

3R - 90

REPORTS

DATE:

2001



February 18, 2002

Conoco, Inc., San Juan/Lobo Business Unit
Attn.: Mr. Gary Ledbetter, Field SHEAR Specialist
3315 Bloomfield Hwy.
Farmington, NM 87401

RE: 2001 Annual Ground Water Report
Conoco Location: NELL-HALL #1,
Unit M, Sec. 07, T30N, R11W, NMPM, San Juan Co., NM

Project #: 2-1363

Dear Mr. Ledbetter:

The following report summarizes the ground water remediation and monitoring activities conducted by On Site Technologies Limited Partnership and/or others on behalf of Conoco, Inc., at the referenced oil and gas location. This report covers the calendar year of 2001, 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 2001 ACTIVITIES:

Ground water sampling events were conducted in March, June, September and December 2001. Samples were not taken during the March 2001 and January 2001 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 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 2001, along with all laboratory QA/QC documentation and chains-of-custody, are attached with this report.

PO Box 2606
Farmington, NM 87499

505-325-5667

FAX: 505-327-1496

Summary and Conclusions:

The following conclusions are based on the 2001 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 2001 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:

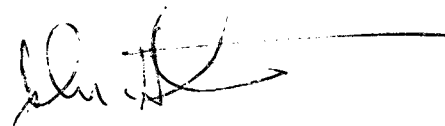
This annual groundwater report documents the results of ground water monitoring for the referenced Conoco well location during the calendar year 2001. This report follows the monitoring plan, dated October 15, 1997.

The scope of On Site Technologies' 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 On Site Technologies for the exclusive use of Conoco Inc., as it pertains to the referenced well location operated by Conoco.

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

Respectfully submitted,



John Hagstrom,
Environmental Technician

Reviewed by:



Lawrence "Larry" Trujillo, CHMM
Environmental Specialist

ON SITE TECHNOLOGIES LIMITED PARTNERSHIP

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:
CONOCO, Inc.

Dan Sedberry SHEAR Specialist
(Name/Title)
2/2/02
(Date)

JPH/jph: 41363-01.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.*

Table 1

BGGS - 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	

BGS - approximate measurements taken as Below Ground Surface
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NM - Not Measured
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Table1

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Table1

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

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 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	

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

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	

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)
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	

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

Table 1
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 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	

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

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			
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
Well-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			
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0

BDL: Below Detection Limits

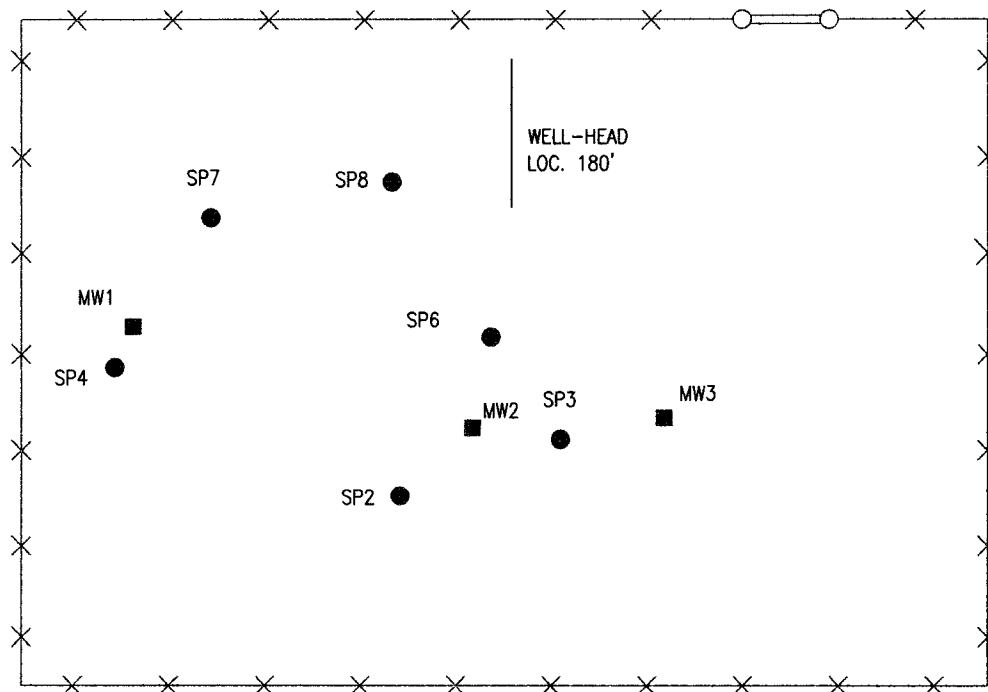
Note: No samples taken during the December 30, 1998 sampling event

Table 2
 BTEX Analytical Summary
 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	
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				
6/5/00	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				
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0	

BDL: Below Detection Limits

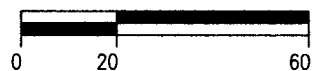
Note: No samples taken during the December 30, 1998 sampling event



LEGEND

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

SCALE (feet)



NOTE: SP#1 REMOVED.



