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REPORTS

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

ConocoPhillips
Attn.: Mr. Neal Goates, RM&R Site Manager
Threadneedle Office
PO Box 2197
Houston, TX 77252-2197

RE: 2002 Annual Ground Water Report
ConocoPhillips Location: NELL-HALL #1,
Unit M, Sec. 07, T30N, R11W, NMPM, San Juan Co., NM

Project #: 2-1363

Dear Mr. Goates,

The following report summarizes the ground water remediation and monitoring activities conducted by Souder Miller and Associates (SMA) and/or others on behalf of ConocoPhillips, at the referenced oil and gas location. This report covers the calendar year of 2002, and follows the format outlined in the *Comprehensive Ground Water Remediation and Long-Term Monitoring Plan for Conoco Locations in the San Juan Basin, New Mexico* (hereafter known as the monitoring plan), submitted to the New Mexico Oil Conservation Division on October 15, 1997.

SUMMARY OF 2002 ACTIVITIES:

Ground water sampling events were conducted in March, June, and September of 2002. The scheduled December 2002 sampling event was delayed until January 2003, due to inclement weather. Samples were not taken during the March 2002 and January 2003, sampling events, due to the lack of measurable water.

Historically ground water levels in the area fluctuate, leading to periods of the year when there is no measurable water in any of the monitoring wells and sparge points. The early spring and winter months are routinely the months with the lowest water levels.

SAMPLING:

In accordance with the monitoring plan, water levels were measured on all monitoring wells prior to purging and sampling. If measurable water was present in the monitoring well, water samples were collected, preserved and transported in accordance with Environmental Protection Agency (EPA) prescribed procedures and proper chain-of-custody protocol followed. The laboratory analyses ordered, followed the monitoring plan.

Table 1, summarizes the monitoring well data and water levels measured during previous and current sampling events. Table 2, summarizes the laboratory results for BTEX compounds from all water sampling completed at the referenced site.

Copies of all laboratory reports for the calendar year 2002, along with all laboratory QA/QC documentation and chains-of-custody, are attached with this report.

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TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT

Summary and Conclusions:

The following conclusions are based on the 2002 ground water monitoring results and trends associated with a former production pit at the Nell-Hall #1 well location:

1. MW-1 shows declining BTEX levels, and was below the New Mexico Water Quality Control Commission (NMWQCC) standards during the June and September sampling events.
2. SP-7 continues to show BTEX contamination levels above the New Mexico Water Quality Control Commission (NMWQCC) standards.
3. BTEX contamination of ground water fluctuates with the fluctuation of the ground water elevation.
4. The ground water during 2002 fluctuated seasonally with changes in irrigation and flow in the Animas River.

RECOMMENDATION:

1. Continue sampling of monitoring wells and sparge points until four sampling events demonstrates that contamination levels are below NMWCC standards.

LIMITATIONS AND CLOSURE:

This annual groundwater report documents the results of ground water monitoring for the referenced ConocoPhillips well location during the calendar year 2002. This report follows the monitoring plan, dated October 15, 1997.

The scope of SMA's services consisted of project management, periodic water sampling and measurement of water levels, laboratory testing for ground water quality, and preparation of the annual report. All work has been performed in accordance with generally accepted professional practices in petroleum and environmental engineering, and hydrogeology.

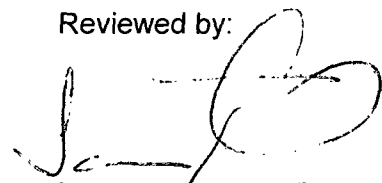
This document has been prepared by Souder Miller and Associates, for the exclusive use of ConocoPhillips, as it pertains to the referenced well location operated by ConocoPhillips.

If there are any questions regarding this status report, please contact either John Hagstrom or Larry Trujillo at Souder Miller and Associates, (505) 325-5667. Thank you for your consideration.

Respectfully submitted,


John Hagstrom,
Environmental Technician

Reviewed by:


Lawrence "Larry" Trujillo, CHMM
Environmental Specialist

Souder Miller and Associates

Attachments: Table 1: Monitoring Well Details and Ground Water Levels Summary
Table 2: Ground Water BTEX Analytical Summary
Figure 1: Site Sketch
Figure 2, & 3, Ground Water Potentiometric Map
Laboratory Results, QA/QC, Chain of Custody

Acknowledgment:
CONOCOPHILLIPS, Inc.

Neal A. Adams / Site Manager
(Name/Title)

2-21-03
(Date)

JPH/jph: 41363-02.doc

REFERENCES:

On Site Technologies, Ltd., February 1, 1998, letter to Ms. Shirley Ebert, SHEAR Specialist, Conoco, Inc., Midland Division, regarding 1997 Annual Ground Water Report, *Conoco Location, Nell-Hall #1, Unit M, Sec. 07, T30N, R11W, NMPM, San Juan Co., NM.*

On Site Technologies, Ltd., February 9, 1999, letter to Ms. Shirley Ebert, SHEAR Specialist, Conoco, Inc., Midland Division, regarding 1998 Annual Ground Water Report, *Conoco Location, Nell-Hall #1, Unit M, Sec. 07, T30N, R11W, NMPM, San Juan Co., NM.*

On Site Technologies, Ltd., January 10, 2000, letter to Ms. Shirley Ebert, SHEAR Specialist, Conoco, Inc., Midland Division, regarding 1999 Annual Ground Water Report, *Conoco Location, Nell-Hall #1, Unit M, Sec. 07, T30N, R11W, NMPM, San Juan Co., NM.*

Table1
Groundwater Level SUMMARY
Well-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
MW#1	97.63	28.61	2" PVC	18.61 to 28.61	03/27/97	NMW	
RESURVEY 6/16/98	97.88				08/07/97	19.11	78.52
					09/16/97	21.09	76.54
					12/30/97	NMW	
					06/12/98	23.56	74.07
					6/16/98	23.56	74.32
					9/28/98	14.86	83.02
					12/30/98	29.23	68.65
					3/3/99	NMW	
					6/6/99	24.02	73.86
					9/15/99	22.88	75.00
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	24.50	73.88
					9/11/00	15.72	84.99
					01/23/00	NMW	
					3/20/01	NMW	
					06/14/01	14.34	83.54
					09/18/01	7.66	90.22
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	14.67	83.21
					9/17/02	15.29	82.59
					1/2/03	NMW	

BGS - approximate measurements taken as Below Ground Surface
BTOC - Below Top of Casing
NM - Not Measured
NMW - No Measurable Water

Table1
Groundwater Level SUMMARY
Well-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
MW#2	96.96	27.31	2" PVC	17.31 to 27.31	03/27/97	NMW	
RESURVEY 6/16/98	97.12				08/07/97	19.17	77.79
					09/16/97	20.79	76.17
					12/30/97	NMW	
					06/12/98	22.31	73.21
					6/16/98	23.66	73.46
					9/28/98	14.97	82.15
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	23.11	74.01
					9/15/99	22.73	74.39
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	24.99	72.13
					9/11/00	16.78	86.59
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	NM	
					09/19/01	7.53	89.59
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	14.5	82.62
					9/17/02	15.06	82.06
					1/2/03	NMW	

