:30 by AM

Account Number: 11288

Submitted: 11/07/2007 09:30
Reported: 11/13/2007 at 12:33
Discard: 12/14/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

NHMW4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
00228	Sulfate	14808-79-8	111.	3.0	10.0	mg/l	10
00345	Total Phosphorus as PO4 water	14265-44-2	0.17	0.080	0.10	mg/l	1
00368	Nitrate Nitrogen	14797-55-8	3.3	0.25	0.50	mg/l	5
08344	Ferrous Iron	n.a.	N.D.	0.0080	0.10	mg/l	1
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	Trial#	Analysis Date and Time	Analyst	Dilution Factor
00228	Sulfate	EPA 300.0	1	11/08/2007 10:52	Ashley M Heckman	10
00345	Total Phosphorus as PO4 water	EPA 365.1	1	11/12/2007 18:17	Venia B McFadden	1
00368	Nitrate Nitrogen	EPA 300.0	1	11/07/2007 18:16	Ashley M Heckman	5
08344	Ferrous Iron	SM20 3500-Fe B modified	1	11/07/2007 20:15	Daniel S Smith	1
02300	GC/MS Volatiles	SW-846 8260B	1	11/08/2007 11:28	Emiley A King	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/08/2007 11:28	Emiley A King	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	11/09/2007 12:05	Carolyn M Mastropietro	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

Lancaster Laboratories Sample No. WW 5205919

MW-5 Grab Water Sample
Site# 6084
Nell Hall #1, NM

Collected: 11/06/2007 15:40 by AM

Account Number: 11288

Submitted: 11/07/2007 09:30
Reported: 11/13/2007 at 12:33
Discard: 12/14/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

NHMW5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
00228	Sulfate	14808-79-8	59.0	1.5	5.0	mg/l	5
00345	Total Phosphorus as PO4 water	14265-44-2	N.D.	0.080	0.10	mg/l	1
00368	Nitrate Nitrogen	14797-55-8	4.0	0.25	0.50	mg/l	5
08344	Ferrous Iron	n.a.	N.D.	0.0080	0.10	mg/l	1
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		
00228	Sulfate	EPA 300.0	1	11/07/2007 18:31	Ashley M Heckman	5
00345	Total Phosphorus as PO4 water	EPA 365.1	1	11/12/2007 18:18	Venia B McFadden	1
00368	Nitrate Nitrogen	EPA 300.0	1	11/07/2007 18:31	Ashley M Heckman	5
08344	Ferrous Iron	SM20 3500-Fe B modified	1	11/07/2007 20:15	Daniel S Smith	1
02300	GC/MS Volatiles	SW-846 8260B	1	11/08/2007 11:51	Emiley A King	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/08/2007 11:51	Emiley A King	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	11/09/2007 12:05	Carolyn M Mastropietro	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

Lancaster Laboratories Sample No. WW 5205920

MW-6 Grab Water Sample
 Site# 6084
 Nell Hall #1, NM

Collected: 11/06/2007 15:00 by AM

Account Number: 11288

Submitted: 11/07/2007 09:30
 Reported: 11/13/2007 at 12:33
 Discard: 12/14/2007

ConocoPhillips
 PO Box 2200
 Bartlesville OK 74005

NHMW6

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Units	Dilution Factor
00228	Sulfate	14808-79-8	5.6	1.5	5.0	mg/l	5
00345	Total Phosphorus as PO4 water	14265-44-2	0.10	0.080	0.10	mg/l	1
00368	Nitrate Nitrogen	14797-55-8	N.D.	0.25	0.50	mg/l	5
08344	Ferrous Iron	n.a.	3.6	0.080	1.0	mg/l	10
02300	GC/MS Volatiles						
05401	Benzene	71-43-2	15.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	47.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	390.	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		
00228	Sulfate	EPA 300.0	1	11/07/2007 18:46	Ashley M Heckman	5
00345	Total Phosphorus as PO4 water	EPA 365.1	1	11/12/2007 18:19	Venia B McFadden	1
00368	Nitrate Nitrogen	EPA 300.0	1	11/07/2007 18:46	Ashley M Heckman	5
08344	Ferrous Iron	SM20 3500-Fe B modified	1	11/07/2007 20:15	Daniel S Smith	10
02300	GC/MS Volatiles	SW-846 8260B	1	11/08/2007 12:14	Emiley A King	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/08/2007 12:14	Emiley A King	1
08264	Total Phos as PO4 Prep (water)	EPA 365.1	1	11/09/2007 12:05	Carolyn M Mastropietro	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 5205921

Duplicate Grab Water Sample
Site# 6084
Nell Hall #1, NM

Collected: 11/06/2007 15:25 by AM

Account Number: 11288

Submitted: 11/07/2007 09:30
Reported: 11/13/2007 at 12:34
Discard: 12/14/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

NHDUP

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	12.	0.5	5.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.7	5.	ug/l	1
05415	Ethylbenzene	100-41-4	36.	0.8	5.	ug/l	1
06310	Xylene (Total)	1330-20-7	310.	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	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/08/2007 12:37	Emiley A King	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/08/2007 12:37	Emiley A King	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