612 E. MURRAY DR. PH. (505) 327-1072
FARMINGTON, NM 87401 FAX (505) 327-1498

APPROVED: *jet*

DATE: 2/21/02

DRWN BY: MED

DATE: 2/13/02

CHK'D BY: *PH*

DATE: 2/18/02

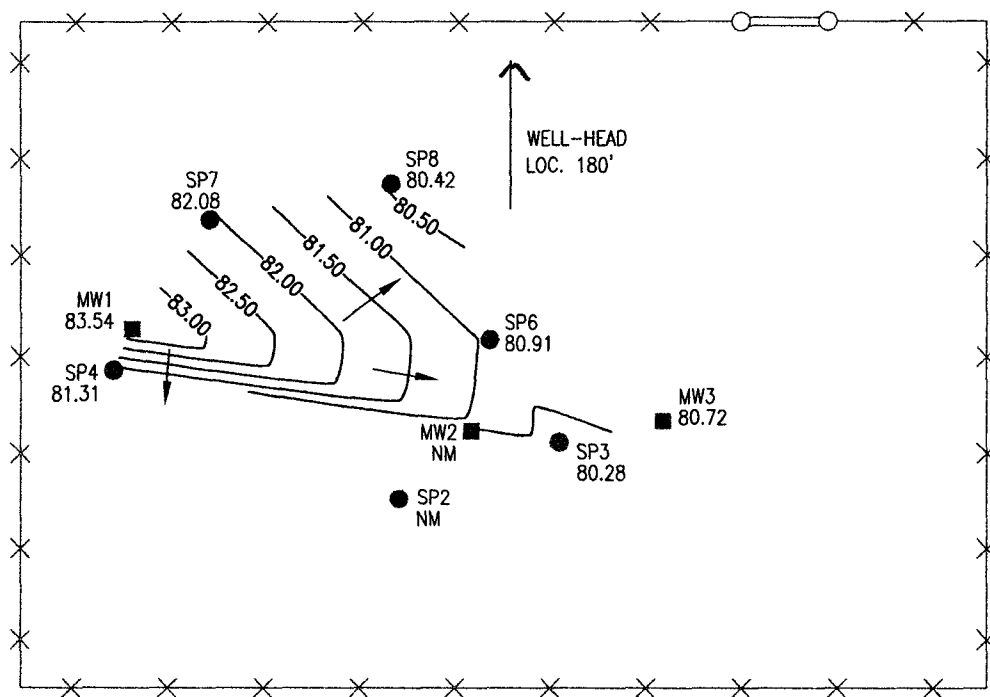
PROJECT NO: 2-1363

SHEET: 1 OF 3

SITE MAP

NELL HALL #1

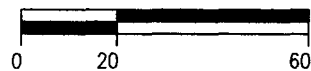
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LEGEND

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

SCALE (feet)



NOTE: SP#1 REMOVED.



612 E. MURRAY DR. PH. (505) 327-1072
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:

DRWN BY: MED

CHK'D BY: *[Signature]*

PROJECT NO: 2-1363

DATE:

DATE: 2/13/02

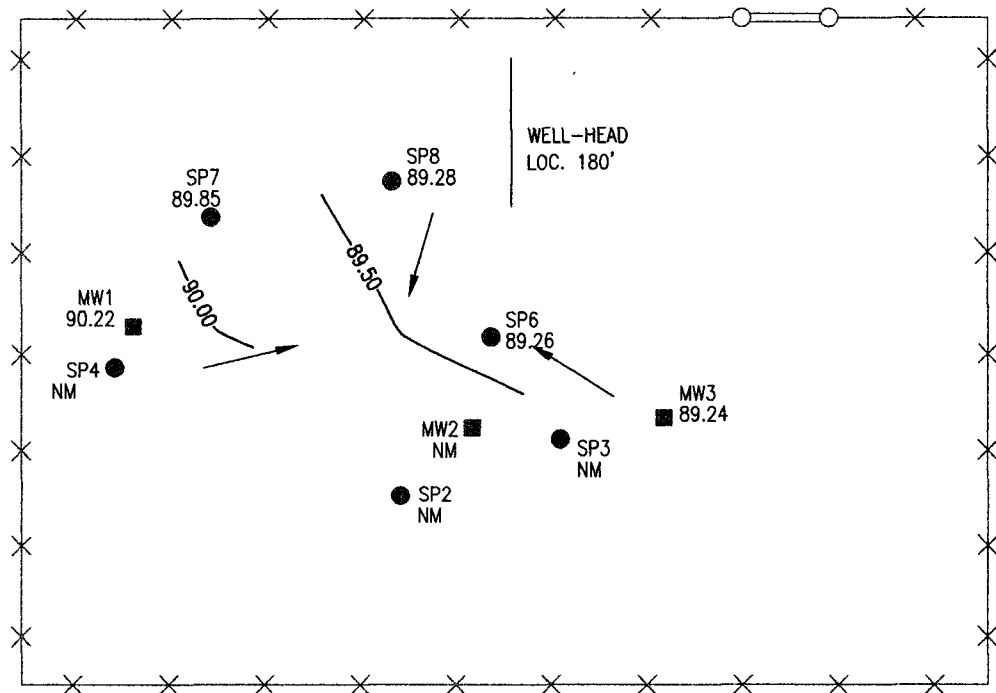
DATE: 2/18/02

SHEET: 2 OF 3

GROUND WATER POTENTIOMETER MAP
JUNE 14, 2001

NELL HALL #1

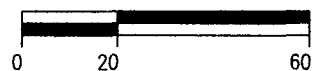
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LEGEND

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

SCALE (feet)



NOTE: SP#1 REMOVED.