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Table1
Groundwater Level SUMMARY
Nell-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
MW#3	97.48	27.03	2"PVC	17.03 to 27.03	03/27/97	NMW	
RESURVEY 6/16/98	97.88				08/07/97	20.02	77.46
					09/16/97	21.40	76.08
					12/30/97	NMW	
					06/12/98	24.51	72.97
					6/16/98	24.51	73.37
					9/28/98	15.40	82.48
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	22.61	75.27
					9/15/99	23.45	74.43
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	25.93	71.95
					9/11/00	17.32	88.17
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	17.16	80.72
					09/19/01	8.64	89.24
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	14.43	83.45
					9/17/02	15.67	82.21
					1/2/03	NMW	

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Table 1

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 1	94.91	26.99	2" PVC	16.99 to 26.99	6/16/98	25.92	73.52
	Well broken off		12 inches		9/28/98	12.73	82.18
					12/30/98	NMW	
					3/3/99	NMW	
Well	buried	6/12/99					
SP 2	95.92	27.52	2" PVC	17.52 to 27.52	6/16/98	22.76	73.16
					9/28/98	14.19	81.73
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	23.32	72.60
					9/15/99	21.81	74.11
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	23.89	72.03
					9/11/00	15.44	83.84
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	NM	
					09/19/01	NM	
					12/13/01	NMW	
					3/12/02	NMW	

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Table1
Groundwater Level SUMMARY
Nell-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 3	95.82	25.29	2" PVC	15.29 to 25.29	6/16/98	22.86	72.96
					9/28/98	13.08	82.74
					12/30/98	25.11	70.71
					3/3/99	NMW	
					6/6/99	21.67	74.15
					9/15/99	21.49	74.33
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	24.11	71.71
					9/11/00	15.61	86.14
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	15.54	80.28
					09/19/01	NM	
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	12.94	82.88
					7/19/02	14.07	81.75

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Table1
Groundwater Level SUMMARY
Nell-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 4	96.03	25.36	2" PVC	15.36 to 25.36	6/16/98	22.09	73.94
					9/28/98	13.33	82.70
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	22.47	73.56
					9/15/99	21.32	74.71
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	23.02	71.88
					9/11/00	13.96	84.63
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	14.72	81.31
					09/19/01	NM	
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	13.18	82.85
					9/17/02	13.76	82.27
					1/2/03	NMW	

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Groundwater Level SUMMARY
Well-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 6	95.90	28.12	2" PVC	18.12 to 28.12	6/16/98	22.77	73.13
					9/28/98	14.00	81.90
					12/30/98	28.22	67.68
					3/3/99	NMW	
					6/6/99	22.21	73.69
					9/15/99	21.65	74.25
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	24.02	71.56
					9/11/00	15.46	71.56
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	14.99	80.91
					09/19/01	6.64	89.26
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	12.89	83.01
					9/17/02	13.94	81.96
					1/2/03	NMW	

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Table 1

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 7	96.06	26.92	2" PVC	16.92 to 26.92	6/16/98	22.67	73.39
					9/28/98	13.27	82.46
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	22.42	73.64
					9/15/99	21.23	74.83
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	24.50	71.56
					9/11/00	14.42	83.56
					01/23/00	NMW	
					03/20/01	NMW	
					06/14/01	13.98	82.08
					09/19/01	6.21	89.85
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	12.91	83.15
					9/17/02	13.54	82.52
					1/2/03	NMW	

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Groundwater Level SUMMARY
Well-Hall #1
Unit M, Sec. 07, T30N, R11W

Well Number	Top of Casing Elevation* (ft)	Total Depth of Well (ft)*	Well Type	Screen Interval (ft) (BGS) *	Sample Date	Depth to Groundwater (ft) (BTOC)*	Relative Groundwater Elevation (ft)
SP 8	96.12	25.92	2" PVC	15.92 to 25.92	6/16/98	22.73	73.39
					9/28/98	13.60	82.52
					12/30/98	NMW	
					3/3/99	NMW	
					6/6/99	22.68	73.44
					9/15/99	21.51	74.61
					12/13/99	NMW	
					3/13/00	NMW	
					6/5/00	23.89	71.88
					9/11/00	15.14	85.34
					01/23/01	NMW	
					03/20/01	NMW	
					06/14/01	15.7	80.42
					09/19/01	6.84	89.28
					12/13/01	NMW	
					3/12/02	NMW	
					6/19/02	12.98	83.14
					9/17/02	13.73	82.39
					1/2/03	NMW	

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BTOC - Below Top of Casing

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Table 2
BTEX Analytical Summary
Nell-Hall #1
Unit M, Sec.07, T30N, R11W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total Xylene
06/14/96	0396G01016	MW#1	IML	26.6	27.7	757.0	9310.0
06/28/96	0369G01208		IML	BDL	42.0	720.0	14404.0
07/12/96	0369G01336		IML	BDL	15.2	168.0	BDL
04/01/97			On Site Lab.	No	Sample	Taken	
08/07/97	15686			19.0	17.0	49.0	1197.0
09/16/97	16200			77.0	15.0	195.0	2140.0
12/30/97				No	Sample	Taken	
06/12/98	980653-01A			39.0	18.0	320.0	2902.8
09/28/98	9809078-01A			3.3	38.0	8.2	111.2
6/16/99	9906061-04A			76.0	16.0	230.0	2006.4
9/15/99	9909057-04A			20.0	17.0	86.0	524.0
6/5/00	0006012-02A			100.0	16.0	120.0	3007.2
9/11/00	0009019-04A			46.0	12.0	19.0	600.0
6/14/01	0106014-04A			4.4	BDL	7.7	54.3
9/19/01	0109027-04A			3.2	BDL	6.8	86.8
12/13/01		No	Sample	Taken			
6/19/02	0206031-04A			4.6	BDL	7.4	55.7
9/17/02	0209018-01A			4.6	BDL	3.7	46.6
06/14/97	0396G01017	MW#2	IML	9.0	1.6	26.1	1.1
06/28/96	0396G01209		IML	BDL	0.4	1.6	0.4
07/12/96	0396G01337		IML	0.5	BDL	1.7	0.8
04/01/97			On Site Lab.	No	Sample	Taken	
08/07/97	15687			BDL	BDL	0.8	0.9
09/16/97	16201			35.0	0.2	33.8	2704
12/30/97				No	Sample	Taken	
06/12/98	9806053-02A			BDL	BDL	BDL	BDL
9/28/98	9809078-02A			BDL	BDL	BDL	BDL
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0

