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REPORTS

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ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

February 26, 2001

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

RE: 2000 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 2000, 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 2000 ACTIVITIES:

Ground water sampling events were conducted in March, June, September of 2000 and January 2001. Samples were not taken during the March 2000 and January 2001 sampling event, 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 2000, along with all laboratory QA/QC documentation and chains-of-custody, are attached with this report.

SUMMARY AND CONCLUSIONS:

The following conclusions are based on the 2000 ground water monitoring results and trends associated with a former production pit at the Nell-Hall #1 well location:

1. MW-1 and SP-7 continue to show BTEX contamination levels above the New Mexico Water Quality Control Commission (NMWQCC) standards.

PO Box 2606
Farmington, NM 87499

505-325-5667

FAX: 505-327-1496

2. BTEX contamination of ground water fluctuates with the fluctuation of the ground water elevation.
3. The ground water during 2000 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 2000. 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 Myke Lane or Larry Trujillo at On Site Technologies, (505) 325-5667. Thank you for your consideration.

Respectfully submitted,

Reviewed by:



Larry Trujillo, C.H.M.M.
Project Manager



Michael K. Lane, P.E.
Senior Engineer

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, 4, 5 Ground Water Potentiometric Map
Laboratory Results, QA/QC, Chain of Custody

Acknowledgment:
CONOCO, Inc.

Dany Ledwith Shear Specialist
(Name/Title)
2/27/01
(Date)

LET/let: 41363-99.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

BGS - approximate measurements taken as Below Ground Surface
 BTOC - Below Top of Casing
 NNM - 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	

BGS - approximate measurements taken as Below Ground Surface
BTOC - Below Top of Casing
NM - Not Measured
NMW - 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)
MW#3	97.48	27.03	2"PVC	17.03 to 27.03	03/27/97	NMW	
RESURVEY	97.88				08/07/97	20.02	77.46
6/16/98					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	

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

Table1
Groundwater Level SUMMARY
Neill-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
SP 4	96.03	25.36	2" PVC	15.36 to 25.36	01/23/00	NMW	
					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	

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

Table 1

BBGS - approximate measurements taken as Below Ground Surface
BTOC - Below Top of Casing
NNM - Not Measured
NNW - No Measurable Water

Table 1

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
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
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
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	MA#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
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0

BDL: Below Detection Limits

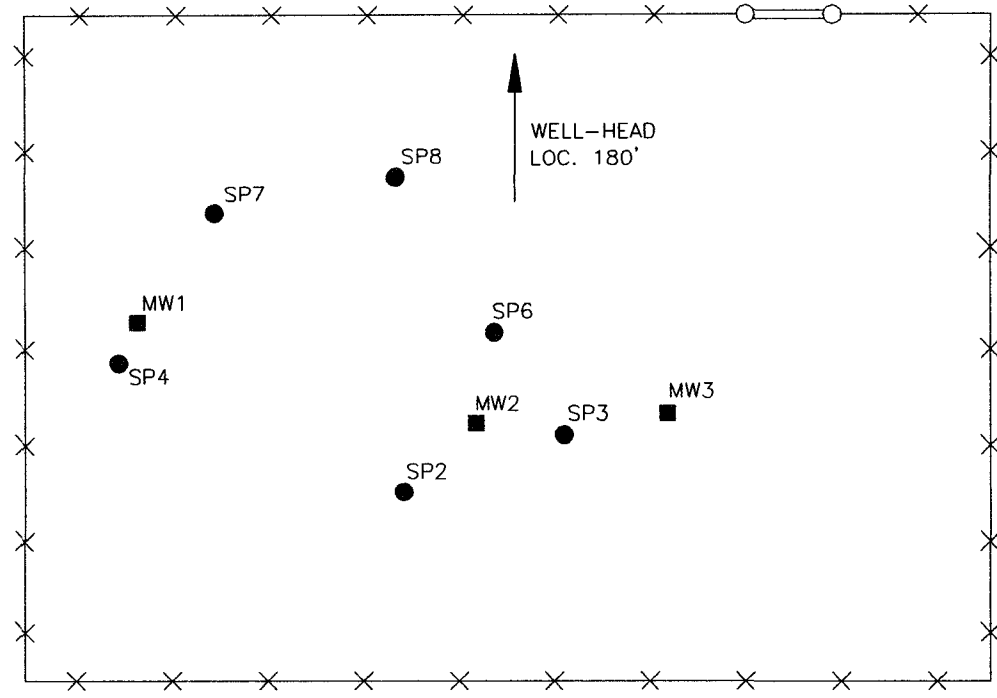
Note: No samples taken during the December 30, 1998 sampling event