612 E. MURRAY DR. PH. (505) 327-1072
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:	DATE:
DRWN BY: MED	DATE: 2/13/02
CHK'D BY: <i>JPH</i>	DATE: 2/18/02
PROJECT NO: 2-1363	SHEET: 3 OF 3

GROUND WATER POTENTIOMETER MAP
SEPTEMBER 18 & 19, 2001

NELL HALL #1

c:/ddr2/2-1363/a1.dwg_sept

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

July 04, 2001

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.: 0106014

Dear John Hagstrom,

On Site Technologies, LTD. received 4 samples on 6/14/2001 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 tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to be 'DC' or 'Cox', written over a horizontal line.

David Cox

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



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

On Site Technologies, LTD.

Date: 04-Jul-01

CLIENT: On Site Technologies Limited
Project: 2-1363; Conoco Nell Hall
Lab Order: 0106014

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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LAB: (505) 325-1556
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ANALYTICAL REPORT

Date: 04-Jul-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0106014	Client Sample ID:	SP 6
Lab ID:	0106014-01A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	6/14/2001 12:00:00 PM
		COC Record:	11343

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	52	0.5		µg/L	1	6/26/2001
Toluene	ND	0.5		µg/L	1	6/26/2001
Ethylbenzene	10	0.5		µg/L	1	6/26/2001
m,p-Xylene	5.6	1		µg/L	1	6/26/2001
o-Xylene	0.5	0.5		µg/L	1	6/26/2001

Qualifiers:	PQL - Practical Quantitation Limit	S - Spike Recovery outside accepted recovery limits
	ND - Not Detected at Practical Quantitation Limit	R - RPD outside accepted recovery 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 4

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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



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

ANALYTICAL REPORT

Date: 04-Jul-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0106014	Client Sample ID:	SP 8
Lab ID:	0106014-02A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	6/14/2001 12:15:00 PM
		COC Record:	11343

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	23	10		µg/L	20	6/27/2001
Toluene	ND	10		µg/L	20	6/27/2001
Ethylbenzene	490	10		µg/L	20	6/27/2001
m,p-Xylene	3900	20		µg/L	20	6/27/2001
o-Xylene	ND	10		µg/L	20	6/27/2001

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

2 of 4

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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FAX: (505) 327-1496



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

ANALYTICAL REPORT

Date: 04-Jul-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0106014	Client Sample ID:	SP 7
Lab ID:	0106014-03A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	6/14/2001 12:35:00 PM
		COC Record:	11343

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	29	5		µg/L	10	6/26/2001
Toluene	ND	5		µg/L	10	6/26/2001
Ethylbenzene	81	5		µg/L	10	6/26/2001
m,p-Xylene	2100	10		µg/L	10	6/26/2001
o-Xylene	ND	5		µg/L	10	6/26/2001

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

3 of 4

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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



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

ANALYTICAL REPORT

Date: 04-Jul-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0106014	Client Sample ID:	MW 1
Lab ID:	0106014-04A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell Hall	Collection Date:	6/14/2001 1:00:00 PM
		COC Record:	11343

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	4.4	0.5		µg/L	1	6/27/2001
Toluene	ND	0.5		µg/L	1	6/27/2001
Ethylbenzene	7.7	0.5		µg/L	1	6/27/2001
m,p-Xylene	53	1		µg/L	1	6/27/2001
o-Xylene	1.3	0.5		µg/L	1	6/27/2001

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

4 of 4

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EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 29-Jun-01

CLIENT: On Site Technologies Limited
Work Order: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L	Analysis Date 6/26/2001	Prep Date:
Client ID:	0106014	Run ID: GC-1_010626A		SeqNo: 39195	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	.2547	0.5			J
m,p-Xylene	.2921	1			J
Methyl tert-Butyl Ether	ND	1			J
o-Xylene	.3507	0.5			J
Toluene	.116	0.5			J

Sample ID: MB1	Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L	Analysis Date 6/27/2001	Prep Date:
Client ID:	0106014	Run ID: GC-1_010627A		SeqNo: 39239	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	.118	0.5			J
m,p-Xylene	.1558	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0835	0.5			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: 29-Jun-01

CLIENT: On Site Technologies Limited
Work Order: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0106014-03AMS		Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L	Analysis Date 6/26/2001		SeqNo: 39196	Prep Date:	
Client ID: SP 7	0106014	Run ID: GC-1_010626A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	420		5	400	29.11	97.7%	70	130	
Ethylbenzene	532.6		5	400	81.25	112.8%	70	130	
m,p-Xylene	2918		10	800	2062	107.0%	70	130	
Methyl tert-Butyl Ether	396.6		10	400	1.349	98.8%	70	130	
o-Xylene	424		5	400	2.196	105.4%	70	130	
Toluene	429.3		5	400	11.43	104.5%	70	130	

Sample ID: 0106014-03AMSD		Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L	Analysis Date 6/26/2001		SeqNo: 39197	Prep Date:	
Client ID: SP 7	0106014	Run ID: GC-1_010626A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	412.5		5	400	29.11	95.9%	70	130	420
Ethylbenzene	524.7		5	400	81.25	110.9%	70	130	532.6
m,p-Xylene	2860		10	800	2062	99.8%	70	130	2918
Methyl tert-Butyl Ether	395.6		10	400	1.349	98.6%	70	130	396.6
o-Xylene	417.1		5	400	2.196	103.7%	70	130	424
Toluene	419.1		5	400	11.43	101.9%	70	130	429.3