BDL: Below Detection Limits

Table 2
BTEX Analytical Summary
Nell-Hall #1
Unit M, Sec.07, T30N, R11W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total Xylene
06/14/96	0396G01017	MW#3	IML	31.3	BDL	BDL	BDL
06/28/96	0396G1210		IML	BDL	BDL	BDL	BDL
07/12/96	0396G01338		IML	BDL	BDL	BDL	BDL
04/01/97			On Site Lab.	No	Sample	Taken	
08/07/97	15688			BDL	BDL	BDL	BDL
09/16/97	16202			BDL	BDL	BDL	BDL
12/30/97				No	Sample	Taken	
06/12/98	9806053-03A			BDL	BDL	BDL	BDL
9/28/98	9809078-03A			BDL	BDL	BDL	BDL
9/28/98	9809078-05A	SP#1	On Site Lab.	BDL	4.2	4.0	BDL
9/28/98	9809078-04A	SP#2	On Site Lab.	BDL	BDL	2.2	BDL
6/16/99	9906061-01A			7.8	BDL	BDL	1.7
9/15/99	9909057-01A			21	2.2	130.0	265.5
6/16/99	9906061-02A	SP#6	On Site Lab.	580.0	BDL	270.0	3000.0
9/15/99	9909057-02A			1.2	0.5	10.0	14.6
9/11/00	0009019-01A			0.6	BDL	12.0	26.6
6/14/01	0106014-01A			52	BDL	10.0	6.1
9/19/01	0109027-01A			BDL	BDL	BDL	BDL
12/13/01		No	Sample	Taken			
6/19/02	0206031-01A			BDL	BDL	BDL	0.5
9/17/02	0209018-02A			BDL	0.67	BDL	2.87
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0

BDL: Below Detection Limits

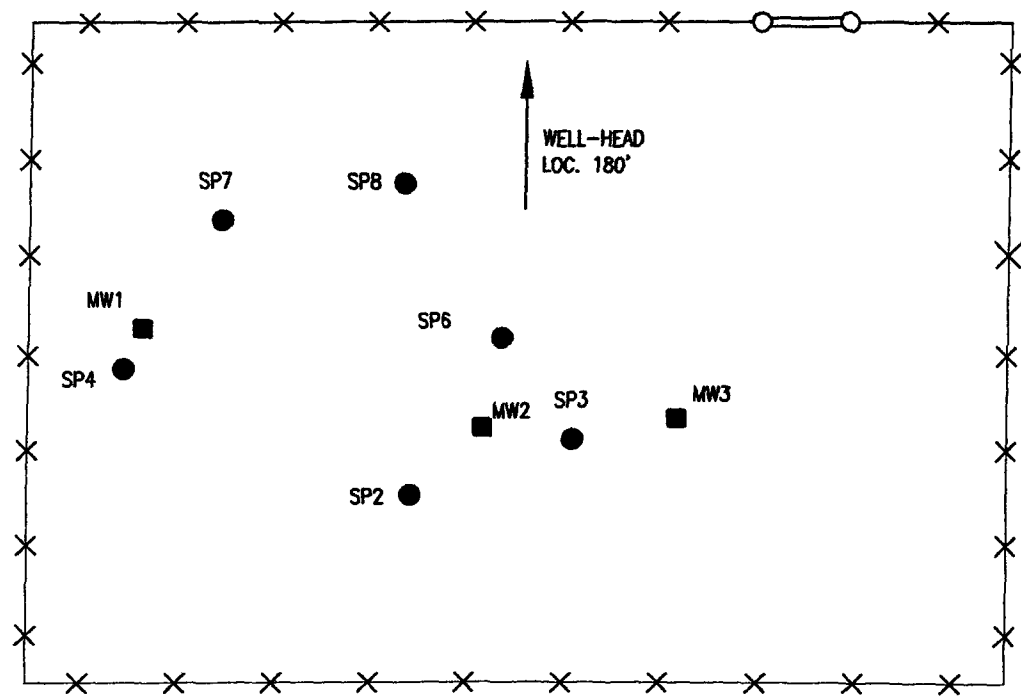
Note: No samples taken during the December 30, 1998 sampling event

Table 2
BTEX Analytical Summary
Neill-Hall #1
Unit M, Sec.07, T30N, R11W

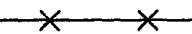
Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total Xylene
9/28/998	9809078-06A	SP#7	On Site Lab.	120.0	19.0	15.0	3300.0
6/16/99	9906061-03A			200.0	40.0	240.0	7313.0
9/15/99	9909057-03A			140.0	19.0	260.0	5110.0
6/5/00	0006012-01A			68.0	BDL	220.0	3900.0
9/11/00	0009019-03A			71.0	11.0	72.0	1500.0
6/14/01	0106014-03A			29.0	BDL	81.0	2100
9/19/01	0109027-03A			34.0	10.0	34.0	740.0
12/13/01		No	Sample	Taken			
6/19/02	0206031-02A			18.0	BDL	26.0	410.0
9/17/02	0209018-03A			21	BDL	29	477.0
6/5/00	0006012-03A	SP#8	On Site Lab.	16.0	BDL	31.0	170.0
9/11/00	0009019-02A			BDL	BDL	3.0	36.0
6/14/01	0106014-02A			23.0	BDL	490.0	3900
9/19/01	0109027-02A			BDL	BDL	BDL	BDL
12/13/01		No	Sample	Taken			
6/19/02	0206031-03A			BDL	BDL	BDL	BDL
9/17/02	0209018-04A			BDL	0.54	BDL	2.5
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0

BDL: Below Detection Limits

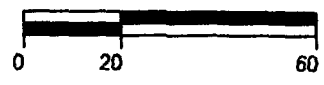
Note: No samples taken during the December 30, 1998 sampling event



LEGEND

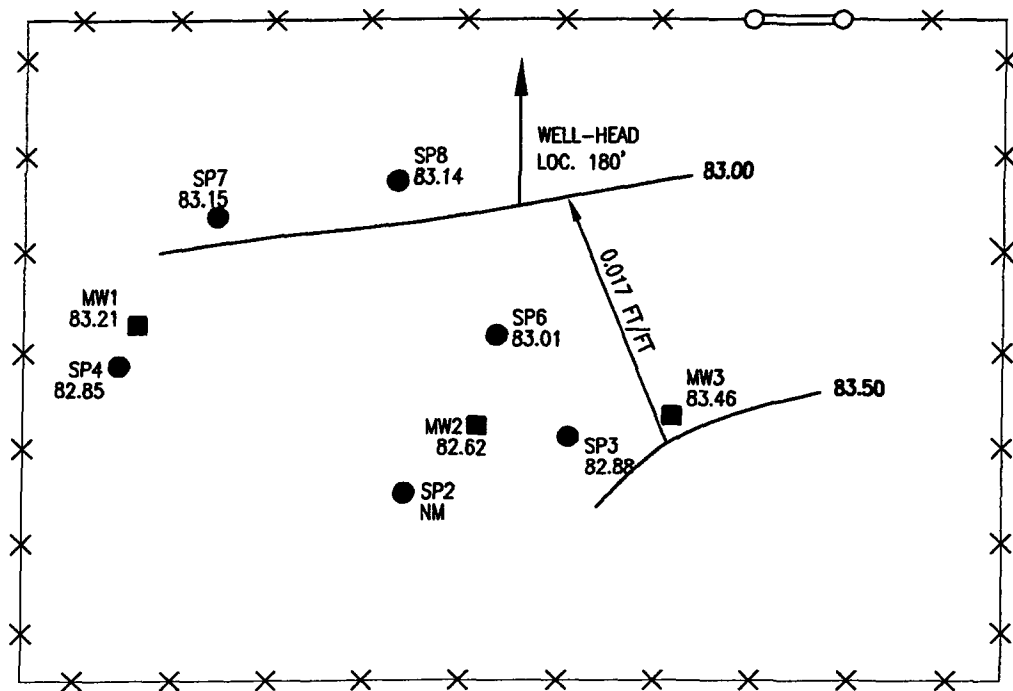
-  MW3 MONITORING WELL LOCATION
-  SP3 SPARGE POINT LOCATION
-  FENCE

SCALE (feet)



NOTE: SP#1 REMOVED.