Lancaster Laboratories Sample No. WW 5205922

Trip Blank Water Sample
Site# 6084
Nell Hall #1, NM

Collected: 11/06/2007 15:45

Account Number: 11288

Submitted: 11/07/2007 09:30
Reported: 11/13/2007 at 12:34
Discard: 12/14/2007

ConocoPhillips
PO Box 2200
Bartlesville OK 74005

NHTB-

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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	GC/MS Volatiles	SW-846 8260B	1	11/08/2007 13:00	Emiley A King	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/08/2007 13:00	Emiley A King	1

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

Quality Control Summary

 Client Name: ConocoPhillips
 Reported: 11/13/07 at 12:34 PM

Group Number: 1064364

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: 07311196101A	Sample number(s): 5205918-5205920								
Sulfate	N.D.	0.30	1.0	mg/l	98		89-110		
Nitrate Nitrogen	N.D.	0.050	0.10	mg/l	99		90-110		
Batch number: 07311834401A	Sample number(s): 5205918-5205920								
Ferrous Iron	N.D.	0.0080	0.10	mg/l	99		95-105		
Batch number: 07313110101A	Sample number(s): 5205918-5205920								
Total Phosphorus as PO4 water	N.D.	0.080	0.10	mg/l	96		90-110		
Batch number: N073121AA	Sample number(s): 5205918-5205922								
Benzene	N.D.	0.5	5.	ug/l	100		78-119		
Toluene	N.D.	0.7	5.	ug/l	97		85-115		
Ethylbenzene	N.D.	0.8	5.	ug/l	96		82-119		
Xylene (Total)	N.D.	0.8	5.	ug/l	96		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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 07311196101A	Sample number(s): 5205918-5205920 UNSPK: P205874 BKG: P205874								
Sulfate	100		90-110			24.0	23.7	2 (1)	3
Nitrate Nitrogen	98		90-110			2.3	2.3	1 (1)	2
Batch number: 07311834401A	Sample number(s): 5205918-5205920 UNSPK: P205904 BKG: P205904								
Ferrous Iron	102	100	86-110	2	4	N.D.	N.D.	0 (1)	8
Batch number: 07313110101A	Sample number(s): 5205918-5205920 UNSPK: P207186 BKG: P207186								
Total Phosphorus as PO4 water	101		90-110			N.D.	N.D.	0 (1)	3
Batch number: N073121AA	Sample number(s): 5205918-5205922 UNSPK: P206081								
Benzene	92	100	83-128	9	30				
Toluene	88	97	83-127	10	30				
Ethylbenzene	90	99	82-129	9	30				
Xylene (Total)	88	97	82-130	10	30				

Surrogate Quality Control

*- 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.

Quality Control Summary

Client Name: ConocoPhillips
Reported: 11/13/07 at 12:34 PM

Group Number: 1064364

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: N073121AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5205918	95	92	90	92
5205919	96	91	90	92
5205920	97	90	92	94
5205921	96	90	93	93
5205922	97	92	89	93
Blank	96	91	90	92
LCS	97	94	91	94
MS	100	89	90	96
MSD	97	92	90	94
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.

ConocoPhillips Analysis Request/Chain of Custody



Lancaster Laboratories

For Lancaster Labs Use ONLY Acct. #:

008943

11288

Group # 1064364

Sample#:

5205918-22

List total number of containers in the box under each analysis.

Site #: <u>6084</u> AOC#: <u>06084</u> State: <u>NM</u> Site City: <u>Aztec</u> Enfos PO#: _____ ConocoPhillips PM: <u>Terry Lauck</u> Samplers Name: <u>Ana Moreno / Mitch Crooks</u>		Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Air		Analyses Requested Preservation Codes S Total Phosphorus as P ₂ O ₅ N Nitrate, Sulfate F Ferrous Iron GC/MS Volatiles		Preservative Codes H = HCl N = HNO ₃ S = H ₂ SO ₄ T = Thiosulfate B = NaOH O = Other	
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Remarks
MW-4	11/6/07	14:30	X		X		
MW-5	11/6/07	15:40	X		X		
MW-6	11/6/07	15:00	X		X		
Duplicate	11/6/07	15:25	X		X		
Trip Blank	11/6/07	15:45	X		X		
Turnaround Time Requested in Business Days (TAT) (Circle One): STD. 5 day 48 hour 24 hour Other _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by: _____ Date: _____ Time: _____ Relinquished by Commercial Carrier: _____ UPS FedEx Other _____ Temperature Upon Receipt _____ °C							
Consultant Information: Office City: <u>Albuquerque</u> State: <u>NM</u> Project Manager: <u>Kelly Henderson</u> Phone Number: <u>(505) 237 8140</u> Fax: _____ Email: <u>Kelly.Henderson@TetraTech.com</u> Electronic Data Deliverables (Circle One) <u>Yes</u> No Format <u>pdf</u> Reporting Requirements (Circle One) Standard Reports/OC 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

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 quantitated 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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