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

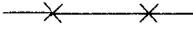
Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total Xylene
9/28/998	9809078-06A	SP#7	On Site Lab.	120.0	19.0	15.0	3300.0
6/16/99	9906061-03A			200.0	40.0	240.0	7313.0
9/15/99	9909057-03A			140.0	19.0	260.0	5110.0
6/5/00	0006012-01A			68.0	BDL	220.0	3900.0
9/11/00	0009019-03A			71.0	11.0	72.0	1500.0
6/5/00	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
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.



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

APPROVED:

DRWN BY: MED

CHK'D BY:

PROJECT NO: 2-1363

DATE:

DATE: 2/23/01

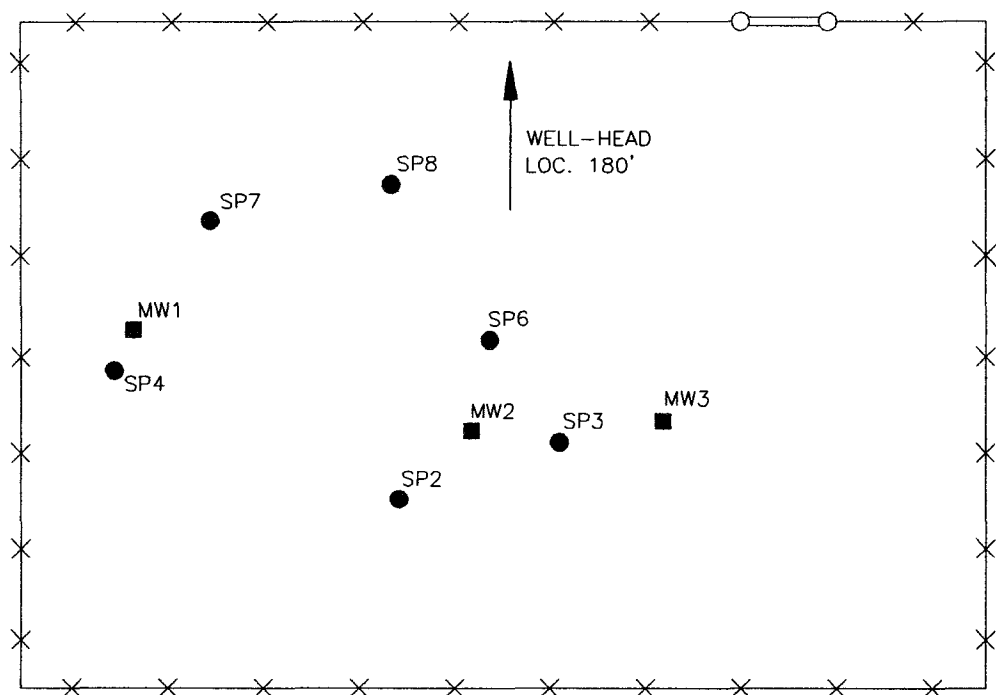
DATE:

SHEET: 1 OF 5

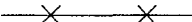
SITE MAP

NELL HALL #1

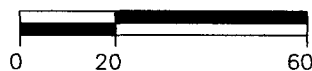
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LEGEND

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

SCALE (feet)



NOTE:
SP#1 REMOVED.

NO MEASURABLE WATER LEVELS
RECORDED AT TIME OF WELL READINGS.