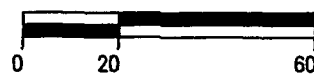
 Civil / Environmental Scientists & Engineers 612 E. MURRAY DR. PH. (505) 327-1072 FARMINGTON, NM 87401 FAX (505) 327-1496	APPROVED:	DATE:	SITE MAP NELL HALL #1
	DRWN BY: JNAKAI	DATE: 2/24/03	
	CHK'D BY:	DATE:	
	PROJECT NO: 2-1363	SHEET: 1 OF 3	



LEGEND

- MW3 MONITORING WELL LOCATION
- SP3 SPARGE POINT LOCATION
- FENCE
- 83.50- GROUND WATER SURFACE CONTOUR
- GRADIENT

SCALE (feet)

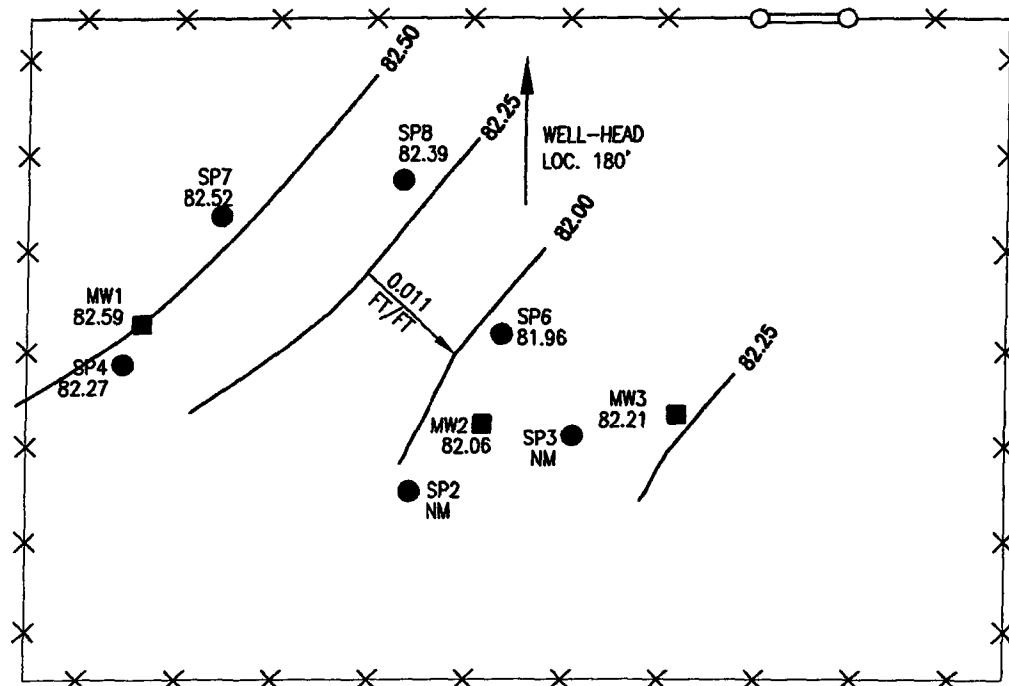


NOTE: SP#1 REMOVED.

SMA
 Civil / Environmental
 Scientists & Engineers
 812 E. MURRAY DR. PH. (505) 327-1072
 FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:	DATE:
DRWN BY: JNAKAI	DATE: 2/24/03
CHK'D BY:	DATE:
PROJECT NO: 2-1363	SHEET: 2 OF 3

GROUND WATER POTENTIOMETER MAP
 JUNE 19, 2002
 NELL HALL #1



LEGEND

- MW3 MONITORING WELL LOCATION
- SP3 SPARGE POINT LOCATION
- FENCE
- 83.50- GROUND WATER SURFACE CONTOUR
- GRADIENT

SCALE (feet)



NOTE: SP#1 REMOVED.

ASMA
 Civil / Environmental
 Scientists & Engineers
 612 E. MURRAY DR. PH. (505) 327-1072
 FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:	DATE:
DRWN BY: JNAKAI	DATE: 2/24/03
CHK'D BY:	DATE:
PROJECT NO: 2-1363	SHEET: 3 OF 3

GROUND WATER POTENTIOMETER MAP
 SEPTEMBER 17, 2002
 NELL HALL #1

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

July 10, 2002

John Hagstrom
On Site Technologies Limited
612 E. Murray Drive
P.O. Box 2606
Farmington, NM 87499
TEL: (505) 325-5667
FAX: (505) 327-1496

RE: 2-1363; Conoco Nell Hall

Order No.: 0206031

Dear John Hagstrom,

On Site Technologies, LTD. received 4 samples on 06/19/2002 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,

David Cox

OFF: (505) 325-5667
FAX: (505) 327-1496



LAB: (505) 325-1556
FAX: (505) 327-1496

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited
Project: 2-1363; Conoco Nell Hall
Lab Order: 0206031

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives.

Any quality control and/or data qualifiers associated with this laboratory order will be flagged in the analytical result page(s) or the quality control summary report(s).

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ANALYTICAL REPORT

Date: 10-Jul-02

Client:	On Site Technologies Limited	Client Sample Info:	Conoco Nell Hall
Work Order:	0206031	Client Sample ID:	SP6
Lab ID:	0206031-01A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	06/19/2002 10:30:00 AM
		COC Record:	11981

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Benzene	ND	0.5		µg/L	1	06/28/2002
Toluene	ND	0.5		µg/L	1	06/28/2002
Ethylbenzene	ND	0.5		µg/L	1	06/28/2002
m,p-Xylene	ND	1		µg/L	1	06/28/2002
o-Xylene	0.5	0.5		µg/L	1	06/28/2002

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted precision limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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ANALYTICAL REPORT

Date: 10-Jul-02

Client: On Site Technologies Limited

Client Sample Info: Conoco Nell Hall

Work Order: 0206031

Client Sample ID: SP7

Lab ID: 0206031-02A Matrix: AQUEOUS

Collection Date: 06/19/2002 11:00:00 AM

Project: 2-1363; Conoco Nell Hall

COC Record: 11981

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: DWC
Benzene	18	5		µg/L	10	06/27/2002
Toluene	ND	5		µg/L	10	06/27/2002
Ethylbenzene	26	5		µg/L	10	06/27/2002
m,p-Xylene	410	10		µg/L	10	06/27/2002
o-Xylene	ND	5		µg/L	10	06/27/2002

Qualifiers: PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted precision limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 10-Jul-02

Client:	On Site Technologies Limited	Client Sample Info:	Conoco Nell Hall
Work Order:	0206031	Client Sample ID:	SP8
Lab ID:	0206031-03A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	06/19/2002 10:20:00 AM
		COC Record:	11981