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: 0106014

Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0106014-02AMS		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L		Analysis Date 6/27/2001		Prep Date:	
Client ID: SP 8	0106014	Run ID: GC-1_010627A				SeqNo: 39240			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Qual
Benzene	818.1	10	800	22.78	99.4%	70	130		
Ethylbenzene	1299	10	800	491.4	100.9%	70	130		
m,p-Xylene	5471	20	1600	3944	95.4%	70	130		
Methyl tert-Butyl Ether	780.8	20	800	0	97.6%	70	130		
o-Xylene	834.8	10	800	4.008	103.8%	70	130		
Toluene	827.2	10	800	4.98	102.8%	70	130		

Sample ID: 0106014-02AMSD		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L		Analysis Date 6/27/2001		Prep Date:	
Client ID: SP 8	0106014	Run ID: GC-1_010627A				SeqNo: 39241			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	Qual
Benzene	807.8	10	800	22.78	98.1%	70	130	818.1	8
Ethylbenzene	1281	10	800	491.4	98.7%	70	130	1299	7
m,p-Xylene	5382	20	1600	3944	89.9%	70	130	5471	7
Methyl tert-Butyl Ether	780.7	20	800	0	97.6%	70	130	780.8	6
o-Xylene	826.7	10	800	4.008	102.8%	70	130	834.8	6
Toluene	816.4	10	800	4.98	101.4%	70	130	827.2	6

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: 29-Jun-01

CLIENT: On Site Technologies Limited
Work Order: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER	Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/26/2001	Prep Date:						
Client ID:	0106014	Run ID:	GC-1_010626A	SeqNo:	39194						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.01	0.5	40	0	102.5%	80	120				
Ethylbenzene	42.36	0.5	40	0.2547	105.3%	80	120				
m,p-Xylene	82.97	1	80	0.2921	103.3%	80	120				
Methyl tert-Butyl Ether	40.18	1	40	0	100.5%	80	120				
o-Xylene	42.49	0.5	40	0.3507	105.3%	80	120				
Toluene	41.71	0.5	40	0.116	104.0%	80	120				

Sample ID: LCS WATER		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L	Analysis Date 6/27/2001		Prep Date:		
Client ID:		0106014	Run ID: GC-1_010627A		SeqNo: 39238				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Benzene	42.76	0.5	40	0	106.9%	80	120		
Ethylbenzene	43.26	0.5	40	0.118	107.8%	80	120		
m,p-Xylene	84.62	1	80	0.1558	105.6%	80	120		
Methyl tert-Butyl Ether	41.6	1	40	0	104.0%	80	120		
o-Xylene	43.25	0.5	40	0	108.1%	80	120		
Toluene	42.8	0.5	40	0.0835	106.8%	80	120		

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: 29-Jun-01

CLIENT: On Site Technologies Limited
Work Order: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L		Analysis Date 6/26/2001		Prep Date:	
Client ID:		0106014	Run ID:	GC-1_010626A		SeqNo:	39191		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Benzene	21.92	0.5	20	0	109.6%	85	115		
Ethylbenzene	22.96	0.5	20	0	114.8%	85	115		
m,p-Xylene	45.32	1	40	0	113.3%	85	115		
Methyl tert-Butyl Ether	20.94	1	20	0	104.7%	85	115		
o-Xylene	22.7	0.5	20	0	113.5%	85	115		
Toluene	22.42	0.5	20	0	112.1%	85	115		
1,4-Difluorobenzene	113.7	0	120	0	94.7%	70	130		
4-Bromochlorobenzene	129.3	0	120	0	107.7%	70	130		
Fluorobenzene	112	0	120	0	93.4%	70	130		

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L		Analysis Date 6/26/2001		Prep Date:			
Client ID:		Run ID:	GC-1_010626A			SeqNo: 39192					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.31	0.5	20	0	101.5%	85	115				
Ethylbenzene	21.8	0.5	20	0	109.0%	85	115				
m,p-Xylene	42.4	1	40	0	106.0%	85	115				
Methyl tert-Butyl Ether	20.69	1	20	0	103.5%	85	115				
o-Xylene	21.35	0.5	20	0	106.7%	85	115				
Toluene	20.78	0.5	20	0	103.9%	85	115				
1,4-Difluorobenzene	113.3	0	120	0	94.4%	70	130				
4-Bromochlorobenzene	123.5	0	120	0	102.9%	70	130				
Fluorobenzene	111.6	0	120	0	93.0%	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: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010626	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/26/2001				Prep Date:		
Client ID:		0106014	Run ID: GC-1_010626A		SeqNo: 39193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.72	0.5	40	0	101.8%	85	115				
Ethylbenzene	41.76	0.5	40	0	104.4%	85	115				
m,p-Xylene	81.55	1	80	0	101.9%	85	115				
Methyl tert-Butyl Ether	40.37	1	40	0	100.9%	85	115				
o-Xylene	42.06	0.5	40	0	105.2%	85	115				
Toluene	41.18	0.5	40	0	103.0%	85	115				
1,4-Difluorobenzene	113.3	0	120	0	94.4%	70	130				
4-Bromochlorobenzene	123.2	0	120	0	102.7%	70	130				
Fluorobenzene	112.2	0	120	0	93.5%	70	130				