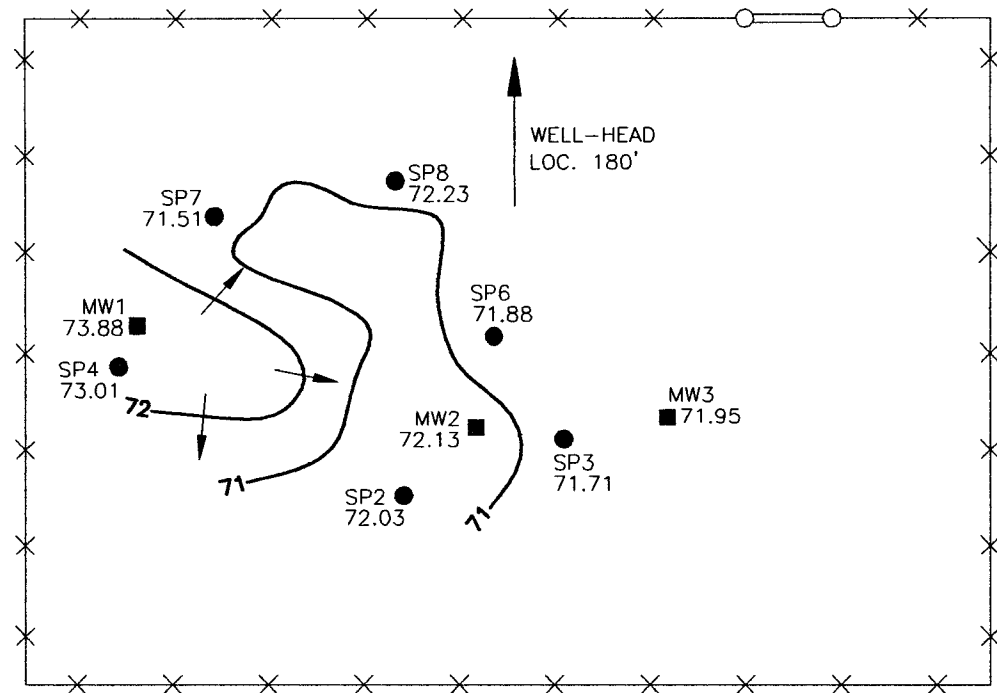


612 E. MURRAY DR. PH. (505) 327-1072
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APPROVED:	DATE:
DRWN BY: MED	DATE: 2/23/01
CHK'D BY:	DATE:
PROJECT NO: 2-1363	SHEET: 2 OF 5

GROUND WATER POTENTIOMETER MAP
MARCH, 2000
NELL HALL #1

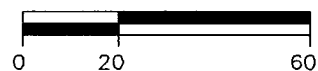
21363NH02.dwg



LEGEND

- MW3 MONITORING WELL LOCATION
- SP3 SPARGE POINT LOCATION
- X—X— FENCE
- 72— 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:

PROJECT NO: 2-1363

DATE:

DATE: 2/23/01

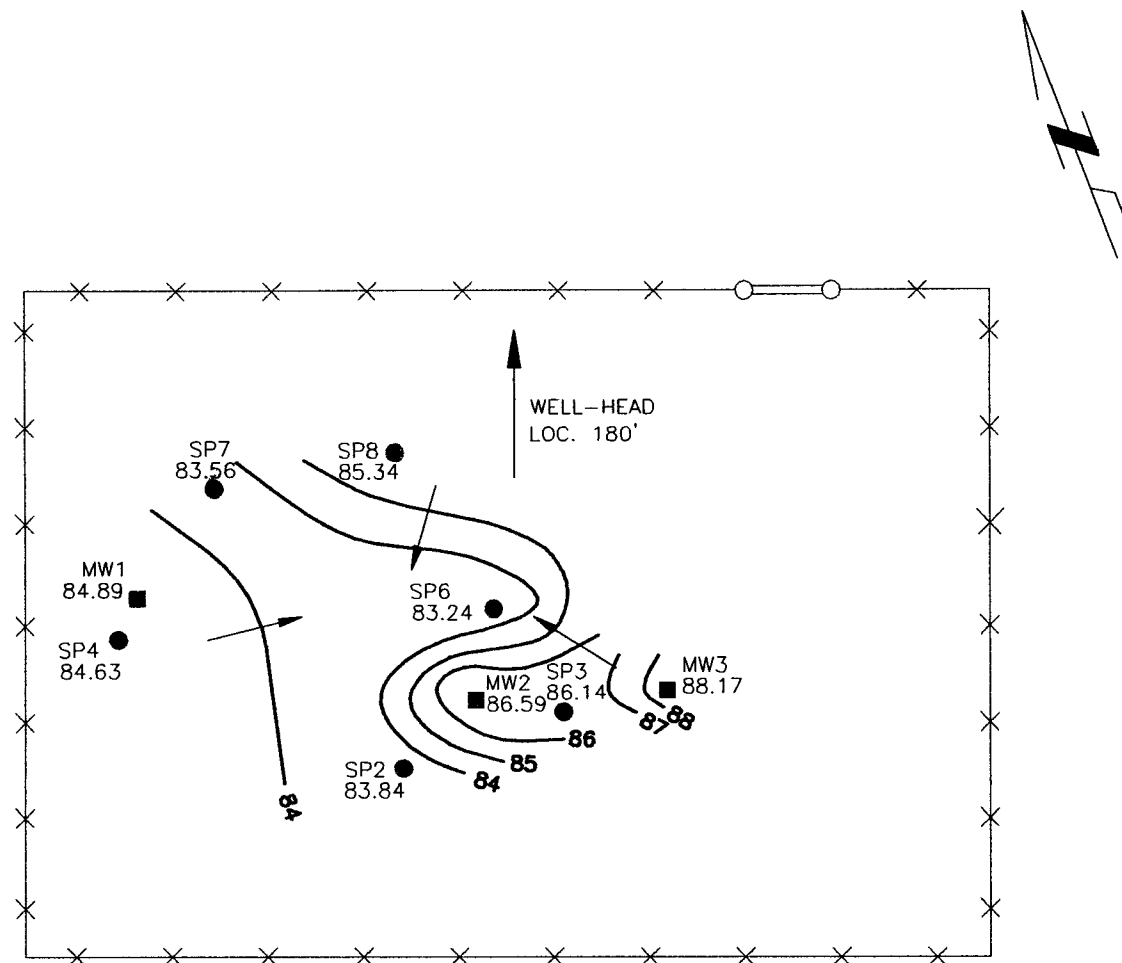
DATE:

SHEET: 3 OF 5

GROUND WATER POTENTIOMETER MAP
JUNE, 2000

NELL HALL #1

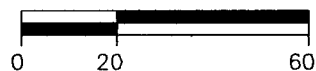
21363NH03.dwg



LEGEND

- MW3 MONITORING WELL LOCATION
- SP3 SPARGE POINT LOCATION
- x—x— FENCE
- 86— 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:

PROJECT NO: 2-1363

DATE:

DATE: 2/23/01

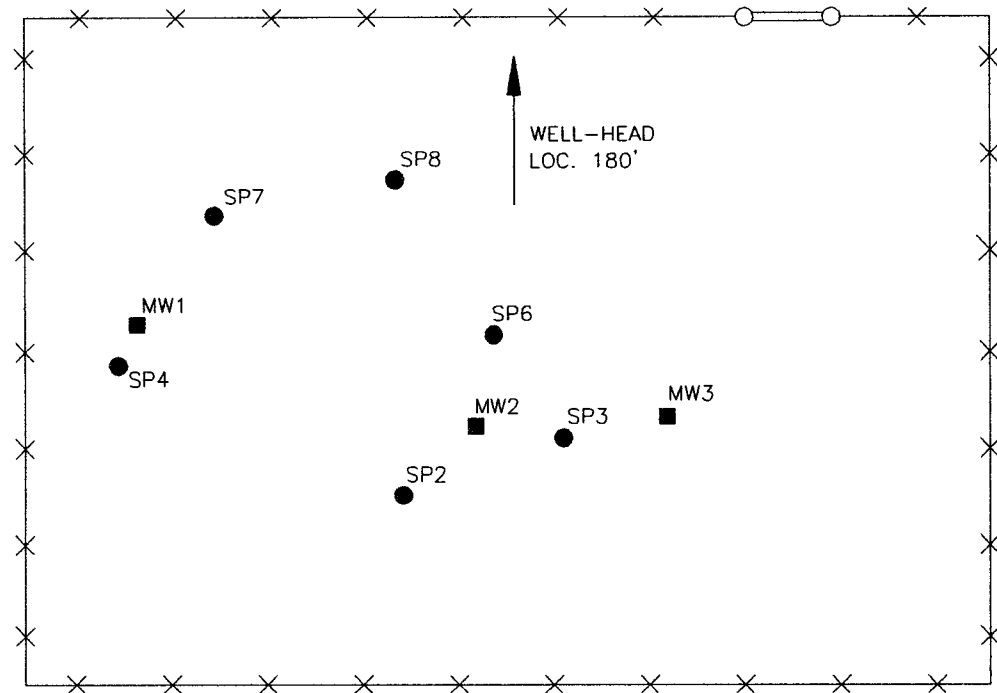
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SHEET: 4 OF 5

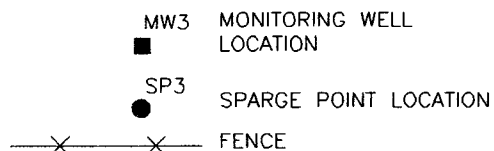
GROUND WATER POTENTIOMETER MAP
SEPTEMBER, 2000

NELL HALL #1

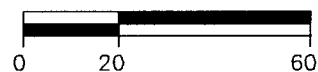
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LEGEND



SCALE (feet)



NOTE:

SP#1 REMOVED.

NO MEASURABLE WATER LEVELS
RECORDED AT TIME OF WELL READINGS.



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FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:

DRWN BY: MED

CHK'D BY:

PROJECT NO: 2-1363

DATE:

DATE: 2/23/01

DATE:

SHEET: 5 OF 5

GROUND WATER POTENTIOMETER MAP
JANUARY, 2001

NELL HALL #1

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



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

September 25, 2000

Larry Trujillo
Conoco, Inc.
3315 Bloomfield Hwy
Farmington, NM 87401
TEL: (505) 327-9557
FAX (505) 324-5825

RE: Nell Hall; 2-1363

Order No.: 0009019

Dear Larry Trujillo,

On Site Technologies, LTD. received 4 samples on 9/11/2000 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 read "David 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: 25-Sep-00

CLIENT: Conoco, Inc.
Project: Nell Hall; 2-1363
Lab Order: 0009019

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).

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



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

ANALYTICAL REPORT

Date: 25-Sep-00

Client:	Conoco, Inc.	Client Sample Info:	Nell Hall
Work Order:	0009019	Client Sample ID:	SP-6
Lab ID:	0009019-01A	Matrix:	AQUEOUS
Project:	Nell Hall; 2-1363	Collection Date:	9/11/2000 9:15:00 AM
		COC Record:	10916

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Benzene	0.6	0.5		µg/L	1	9/18/2000
Toluene	ND	0.5		µg/L	1	9/18/2000
Ethylbenzene	12	0.5		µg/L	1	9/18/2000
m,p-Xylene	26	1		µg/L	1	9/18/2000
o-Xylene	0.6	0.5		µg/L	1	9/18/2000

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

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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: 25-Sep-00

Client:	Conoco, Inc.	Client Sample Info:	Nell Hall
Work Order:	0009019	Client Sample ID:	SP-8
Lab ID:	0009019-02A	Matrix:	AQUEOUS
Project:	Nell Hall; 2-1363	Collection Date:	9/11/2000 9:25:00 AM
		COC Record:	10916