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Benzene	ND	0.5		µg/L	1	06/28/2002
Toluene	ND	0.5		µg/L	1	06/28/2002
Ethylbenzene	ND	0.5		µg/L	1	06/28/2002
m,p-Xylene	ND	1		µg/L	1	06/28/2002
o-Xylene	ND	0.5		µg/L	1	06/28/2002

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted precision limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

1 of 1

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ANALYTICAL REPORT

Date: 10-Jul-02

Client:	On Site Technologies Limited	Client Sample Info:	Conoco Nell Hall
Work Order:	0206031	Client Sample ID:	MW1
Lab ID:	0206031-04A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	06/19/2002 10:45:00 AM
		COC Record:	11981

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Benzene	4.6	0.5		µg/L	1	06/27/2002
Toluene	ND	0.5		µg/L	1	06/27/2002
Ethylbenzene	7.4	0.5		µg/L	1	06/27/2002
m,p-Xylene	54	1		µg/L	1	06/27/2002
o-Xylene	1.7	0.5		µg/L	1	06/27/2002

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted precision limits
	J - Analyte detected below Practical Quantitation Limit	E - Value above quantitation range
	B - Analyte detected in the associated Method Blank	Surr: - Surrogate

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited

Work Order: 0206031

Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Method Blank

Sample ID: MB_020627	Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002	Prep Date: 06/27/2002
Client ID:	0206031	Run ID: GC-1_020627A		SeqNo: 52887	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1054	0.5			
1,4-Difluorobenzene	107.6	0			
4-Bromochlorobenzene	118.6	0			
Fluorobenzene	109.7	0			J

Sample ID: MB_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002	Prep Date: 06/28/2002
Client ID:	0206031	Run ID: GC-1_020628A		SeqNo: 52913	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1684	0.5			
1,4-Difluorobenzene	109	0			
4-Bromochlorobenzene	121.8	0			
Fluorobenzene	112.8	0			J

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited
 Work Order: 0206031
 Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0206041-01AMS		Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002		Prep Date: 06/27/2002
Client ID: 0206031		Run ID: GC-1_020627A	PQL	SPK value	SPK Ref Val	SeqNo: 52888	
Analyte	Result					LowLimit	HighLimit
Benzene	1171	5		400	769.1	70	130
Ethylbenzene	763.9	5		400	352.2	70	130
m,p-Xylene	1554	10		800	774.5	70	130
Methyl tert-Butyl Ether	601.3	10		400	205	70	130
o-Xylene	474.6	5		400	88.25	70	130
Toluene	597.6	5		400	204.9	70	130
1,4-Difluorobenzene	1065	0		1100	0	70	130
4-Bromochlorobenzene	1210	0		1100	0	70	130
Fluorobenzene	1087	0		1100	0	70	130
						%REC	%RPD
							RPDLimit
							Qual

Sample ID: 0206041-01AMSD		Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002		Prep Date: 06/27/2002
Client ID: 0206031		Run ID: GC-1_020627A	PQL	SPK value	SPK Ref Val	SeqNo: 52889	
Analyte	Result					LowLimit	HighLimit
Benzene	1127	5		400	769.1	70	130
Ethylbenzene	735.7	5		400	352.2	70	130
m,p-Xylene	1498	10		800	774.5	70	130
Methyl tert-Butyl Ether	591.9	10		400	205	70	130
o-Xylene	460.1	5		400	88.25	70	130
Toluene	574.8	5		400	204.9	70	130
1,4-Difluorobenzene	1054	0		1100	0	70	130
4-Bromochlorobenzene	1208	0		1100	0	70	130
Fluorobenzene	1084	0		1100	0	70	130
						%REC	%RPD
							RPDLimit
							Qual

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited
Work Order: 0206031
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0206039-02AMS		Batch ID: GC-1_020628		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/28/2002		Prep Date: 06/28/2002	
Client ID: 0206031		Run ID: GC-1_020628A		SeqNo: 52914							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	512.8	2.5	200	312.6	100.1%	70	130				
Ethylbenzene	483.4	2.5	200	295.9	93.8%	70	130				
m,p-Xylene	897.1	5	400	517.3	94.9%	70	130				
Methyl tert-Butyl Ether	202.2	5	200	0	101.1%	70	130				
o-Xylene	221.4	2.5	200	30.64	95.4%	70	130				
Toluene	212.8	2.5	200	0.7775	106.0%	70	130				
1,4-Difluorobenzene	538.8	0	550	0	98.0%	70	130				
4-Bromochlorobenzene	614	0	550	0	111.6%	70	130				
Fluorobenzene	553.7	0	550	0	100.7%	70	130				

Sample ID: 0206039-02AMS		Batch ID: GC-1_020628		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/28/2002		Prep Date: 06/28/2002	
Client ID: 0206031		Run ID: GC-1_020628A		SeqNo: 52915							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	495.9	2.5	200	312.6	91.6%	70	130	512.8	3.3%	15	
Ethylbenzene	466.3	2.5	200	295.9	85.2%	70	130	483.4	3.6%	15	
m,p-Xylene	866.1	5	400	517.3	87.2%	70	130	897.1	3.5%	15	
Methyl tert-Butyl Ether	197.8	5	200	0	98.9%	70	130	202.2	2.2%	15	
o-Xylene	216.8	2.5	200	30.64	93.1%	70	130	221.4	2.1%	15	
Toluene	206.5	2.5	200	0.7775	102.9%	70	130	212.8	3.0%	15	
1,4-Difluorobenzene	529.2	0	550	0	96.2%	70	130	0	0.0%	0	
4-Bromochlorobenzene	603	0	550	0	109.6%	70	130	0	0.0%	0	
Fluorobenzene	545.4	0	550	0	99.2%	70	130	0	0.0%	0	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited
 Work Order: 0206031
 Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020627		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID:		0206031		Run ID:		GC-1_020627A		SeqNo: 52886			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.85	0.5	40	0	97.1%	80	120				
Ethylbenzene	39.46	0.5	40	0	98.7%	80	120				
m,p-Xylene	78.4	1	80	0	98.0%	80	120				
Methyl tert-Butyl Ether	39.58	1	40	0	99.0%	80	120				
o-Xylene	38.05	0.5	40	0	95.1%	80	120				
Toluene	37.88	0.5	40	0.1054	94.4%	80	120				
1,4-Difluorobenzene	106.6	0	110	0	97.0%	70	130				
4-Bromochlorobenzene	120.1	0	110	0	109.2%	70	130				
Fluorobenzene	108.9	0	110	0	99.0%	70	130				

Sample ID: LCS_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002				Prep Date: 06/28/2002			
Client ID: 0206031	Run ID: GC-1_020628A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result										
Benzene	39.44	0.5	40	0	98.6%	80	120				
Ethylbenzene	39.99	0.5	40	0	100.0%	80	120				
m,p-Xylene	79.19	1	80	0	99.0%	80	120				
Methyl tert-Butyl Ether	38.46	1	40	0	96.1%	80	120				
o-Xylene	38.22	0.5	40	0	95.6%	80	120				
Toluene	38.31	0.5	40	0.1684	95.4%	80	120				
1,4-Difluorobenzene	108.3	0	110	0	98.4%	70	130				
4-Bromochlorobenzene	122	0	110	0	110.9%	70	130				
Fluorobenzene	111.3	0	110	0	101.2%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits
 S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits
 B - Analyte detected in the associated Method Blank
 1 of 1