Sample ID: CCV1 BTEX_0105		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L		Analysis Date 6/27/2001		Prep Date:	
Client ID:		0106014	Run ID: GC-1_010627A			SeqNo: 39235			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit Qual
Benzene	21.38	0.5	20	0	106.9%	85	115		
Ethylbenzene	22.26	0.5	20	0	111.3%	85	115		
m,p-Xylene	43.85	1	40	0	109.6%	85	115		
Methyl tert-Butyl Ether	20.24	1	20	0	101.2%	85	115		
o-Xylene	22.25	0.5	20	0	111.2%	85	115		
Toluene	21.87	0.5	20	0	109.3%	85	115		
1,4-Difluorobenzene	112.1	0	120	0	93.4%	70	130		
4-Bromochlorobenzene	122.8	0	120	0	102.4%	70	130		
Fluorobenzene	112.6	0	120	0	93.8%	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: 0106014
Project: 2-1363; Conoco Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0105		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L		Analysis Date 6/27/2001		Prep Date:	
Client ID: 0106014		Run ID: GC-1_010627A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 39236
Analyte	Result								
Benzene	20.62	0.5	0.5	20	0	103.1%	85	115	
Ethylbenzene	21.42	0.5	0.5	20	0	107.1%	85	115	
m,p-Xylene	42.33	1	1	40	0	105.8%	85	115	
Methyl tert-Butyl Ether	20.54	1	1	20	0	102.7%	85	115	
o-Xylene	21.69	0.5	0.5	20	0	108.4%	85	115	
Toluene	21.2	0.5	0.5	20	0	106.0%	85	115	
1,4-Difluorobenzene	113	0	0	120	0	94.2%	70	130	
4-Bromochlorobenzene	121.3	0	0	120	0	101.1%	70	130	
Fluorobenzene	111.7	0	0	120	0	93.1%	70	130	

Sample ID: CCV3 BTEX_0105		Batch ID: GC-1_010627	Test Code: SW8021B	Units: µg/L		Analysis Date 6/27/2001		Prep Date:	
Client ID: 0106014		Run ID: GC-1_010627A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 39237
Analyte	Result								
Benzene	39.57	0.5	0.5	40	0	98.9%	85	115	
Ethylbenzene	41.04	0.5	0.5	40	0	102.6%	85	115	
m,p-Xylene	80.35	1	1	80	0	100.4%	85	115	
Methyl tert-Butyl Ether	38.87	1	1	40	0	97.2%	85	115	
o-Xylene	41.33	0.5	0.5	40	0	103.3%	85	115	
Toluene	40.4	0.5	0.5	40	0	101.0%	85	115	
1,4-Difluorobenzene	112.8	0	0	120	0	94.0%	70	130	
4-Bromochlorobenzene	124.6	0	0	120	0	103.8%	70	130	
Fluorobenzene	111.9	0	0	120	0	93.2%	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

CLIENT: On Site Technologies Limited

Work Order: 0106014

Project: 2-1363; Conoco Nell Hall

Test No: SW8021B

**QC SUMMARY REPORT
SURROGATE RECOVERIES****Aromatic Volatiles by GC/PID**

Sample ID	14FBZ	4BCBZ	FLBZ
0106014-01A	93.8	113	93.6
0106014-02A	94.8	102	93.6
0106014-02AMS	93	103	93.2
0106014-02AMSD	94	103	92.9
0106014-03A	92.6	102	93.6
0106014-03AMS	91.8	103	91.3
0106014-03AMSD	92	104	91.1
0106014-04A	91.3	112	90.6
0106015-01A	91.5	96.6	93.3
0106016-01A	93.4	102	94
0106016-02A	94	103	93.6
0106016-03A	93.8	101	92.9
0106016-04A	91.7	100	91.9
0106017-01A	96.8	104	95.8
0106018-01A	92.7	100	96
0106018-02A	94.3	105	94.4
0106037-01A	95.7	104	94
0106037-02A	89.8	96.3	89.7
0106037-03A	93.2	99.6	91.9
0106037-04A	91.5	97.9	91
0106037-05A	93.8	99.2	91.9
0106037-06A	95.7	102	94
0106037-07A	92.8	100	93.7
0106037-08A	94.1	98	93
0106037-09A	95.2	98.9	93.8
0106037-10A	95.6	103	94.1
0106037-11A	95.2	101	93.6

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: 0106014
Project: 2-1363; Conoco Nell Hall
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0106037-12A	94.1	109	92.5
0106037-13A	92.6	102	93.5
0106040-01A	94.9	103	93.1
0106040-02A	93.6	105	94.6
0106040-04A	94.5	101	94
0106040-05A	95.2	102	93.7
0106040-06A	93.6	101	94.2
CCV1 BTEX_01052	93.4	102	93.8
CCV2 BTEX_01052	94.2	101	93.1
CCV3 BTEX_01052	94	104	93.2
LCS WATER	94.3	105	92.9
MBI	94.9	104	94.3

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

* Surrogate recovery outside acceptance limits



Page: _____ of _____

Page: _____ of _____

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client



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Page: _____ of _____

Distribution:	White - On Site	Yellow - LAB	Pink - Sampler	Goldenrod - Client
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OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

September 26, 2001

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 #1

Order No.: 0109027

Dear John Hagstrom,

On Site Technologies, LTD. received 4 samples on 9/19/2001 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 tests results, please feel free to call.

Sincerely,

A handwritten signature in dark ink, appearing to read "David Cox", is written over a horizontal line.

David Cox

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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On Site Technologies, LTD.