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID						
		SW8021B				Analyst: DM
Benzene	ND	0.5		µg/L	1	9/19/2000
Toluene	ND	0.5		µg/L	1	9/19/2000
Ethylbenzene	3	0.5		µg/L	1	9/19/2000
m,p-Xylene	36	1		µg/L	1	9/19/2000
o-Xylene	ND	0.5		µg/L	1	9/19/2000

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

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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: 25-Sep-00

Client:	Conoco, Inc.	Client Sample Info:	Nell Hall
Work Order:	0009019	Client Sample ID:	SP-7
Lab ID:	0009019-03A	Matrix:	AQUEOUS
Project:	Nell Hall; 2-1363	Collection Date:	9/11/2000 9:35:00 AM
		COC Record:	10916

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	71	5		µg/L	10	9/18/2000
Toluene	11	5		µg/L	10	9/18/2000
Ethylbenzene	72	5		µg/L	10	9/18/2000
m,p-Xylene	1500	10		µg/L	10	9/18/2000
o-Xylene	ND	5		µg/L	10	9/18/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- 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: 25-Sep-00

Client:	Conoco, Inc.	Client Sample Info:	Nell Hall
Work Order:	0009019	Client Sample ID:	MW-1
Lab ID:	0009019-04A	Matrix:	AQUEOUS
Project:	Nell Hall; 2-1363	Collection Date:	9/11/2000 9:45:00 AM
		COC Record:	10916

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	46	5		µg/L	10	9/18/2000
Toluene	12	5		µg/L	10	9/18/2000
Ethylbenzene	19	5		µg/L	10	9/18/2000
m,p-Xylene	600	10		µg/L	10	9/18/2000
o-Xylene	ND	5		µg/L	10	9/18/2000

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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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 25-Sep-00

CLIENT: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000	Prep Date:
Client ID:	0009019	Run ID: GC-1_000918A		SeqNo: 31258	
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	.0826	0.5			J

Sample ID: MB1	Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000	Prep Date:
Client ID:	0009019	Run ID: GC-1_000919A		SeqNo: 31270	
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	.2295	1			J
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1539	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: 25-Sep-00

CLIENT: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009019-04AMS	Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000	Prep Date:
Client ID: MW-1	Run ID: 0009019	PQL	SPK value	SeqNo: 31259	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	437	5	46.21	88	112
Ethylbenzene	425.2	5	19.04	86	113
m,p-Xylene	1386	10	604.1	85	108
Methyl tert-Butyl Ether	430.5	10	0	86	117
o-Xylene	439.2	5	1.64	92	110
Toluene	414.6	5	11.6	88	116

Sample ID: 0009019-04AMS	Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000	Prep Date:
Client ID: MW-1	Run ID: 0009019	PQL	SPK value	SeqNo: 31260	
Analyte	Result		SPK Ref Val	LowLimit	HighLimit
Benzene	433.4	5	46.21	88	112
Ethylbenzene	422.3	5	19.04	86	113
m,p-Xylene	1380	10	604.1	85	108
Methyl tert-Butyl Ether	434.2	10	0	86	117
o-Xylene	426.5	5	1.64	92	110
Toluene	410.6	5	11.6	88	116

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: Conoco, Inc.

Work Order: 0009019

Project: Nell Hall; 2-1363

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0009018-01AMS		Batch ID: GC-1_000919		Test Code: SW8021B		Units: µg/L		Analysis Date 9/19/2000		Prep Date:	
Client ID:		0009019		Run ID:		GC-1_000919A		SeqNo: 31271			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	210.6	2.5	200	23	93.8%	88	112				
Ethylbenzene	297.7	2.5	200	100	98.9%	86	113				
m,p-Xylene	965.9	5	400	590	94.0%	85	108				
Methyl tert-Butyl Ether	210.1	5	200	10	100.1%	86	117				
o-Xylene	249.5	2.5	200	62	93.7%	92	110				
Toluene	205.3	2.5	200	0	102.6%	88	116				