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited

Work Order: 0206031

Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020627	Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002			Prep Date: 06/27/2002				
Client ID:	0206031	Run ID:	GC-1_020627A	SeqNo:	52883						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.08	0.5	20	0	100.4%	85	115				
Ethylbenzene	20.33	0.5	20	0	101.6%	85	115				
m,p-Xylene	40.7	1	40	0	101.7%	85	115				
Methyl tert-Butyl Ether	19.9	1	20	0	99.5%	85	115				
o-Xylene	19.56	0.5	20	0	97.8%	85	115				
Toluene	19.51	0.5	20	0	97.5%	85	115				
1,4-Difluorobenzene	106.7	0	110	0	97.0%	70	130				
4-Bromochlorobenzene	117.7	0	110	0	107.0%	70	130				
Fluorobenzene	109.6	0	110	0	99.6%	70	130				

Sample ID: CCV2_020627		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002			Prep Date: 06/27/2002		
Client ID:		0206031		Run ID:		GC-1_020627A		SeqNo: 52884					
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene		19.17	0.5	20	0	95.9%	85	115					
Ethylbenzene		19.37	0.5	20	0	96.9%	85	115					
m,p-Xylene		38.18	1	40	0	95.4%	85	115					
Methyl tert-Butyl Ether		18.95	1	20	0	94.7%	85	115					
o-Xylene		18.69	0.5	20	0	93.5%	85	115					
Toluene		18.54	0.5	20	0	92.7%	85	115					
1,4-Difluorobenzene		109.1	0	110	0	99.2%	70	130					
4-Bromochlorobenzene		123.6	0	110	0	112.4%	70	130					
Fluorobenzene		111.7	0	110	0	101.6%	70	130					

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited
Work Order: 0206031
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3_020627		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID:		0206031		Run ID:		GC-1_020627A		SeqNo: 52885			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.74	0.5	40	0	96.8%	85	115				
Ethylbenzene	38.89	0.5	40	0	97.2%	85	115				
m,p-Xylene	76.38	1	80	0	95.5%	85	115				
Methyl tert-Butyl Ether	38.49	1	40	0	96.2%	85	115				
o-Xylene	37.42	0.5	40	0	93.5%	85	115				
Toluene	37.56	0.5	40	0	93.9%	85	115				
1,4-Difluorobenzene	107.9	0	110	0	98.1%	70	130				
4-Bromochlorobenzene	119.1	0	110	0	108.3%	70	130				
Fluorobenzene	111.5	0	110	0	101.4%	70	130				

Sample ID: CCV1_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002				Prep Date: 06/28/2002				
Client ID:	0206031	Run ID:	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 52911		RPD Ref Val	%RPD	RPDLimit	Qual
							LowLimit	HighLimit				
Analyte	Result											
Benzene	20.37		0.5	20	0	101.9%	85	115				
Ethylbenzene	20.56		0.5	20	0	102.8%	85	115				
m,p-Xylene	40.47		1	40	0	101.2%	85	115				
Methyl tert-Butyl Ether	19.98		1	20	0	99.9%	85	115				
o-Xylene	19.67		0.5	20	0	98.4%	85	115				
Toluene	19.69		0.5	20	0	98.5%	85	115				
1,4-Difluorobenzene	108.4		0	110	0	98.5%	70	130				
4-Bromochlorobenzene	121.5		0	110	0	110.4%	70	130				
Fluorobenzene	111.6		0	110	0	101.5%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited
Work Order: 0206031
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2_020628		Batch ID: GC-1_020628		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/28/2002			Prep Date: 06/28/2002	
Client ID:		0206031		Run ID:		GC-1_020628A		SeqNo: 52909				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Benzene	20.06	0.5	20	0	100.3%	85	115					
Ethylbenzene	20.13	0.5	20	0	100.6%	85	115					
m,p-Xylene	39.24	1	40	0	98.1%	85	115					
Methyl tert-Butyl Ether	20.31	1	20	0	101.5%	85	115					
o-Xylene	19.37	0.5	20	0	96.8%	85	115					
Toluene	19.38	0.5	20	0	96.9%	85	115					
1,4-Difluorobenzene	108.7	0	110	0	98.8%	70	130					
4-Bromochlorobenzene	118.9	0	110	0	108.1%	70	130					
Fluorobenzene	111.8	0	110	0	101.7%	70	130					

Sample ID: CCV3_020628	Batch ID: GC-1_020628	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/28/2002				Prep Date: 06/28/2002					
Client ID:	0206031	Run ID:	GC-1_020628A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	38.19			0.5	40	0	95.5%	85	115				
Ethylbenzene	38.83			0.5	40	0	97.1%	85	115				
m,p-Xylene	75.68			1	80	0	94.6%	85	115				
Methyl tert-Butyl Ether	38.62			1	40	0	96.5%	85	115				
o-Xylene	37.34			0.5	40	0	93.4%	85	115				
Toluene	37.3			0.5	40	0	93.2%	85	115				
1,4-Difluorobenzene	108.5			0	110	0	98.6%	70	130				
4-Bromochlorobenzene	116.4			0	110	0	105.8%	70	130				
Fluorobenzene	112.3			0	110	0	102.1%	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited

Work Order: 0206031

Project: 2-1363; Conoco Nell Hall

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0206028-01A	88	100	105
0206029-01A	99.2	109	102
0206030-01A	90.1	103	102
0206030-02A	99.4	111	102
0206030-03A	96.5	111	100
0206031-01A	99.4	110	102
0206031-02A	98.4	110	102
0206031-03A	98.2	111	101
0206031-04A	92.1	107	95.5
0206039-01A	91.8	112	95.2
0206039-02A	96.5	108	99.6
0206039-02AMS	98	112	101
0206039-02AMSD	96.2	110	99.2
0206041-01A	96.6	110	99
0206041-01AMS	96.8	110	98.8
0206041-01AMSD	95.8	110	98.5
0206041-02A	98.1	112	101
0206048-01A	97.7	109	101
0206049-01A	97.6	106	100
0206049-02A	95.9	107	99.7
0206050-01A	95.5	109	98.7
0206050-02A	99.5	113	102
0206051-01A	99.2	111	102
0206052-01A	96.3	106	100
0206054-02A	101	100	96.8
0206054-03A	95.5	109	98.3
0206054-04A	95.4	109	98.2