Date: 26-Sep-01

CLIENT: On Site Technologies Limited
Project: 2-1363; Conoco Nell-Hall #1
Lab Order: 0109027

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

ANALYTICAL REPORT

Date: 26-Sep-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell-Hall #1
Work Order:	0109027	Client Sample ID:	SP 6
Lab ID:	0109027-01A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell-Hall #1	Collection Date:	9/19/2001 9:20:00 AM
		COC Record:	11551

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	ND	0.5		µg/L	1	9/22/2001
Toluene	ND	0.5		µg/L	1	9/22/2001
Ethylbenzene	ND	0.5		µg/L	1	9/22/2001
m,p-Xylene	ND	1		µg/L	1	9/22/2001
o-Xylene	ND	0.5		µg/L	1	9/22/2001

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery 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 4

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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



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

ANALYTICAL REPORT

Date: 26-Sep-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell-Hall #1
Work Order:	0109027	Client Sample ID:	SP 8
Lab ID:	0109027-02A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell-Hall #1	Collection Date:	9/19/2001 9:45:00 AM
		COC Record:	11551

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	ND	0.5		µg/L	1	9/23/2001
Toluene	ND	0.5		µg/L	1	9/23/2001
Ethylbenzene	ND	0.5		µg/L	1	9/23/2001
m,p-Xylene	ND	1		µg/L	1	9/23/2001
o-Xylene	ND	0.5		µg/L	1	9/23/2001

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

2 of 4

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LAB: (505) 325-1556
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ANALYTICAL REPORT

Date: 26-Sep-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell-Hall #1
Work Order:	0109027	Client Sample ID:	SP 7
Lab ID:	0109027-03A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell-Hall #1	Collection Date:	9/19/2001 10:15:00 AM
		COC Record:	11551

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	34	5		µg/L	10	9/22/2001
Toluene	10	5		µg/L	10	9/22/2001
Ethylbenzene	34	5		µg/L	10	9/22/2001
m,p-Xylene	740	10		µg/L	10	9/22/2001
o-Xylene	ND	5		µg/L	10	9/22/2001

Qualifiers:

PQL - Practical Quantitation Limit

S - Spike Recovery outside accepted recovery limits

ND - Not Detected at Practical Quantitation Limit

R - RPD outside accepted recovery limits

J - Analyte detected below Practical Quantitation Limit

E - Value above quantitation range

B - Analyte detected in the associated Method Blank

Surr: - Surrogate

3 of 4

P.O. BOX 2606 • FARMINGTON, NM 87499

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667
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LAB: (505) 325-1556
FAX: (505) 327-1496

ANALYTICAL REPORT

Date: 26-Sep-01

Client:	On Site Technologies Limited	Client Sample Info:	Nell-Hall #1
Work Order:	0109027	Client Sample ID:	MW 1
Lab ID:	0109027-04A	Matrix:	AQUEOUS
Project:	2-1363; Conoco Nell-Hall #1	Collection Date:	9/19/2001 10:35:00 AM
		COC Record:	11551

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HR		
Benzene	3.2	0.5		µg/L	1	9/22/2001
Toluene	ND	0.5		µg/L	1	9/22/2001
Ethylbenzene	6.8	0.5		µg/L	1	9/22/2001
m,p-Xylene	85	1		µg/L	1	9/22/2001
o-Xylene	1.8	0.5		µg/L	1	9/22/2001

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

4 of 4

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 26-Sep-01

CLIENT: On Site Technologies Limited
Work Order: 0109027
Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/22/2001	Prep Date:
Client ID:	0109027	Run ID: GC-1_010922A		SeqNo: 42584	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0521	0.5			J
Ethylbenzene	.2728	0.5			J
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	.3639	1			J
o-Xylene	ND	0.5			
Toluene	.1163	0.5			J

Sample ID: MB1	Batch ID: GC-1_010923	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/23/2001	Prep Date:
Client ID:	0109027	Run ID: GC-1_010923A		SeqNo: 42596	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0422	0.5			J
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1251	0.5			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: 26-Sep-01

CLIENT: On Site Technologies Limited
Work Order: 0109027
Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0109023-09AMS		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L	Analysis Date 9/22/2001		SeqNo: 42585	Prep Date:	
Client ID: 0109027		Run ID: GC-1_010922A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	2174		25	2000	94.19	104.0%	78	117	
Ethylbenzene	2143		25	2000	53.24	104.5%	79	121	
m,p-Xylene	4164		50	4000	73.06	102.3%	80	115	
Methyl tert-Butyl Ether	4784		50	2000	3178	80.3%	84	114	S
o-Xylene	2090		25	2000	10.14	104.0%	88	116	
Toluene	1980		25	2000	11.38	98.4%	88	113	

Sample ID: 0109023-09AMSD		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L	Analysis Date 9/22/2001		SeqNo: 42586	Prep Date:	
Client ID: 0109027		Run ID: GC-1_010922A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	2150		25	2000	94.19	102.8%	78	117	2174
Ethylbenzene	2232		25	2000	53.24	108.9%	79	121	2143
m,p-Xylene	4337		50	4000	73.06	106.6%	80	115	4164
Methyl tert-Butyl Ether	5116		50	2000	3178	96.9%	84	114	4784
o-Xylene	2181		25	2000	10.14	108.5%	88	116	2090
Toluene	2198		25	2000	11.38	109.3%	88	113	1980