Sample ID: 0009018-01AMSD		Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000		Prep Date:				
Client ID: 0009019		Run ID: GC-1_000919A			SeqNo: 31272						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	206.7	2.5	200	23	91.9%	88	112	210.6	1.8%	6	
Ethylbenzene	293.5	2.5	200	100	96.8%	86	113	297.7	1.4%	6	
m,p-Xylene	952.2	5	400	590	90.5%	85	108	965.9	1.4%	6	
Methyl tert-Butyl Ether	215.2	5	200	10	102.6%	86	117	210.1	2.4%	7	
o-Xylene	247.1	2.5	200	62	92.6%	92	110	249.5	1.0%	6	
Toluene	203.3	2.5	200	0	101.7%	88	116	205.3	1.0%	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: 25-Sep-00

CLIENT: Conoco, Inc.
Work Order: 0009019
Project: Neil Hall; 2-1363

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000		Prep Date:
Client ID:		0009019	Run ID: GC-1_000918A		SeqNo: 31257		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	39.98	0.5	40	0	99.9%	96	111
Ethylbenzene	40.95	0.5	40	0	102.4%	96	111
m,p-Xylene	80.24	1	80	0	100.3%	92	105
Methyl tert-Butyl Ether	42.47	1	40	0	106.2%	93	113
o-Xylene	40.15	0.5	40	0	100.4%	97	110
Toluene	39.83	0.5	40	0.0826	99.4%	97	109

Sample ID: LCS WATER		Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000		Prep Date:
Client ID:		0009019	Run ID: GC-1_000919A		SeqNo: 31269		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Benzene	40.11	0.5	40	0	100.3%	96	111
Ethylbenzene	40.97	0.5	40	0	102.4%	96	111
m,p-Xylene	80.3	1	80	0.2295	100.1%	92	105
Methyl tert-Butyl Ether	42.17	1	40	0	105.4%	93	113
o-Xylene	39.99	0.5	40	0	100.0%	97	110
Toluene	39.95	0.5	40	0.1539	99.5%	97	109

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: 25-Sep-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

CLIENT: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000				Prep Date:		
Client ID: 0009019		Run ID:	GC-1_000918A		SeqNo:	31254					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.06	0.5	20	0	105.3%	85	115				
Ethylbenzene	21.53	0.5	20	0	107.7%	85	115				
m,p-Xylene	42.36	1	40	0	105.9%	85	115				
Methyl tert-Butyl Ether	22.51	1	20	0	112.5%	85	115				
o-Xylene	21.37	0.5	20	0	106.9%	85	115				
Toluene	20.98	0.5	20	0	104.9%	85	115				
1,4-Difluorobenzene	86.05	0	100	0	86.0%	79	101				
4-Bromochlorobenzene	91.15	0	100	0	91.2%	78	99				
Fluorobenzene	84.39	0	100	0	84.4%	76	103				

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000918	Test Code: SW8021B	Units: µg/L	Analysis Date 9/18/2000				Prep Date:		
Client ID:		Run ID:	GC-1_000918A			SeqNo:	31255				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.19	0.5	20	0	100.9%	85	115				
Ethylbenzene	20.48	0.5	20	0	102.4%	85	115				
m,p-Xylene	40.61	1	40	0	101.5%	85	115				
Methyl tert-Butyl Ether	22.19	1	20	0	111.0%	85	115				
o-Xylene	20.32	0.5	20	0	101.6%	85	115				
Toluene	20.12	0.5	20	0	100.6%	85	115				
1,4-Difluorobenzene	85.97	0	100	0	86.0%	79	101				
4-Bromochlorobenzene	89.68	0	100	0	89.7%	78	99				
Fluorobenzene	84.58	0	100	0	84.6%	76	103				

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: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363