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits

CLIENT: On Site Technologies Limited
Work Order: 0206031
Project: 2-1363; Conoco Nell Hall
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0206057-01A	99.5	107	102
0206057-02A	99.2	106	103
0206057-03A	99.6	106	103
0206057-04A	99.7	106	103
0206057-05A	99.4	105	103
0206057-06A	99.1	106	103
0206057-07A	99.3	108	102
0206057-08A	99.3	108	103
0206061-01A	95.4	100	102
CCV1_020627	97	107	99.6
CCV1_020628	98.5	110	102
CCV2_020627	99.2	112	102
CCV2_020628	98.8	108	102
CCV3_020627	98.1	108	101
CCV3_020628	98.6	106	102
LCS_020627	97	109	99
LCS_020628	98.4	111	101
MB_020627	97.8	108	99.8
MB_020628	99.1	111	102

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	70-130
4BCBZ	= 4-Bromochlorobenzene	70-130
FLBZ	= Fluorobenzene	70-130

* Surrogate recovery outside acceptance limits



612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

CHAIN OF CUSTODY RECORD

Date: 6/19/02

Page: 1 of 1

Purchase Order No.:		Project No. <u>2-1363</u>	
SEND INVOICE TO		REPORT RESULTS TO	
Name <u>JOHN HAGSTROM</u>		Name <u>JOHN HAGSTROM</u>	
Company _____		Company _____	
Address _____		Mailing Address _____	
City, State, Zip _____		City, State, Zip _____	
Telephone No. _____		Telefax No. _____	
PROJECT LOCATION: <u>Condole NEEL HALL</u>		ANALYSIS REQUESTED	
SAMPLER'S SIGNATURE <u>[Signature]</u>		LAB ID	
SAMPLE IDENTIFICATION		Number of Containers	
DATE TIME MATRIX PRES.			
NEEL HALL		BTX	
SPC		2	
SP7		2	
SP8		2	
MUI		2	
Relinquished by: <u>[Signature]</u>		Received by: <u>[Signature]</u>	
Date/Time <u>6/19/02</u>		Date/Time <u>6/19/02</u>	
Relinquished by: _____		Received by: _____	
Date/Time _____		Date/Time _____	
Method of Shipment: _____		Rush _____	
Authorized by: <u>[Signature]</u>		24-Hour _____	
Date <u>6/19/02</u>		10 Working Days _____	
(Client Signature Must Accompany Request)		By Date _____	
Special Instructions / Remarks:			

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

iina bá

P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

October 08, 2002

John Hagstrom
On Site Technologies Limited
612 E. Murray Drive
P.O. Box 2606
Farmington, NM 87499

TEL: (505) 325-5667

FAX (505) 327-1496

RE: 2-1363; Conoco Nell Hall

Order No.: 0209018

Dear John Hagstrom:

iina ba, Ltd. received 4 samples on 9/17/2002 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative.

If you have any questions regarding these test results, please feel free to call.

Sincerely,



David Cox

612 E. Murray Drive
Farmington, NM 87401

Off: (505) 327-1072

iiná bá

P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 08-Oct-02

CLIENT: On Site Technologies Limited
Work Order: 0209018
Project: 2-1363; Conoco Nell Hall
Lab ID: 0209018-01A

Client Sample Info: Nell Hall; Aztec, NM
Client Sample ID: MW #1
Collection Date: 9/17/2002 12:50:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HNR		
Benzene	4.6	0.50		µg/L	1	9/25/2002
Ethylbenzene	3.7	0.50		µg/L	1	9/25/2002
m,p-Xylene	44	1.0		µg/L	1	9/25/2002
o-Xylene	2.6	0.50		µg/L	1	9/25/2002
Toluene	ND	0.50		µg/L	1	9/25/2002

Qualifiers: ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted precision limits
E - Value above quantitation range

Page 1 of 4

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
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P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 08-Oct-02

CLIENT: On Site Technologies Limited
Work Order: 0209018
Project: 2-1363; Conoco Nell Hall
Lab ID: 0209018-02A

Client Sample Info: Nell Hall; Aztec, NM
Client Sample ID: SP 6
Collection Date: 9/17/2002 12:20:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HNR
Benzene	ND	0.50		µg/L	1	9/25/2002
Ethylbenzene	ND	0.50		µg/L	1	9/25/2002
m,p-Xylene	2.1	1.0		µg/L	1	9/25/2002
o-Xylene	0.77	0.50		µg/L	1	9/25/2002
Toluene	0.67	0.50		µg/L	1	9/25/2002

Qualifiers: ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above quantitation range

Page 2 of 4

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Farmington, NM 87499

Fax: (505) 327-1496

Date: 08-Oct-02

CLIENT: On Site Technologies Limited
Work Order: 0209018
Project: 2-1363; Conoco Nell Hall
Lab ID: 0209018-03A

Client Sample Info: Nell Hall; Aztec, NM
Client Sample ID: SP 7
Collection Date: 9/17/2002 12:40:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B				Analyst: HNR
Benzene	21	2.5		µg/L	5	9/25/2002
Ethylbenzene	29	2.5		µg/L	5	9/25/2002
m,p-Xylene	470	5.0		µg/L	5	9/25/2002
o-Xylene	7.0	2.5		µg/L	5	9/25/2002
Toluene	ND	2.5		µg/L	5	9/25/2002

Qualifiers: ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted precision limits

E - Value above quantitation range

Page 3 of 4

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

612 E. Murray Drive
Farmington, NM 87401

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P.O. Box 2606
Farmington, NM 87499

Fax: (505) 327-1496

Date: 08-Oct-02

CLIENT: On Site Technologies Limited
Work Order: 0209018
Project: 2-1363; Conoco Nell Hall
Lab ID: 0209018-04A

Client Sample Info: Nell Hall; Aztec, NM
Client Sample ID: SP 8
Collection Date: 9/17/2002 12:30:00 PM
Matrix: AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B			Analyst: HNR	
Benzene	ND	0.50		µg/L	1	9/25/2002
Ethylbenzene	ND	0.50		µg/L	1	9/25/2002
m,p-Xylene	1.8	1.0		µg/L	1	9/25/2002
o-Xylene	0.70	0.50		µg/L	1	9/25/2002
Toluene	0.54	0.50		µg/L	1	9/25/2002

Qualifiers: ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted precision limits
E - Value above quantitation range

Page 4 of 4

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

ina ba, Ltd.

CLIENT: On Site Technologies Limited
 Work Order: 0209018
 Project: 2-1363; Conoco Nell Hall

Date: 08-Oct-02

ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

Sample ID	MB_020923	SampType: MBLK	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58371					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	0.0412	0.50									J
Ethylbenzene	0.0587	0.50									J
m,p-Xylene	ND	1.0									
o-Xylene	0.0942	0.50									J
Toluene	0.1038	0.50									J
Surr: 1,4-Difluorobenzene	107.6	0	110	0	97.8	82	112	0	0		
Surr: 4-Bromochlorobenzene	117.7	0	110	0	107	95	124	0	0		
Surr: Fluorobenzene	110.1	0	110	0	100	84	114	0	0		

Sample ID	LCS_020925	SampType: LCS	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID:	ZZZZZ	Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58370					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	40.11	0.50	40	0.0412	100	86	106	0	0		
Ethylbenzene	41.09	0.50	40	0.0587	103	88	110	0	0		
m,p-Xylene	82.23	1.0	80	0	103	86	110	0	0		
o-Xylene	39.67	0.50	40	0.0942	98.9	83	110	0	0		
Toluene	39.45	0.50	40	0.1038	98.4	84	105	0	0		
Surr: 1,4-Difluorobenzene	107.3	0	110	0	97.6	82	112	0	0		
Surr: 4-Bromochlorobenzene	122.8	0	110	0	112	95	124	0	0		
Surr: Fluorobenzene	108.1	0	110	0	98.3	84	114	0	0		