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: 0109027
Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0109025-11AMS		Batch ID: GC-1_010923	Test Code: SW8021B	Units: µg/L	Analysis Date 9/23/2001		Prep Date:
Client ID: 0109027		Run ID: GC-1_010923A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 42597
Analyte	Result						
Benzene	206.7	2.5	200	23	91.8%	78	117
Ethylbenzene	487.5	2.5	200	280	103.7%	79	121
m,p-Xylene	403.9	5	400	8.8	98.8%	80	115
Methyl tert-Butyl Ether	227.5	5	200	0	113.8%	84	114
o-Xylene	201	2.5	200	2	99.5%	88	116
Toluene	201.5	2.5	200	23	89.3%	88	113

Sample ID: 0109025-11AMSD		Batch ID: GC-1_010923	Test Code: SW8021B	Units: µg/L	Analysis Date 9/23/2001		Prep Date:
Client ID: 0109027		Run ID: GC-1_010923A	PQL	SPK value	SPK Ref Val	%REC	SeqNo: 42598
Analyte	Result						
Benzene	203.5	2.5	200	23	90.2%	78	117
Ethylbenzene	481.4	2.5	200	280	100.7%	79	121
m,p-Xylene	400.5	5	400	8.8	97.9%	80	115
Methyl tert-Butyl Ether	226.9	5	200	0	113.4%	84	114
o-Xylene	199.2	2.5	200	2	98.6%	88	116
Toluene	205.7	2.5	200	23	91.3%	88	113

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: 26-Sep-01

CLIENT: On Site Technologies Limited
Work Order: 0109027
Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L	Analysis Date 9/22/2001		Prep Date:				
Client ID:		0109027	Run ID: GC-1_010922A		SeqNo: 42583						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.33	0.5	40	0.0521	103.2%	92	113				
Ethylbenzene	41.29	0.5	40	0.2728	102.5%	94	114				
m,p-Xylene	80.41	1	80	0	100.5%	92	111				
Methyl tert-Butyl Ether	39.52	1	40	0.3639	97.9%	91	112				
o-Xylene	42.36	0.5	40	0	105.9%	97	112				
Toluene	41.24	0.5	40	0.1163	102.8%	95	111				

Sample ID: LCS WATER	Batch ID: GC-1_010923	Test Code: SW8021B	Units: µg/L	Analysis Date 9/23/2001	Prep Date:						
Client ID:	0109027	Run ID: GC-1_010923A		SeqNo: 42595							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	42.24	0.5	40	0.0422	105.5%	92	113				
Ethylbenzene	42.53	0.5	40	0	106.3%	94	114				
m,p-Xylene	83.42	1	80	0	104.3%	92	111				
Methyl tert-Butyl Ether	39.69	1	40	0	99.2%	91	112				
o-Xylene	42.37	0.5	40	0	105.9%	97	112				
Toluene	41.99	0.5	40	0.1251	104.7%	95	111				

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.

CLIENT: On Site Technologies Limited
Work Order: 0109027
Project: 2-1363; Conoco Nell-Hall #1

Date: 26-Sep-01

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0107		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L		Analysis Date 9/22/2001		Prep Date:
Client ID: 0109027		Run ID: GC-1_010922A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	41.8		0.5	40	0	104.5%	85	115
Ethylbenzene	42.32		0.5	40	0	105.8%	85	115
m,p-Xylene	83.15		1	80	0	103.9%	85	115
Methyl tert-Butyl Ether	39.41		1	40	0	98.5%	85	115
o-Xylene	42.33		0.5	40	0	105.8%	85	115
Toluene	41.76		0.5	40	0	104.4%	85	115
1,4-Difluorobenzene	113.2		0	120	0	94.3%	77	112
4-Bromochlorobenzene	125.9		0	120	0	105.0%	88	116
Fluorobenzene	113.5		0	120	0	94.6%	87	102

Sample ID: CCV2 BTEX_0107		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L		Analysis Date 9/22/2001		Prep Date:
Client ID: 0109027		Run ID: GC-1_010922A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	42.04		0.5	40	0	105.1%	85	115
Ethylbenzene	42.31		0.5	40	0	105.8%	85	115
m,p-Xylene	82.9		1	80	0	103.6%	85	115
Methyl tert-Butyl Ether	40.34		1	40	0	100.9%	85	115
o-Xylene	42.2		0.5	40	0	105.5%	85	115
Toluene	41.86		0.5	40	0	104.6%	85	115
1,4-Difluorobenzene	113.5		0	120	0	94.6%	77	112
4-Bromochlorobenzene	125.3		0	120	0	104.4%	88	116
Fluorobenzene	114.2		0	120	0	95.1%	87	102

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: 0109027

Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0107		Batch ID: GC-1_010922	Test Code: SW8021B	Units: µg/L	Analysis Date 9/22/2001		Prep Date:				
Client ID:		0109027	Run ID: GC-1_010922A		SeqNo: 42582						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.48	0.5	40	0	101.2%	85	115				
Ethylbenzene	40.59	0.5	40	0	101.5%	85	115				
m,p-Xylene	79.53	1	80	0	99.4%	85	115				
Methyl tert-Butyl Ether	40.1	1	40	0	100.3%	85	115				
o-Xylene	40.82	0.5	40	0	102.1%	85	115				
Toluene	40.26	0.5	40	0	100.6%	85	115				
1,4-Difluorobenzene	113	0	120	0	94.2%	77	112				
4-Bromochlorobenzene	126.3	0	120	0	105.2%	88	116				
Fluorobenzene	114.2	0	120	0	95.2%	87	102				