Sample ID	0209018-03AMS	SampType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58372					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	217.5	2.5	200	21.32	98.1	76	114	0	0		
Ethylbenzene	231.2	2.5	200	28.79	101	80	113	0	0		
m,p-Xylene	894.2	5.0	400	469.7	106	73	118	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited
 Work Order: 0209018
 Project: 2-1363; Conoco Nell Hall

ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

Sample ID	0209018-03AMS	SampType: MS	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58372					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

o-Xylene	194.4	2.5	200	6.976	93.7	82	106	0	0		
Toluene	207.4	2.5	200	2.468	102	80	110	0	0		
Surr: 1,4-Difluorobenzene	510.9	0	550	0	92.9	82	112	0	0		
Surr: 4-Bromochlorobenzene	611.8	0	550	0	111	95	124	0	0		
Surr: Fluorobenzene	518.5	0	550	0	94.3	84	114	0	0		

Sample ID	0209018-03AMSD	SampType: MSD	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID:	ZZZZZ	Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58373					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	211.5	2.5	200	21.32	95.1	76	114	217.5	2.82	15	
Ethylbenzene	225.1	2.5	200	28.79	98.2	80	113	231.2	2.66	15	
m,p-Xylene	872.5	5.0	400	469.7	101	73	118	894.2	2.46	15	
o-Xylene	189.7	2.5	200	6.976	91.4	82	106	194.4	2.44	15	
Toluene	199.8	2.5	200	2.468	98.6	80	110	207.4	3.77	15	
Surr: 1,4-Difluorobenzene	515.1	0	550	0	93.7	82	112	0	0	0	
Surr: 4-Bromochlorobenzene	616	0	550	0	112	95	124	0	0	0	
Surr: Fluorobenzene	519.8	0	550	0	94.5	84	114	0	0	0	

Sample ID	CCV1_020925	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58367					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Benzene	20.2	0.50	20	0	101	85	115	0	0		
Ethylbenzene	20.68	0.50	20	0	103	85	115	0	0		
m,p-Xylene	40.89	1.0	40	0	102	85	115	0	0		
o-Xylene	19.84	0.50	20	0	99.2	85	115	0	0		
Toluene	19.77	0.50	20	0	98.9	85	115	0	0		
Surr: 1,4-Difluorobenzene	107.5	0	110	0	97.7	82	112	0	0		
Surr: 4-Bromochlorobenzene	120.7	0	110	0	110	95	124	0	0		
Surr: Fluorobenzene	109.1	0	110	0	99.1	84	114	0	0		

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited
 Work Order: 0209018
 Project: 2-1363; Conoco Neil Hall

ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

Sample ID	CCV2_020925	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A
Client ID:	ZZZZZ	Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58368

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.37	0.50	40	0	103	85	115	0	0	0	
Ethylbenzene	41.99	0.50	40	0	105	85	115	0	0	0	
m,p-Xylene	83.76	1.0	80	0	105	85	115	0	0	0	
o-Xylene	40.38	0.50	40	0	101	85	115	0	0	0	
Toluene	40.53	0.50	40	0	101	85	115	0	0	0	
Surr: 1,4-Difluorobenzene	106	0	110	0	96.3	82	112	0	0	0	
Surr: 4-Bromochlorobenzene	125	0	110	0	114	95	124	0	0	0	
Surr: Fluorobenzene	107.9	0	110	0	98.1	84	114	0	0	0	

Sample ID	CCV3_020925	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A
Client ID:	ZZZZZ	Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58369

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.87	0.50	20	0	99.3	85	115	0	0	0	
Ethylbenzene	20.26	0.50	20	0	101	85	115	0	0	0	
m,p-Xylene	39	1.0	40	0	97.5	85	115	0	0	0	
o-Xylene	19.64	0.50	20	0	98.2	85	115	0	0	0	
Toluene	19.41	0.50	20	0	97.1	85	115	0	0	0	
Surr: 1,4-Difluorobenzene	107.4	0	110	0	97.6	82	112	0	0	0	
Surr: 4-Bromochlorobenzene	122.3	0	110	0	111	95	124	0	0	0	
Surr: Fluorobenzene	109.1	0	110	0	99.2	84	114	0	0	0	

Qualifiers: ND - Not Detected at the Reporting Limit
 J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
 R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

iina ba, Ltd.

Date: 08-Oct-02

CLIENT: On Site Technologies Limited

Work Order: 0209018

Project: 2-1363; Conoco Nell Hall

Test No: SW8021B

Matrix: W

QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ					
0209018-01A	94.2	109	95.8					
0209018-02A	99.4	113	101					
0209018-03A	95.7	112	96.8					
0209018-03AMS	92.9	111	94.3					
0209018-03AMSD	93.7	112	94.5					
0209018-04A	98.4	114	101					
CCV1_020925	97.7	110	99.1					
CCV2_020925	96.3	114	98.1					
CCV3_020925	97.6	111	99.2					
LCS_020925	97.6	112	98.3					
MB_020923	97.8	107	100					

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	82-112
4BCBZ	= 4-Bromochlorobenzene	95-124
FLBZ	= Fluorobenzene	84-114

* Surrogate recovery outside acceptance limits

ina bá

(for life's sake)

612 E. Murray Dr. • P. O. Box 2606 • Farmington NM 87499
(505) 327-1072 • FAX: (505) 327-1496

CHAIN OF CUSTODY RECORD

B 1422

Date: 9/17/02

Page 1 of 1

Purchase Order No.:

Job No.:

2-1313

SEND INVOICE TO

Name

J. HASTON

Company

Dept.

Address

City, State, Zip

Sampling Location:

CONOCO
BELL HALL, AZTEC NW

Sampler:

JOHN HASTON

SAMPLE IDENTIFICATION

SAMPLE DATE TIME MATRIX PRES.

Number of Containers

REPORT RESULTS TO

Name

J. HASTON

Title

Company

Mailing Address

City, State, Zip

Telephone No.

Telefax No.

ANALYSIS REQUESTED

LAB ID

NH

MW1

9/17/02 1250

HCL

2

0201016 Q1A

SP6

1225

1

2

0201016 Q1A

SP7

1240

1

2

0201016 Q1A

SP8

1230

1

2

0201016 Q1A

Relinquished by:

John H. H.

Date/Time 9/17/02 1540

Received by:

Theresa R.

Date/Time 9/17/02 1540

Relinquished by:

Date/Time

Received by:

Date/Time

Relinquished by:

Date/Time

Received by:

Date/Time

Method of Shipment:

24-48 Hours

10 Working Days

Special Instructions:

Authorized by:

John H. H.

(Client Signature Must Accompany Request)

Date 9/17/02

Distribution: White - On Site

Yellow - LAB

Pink - Sampler

Goldenrod - Client