Sample ID: CCV1 BTEX_0109		Batch ID: GC-1_010923		Test Code: SW8021B		Units: µg/L		Analysis Date 9/23/2001		Prep Date:	
Client ID:		0109027		Run ID: GC-1_010923A				SeqNo: 42593			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	40.18	0.5	40	0	100.5%	85	115				
Ethylbenzene	40.44	0.5	40	0	101.1%	85	115				
m,p-Xylene	79.25	1	80	0	99.1%	85	115				
Methyl tert-Butyl Ether	37.8	1	40	0	94.5%	85	115				
o-Xylene	40.29	0.5	40	0	100.7%	85	115				
Toluene	39.92	0.5	40	0	99.8%	85	115				
1,4-Difluorobenzene	113.5	0	120	0	94.6%	77	112				
4-Bromochlorobenzene	127.1	0	120	0	105.9%	88	116				
Fluorobenzene	114.8	0	120	0	95.6%	87	102				

Qualifiers:

NID - 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: 0109027
 Project: 2-1363; Conoco Nell-Hall #1

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0109		Batch ID: GC-1_010923	Test Code: SW8021B	Units: µg/L		Analysis Date 9/23/2001		Prep Date:	
Client ID: 0109027		Run ID: GC-1_010923A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 42594
Analyte	Result								
Benzene	40.86		0.5	40	0	102.2%	85	115	
Ethylbenzene	41.15		0.5	40	0	102.9%	85	115	
m,p-Xylene	80.56		1	80	0	100.7%	85	115	
Methyl tert-Butyl Ether	39.41		1	40	0	98.5%	85	115	
o-Xylene	41		0.5	40	0	102.5%	85	115	
Toluene	40.69		0.5	40	0	101.7%	85	115	
1,4-Difluorobenzene	113.5		0	120	0	94.6%	77	112	
4-Bromochlorobenzene	126.7		0	120	0	105.6%	88	116	
Fluorobenzene	114.7		0	120	0	95.6%	87	102	

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: 0109027
Project: 2-1363; Conoco Nell-Hall #1
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0109001-01A	96	108	97.5
0109023-09A	95.4	105	96.4
0109023-09AMS	94.8	105	95
0109023-09AMSD	99	110	95.6
0109025-09A	95.9	106	96.9
0109025-10A	95.7	112	96.6
0109025-11A	94	98.8	93.1
0109025-11AMS	90.2	104	93.7
0109025-11AMSD	90.6	101	96.9
0109025-12A	97.7	104	100
0109025-13A	95.7	107	96.2
0109026-01A	92.8	108	94.8
0109026-02A	91.6	101	93.5
0109026-03A	95.5	107	97
0109027-01A	96	104	96.9
0109027-02A	95.6	105	96.7
0109027-03A	91.9	105	93.7
0109027-04A	92.5	106	93.6
0109028-01A	89.6	104	90.8
0109030-12A	95.8	105	97
0109030-19A	96.3	106	96.9
CCV1 BTEX_01070	94.3	105	94.6
CCV1 BTEX_01092	94.6	106	95.6
CCV2 BTEX_01070	94.6	104	95.1
CCV2 BTEX_01092	94.6	106	95.6
CCV3 BTEX_01070	94.2	105	95.2
LCS WATER	94.6	106	95.5

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	77-112
4BCBZ	= 4-Bromochlorobenzene	88-116
FLBZ	= Fluorobenzene	87-102

* Surrogate recovery outside acceptance limits

CLIENT: On Site Technologies Limited
Work Order: 0109027
Project: 2-1363; Conoco Nell-Hall #1
Test No: SW8021B

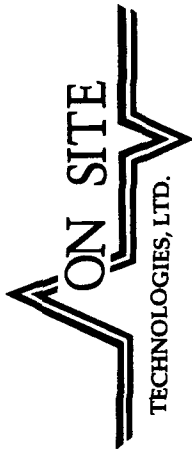
**QC SUMMARY REPORT
SURROGATE RECOVERIES**

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
MB1	95.6	104	97

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	77-112
4BCBZ	= 4-Bromochlorobenzene	88-116
FLBZ	= Fluorobenzene	87-102

* Surrogate recovery outside acceptance limits



CHAIN OF CUSTODY RECORD

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

Date: 1/26/01

Page: 1 of 1

Purchase Order No.:		Project No.:		Name: <u>AlphaGraphics</u>		Title:																	
SEND INVOICE TO		Company:		Company:																			
		Dept.:		Mailing Address:																			
		Address:		City, State, Zip:																			
		City, State, Zip:		Telephone No.:		Telefax No.:																	
PROJECT LOCATION:				ANALYSIS REQUESTED																			
SAMPLER'S SIGNATURE:				LAB ID																			
SAMPLE IDENTIFICATION																							
DATE								TIME				MATRIX				PRES.							
Relinquished by:				Date/Time				Received by:				Date/Time											
Relinquished by:				Date/Time				Received by:				Date/Time											
Relinquished by:				Date/Time				Received by:				Date/Time											
Method of Shipment:								Rush				24-48 Hours				10 Working Days				By Date			
Authorized by:				Date				Special Instructions / Remarks:															
(Client Signature Must Accompany Request)																							