QC SUMMARY REPORT
 Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0007		Batch ID: GC-1_000918		Test Code: SW8021B		Units: µg/L		Analysis Date 9/18/2000		Prep Date:	
Client ID: 0009019		Run ID: GC-1_000918A		SeqNo: 31256							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.84	0.5	40	0	97.1%	85	115				
Ethylbenzene	39.44	0.5	40	0	98.6%	85	115				
m,p-Xylene	77.84	1	80	0	97.3%	85	115				
Methyl tert-Butyl Ether	42.93	1	40	0	107.3%	85	115				
o-Xylene	38.89	0.5	40	0	97.2%	85	115				
Toluene	38.87	0.5	40	0	97.2%	85	115				
1,4-Difluorobenzene	86.1	0	100	0	86.1%	79	101				
4-Bromochlorobenzene	90	0	100	0	90.0%	78	99				
Fluorobenzene	84.12	0	100	0	84.1%	76	103				

Sample ID: CCV1 BTEX_0007		Batch ID: GC-1_000919		Test Code: SW8021B		Units: µg/L		Analysis Date 9/19/2000		Prep Date:	
Client ID: 0009019		Run ID: GC-1_000919A		SeqNo: 31267							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.4	0.5	20	0	102.0%	85	115				
Ethylbenzene	20.8	0.5	20	0	104.0%	85	115				
m,p-Xylene	40.95	1	40	0	102.4%	85	115				
Methyl tert-Butyl Ether	21.31	1	20	0	106.5%	85	115				
o-Xylene	20.47	0.5	20	0	102.3%	85	115				
Toluene	20.26	0.5	20	0	101.3%	85	115				
1,4-Difluorobenzene	86.08	0	100	0	86.1%	79	101				
4-Bromochlorobenzene	91.44	0	100	0	91.4%	78	99				
Fluorobenzene	84.14	0	100	0	84.1%	76	103				

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: Conoco, Inc.

Work Order: 0009019

Project: Nell Hall; 2-1363

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0007		Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000			Prep Date:			
Client ID:		0009019	Run ID:	GC-1_000919A	SeqNo:	31268					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.01	0.5	20	0	100.0%	85	115				
Ethylbenzene	20.4	0.5	20	0	102.0%	85	115				
m,p-Xylene	40.16	1	40	0	100.4%	85	115				
Methyl tert-Butyl Ether	21.15	1	20	0	105.8%	85	115				
o-Xylene	20.09	0.5	20	0	100.4%	85	115				
Toluene	19.88	0.5	20	0	99.4%	85	115				
1,4-Difluorobenzene	86.42	0	100	0	86.4%	79	101				
4-Bromochlorobenzene	87.47	0	100	0	87.5%	78	99				
Fluorobenzene	83.99	0	100	0	84.0%	76	103				

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: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0009016-03A	83.8	88	86.2
0009017-01A	85.9	88.3	84.3
0009018-01A	81.2	86.8	80.5
0009018-01AMS	80.4	89	79
0009018-01AMSD	80.4	89.8	79.6
0009019-01A	86.3	94.2	84.8
0009019-02A	87.3	90.9	85.5
0009019-03A	85.8	90.1	85.6
0009019-04A	85.6	89.6	84.4
0009019-04AMS	84.6	91.1	83
0009019-04AMSD	85.6	91.2	84.4
0009020-01A	86.5	91.6	84.6
0009020-02A	86.5	91.3	84.5
0009020-03A	84.6	92.7	82.4
0009021-01A	86.3	91.4	84.8
0009021-02A	87	89.4	84.8
0009021-03A	86.3	91	85.3
0009021-04A	87.1	89.8	85.1
0009021-05A	86.4	89.7	85.3
0009021-06A	86.3	90.8	84.2
0009021-07A	85.8	89.2	84.1
0009024-01A	85.7	89	84.4
0009024-02A	82.4	88.7	80.4
0009024-03A	85	89.2	83
0009026-01A	86.4	91.9	84.8
0009026-02A	85.4	90.2	83.2
0009026-03A	87.5	88.3	85.2

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* Surrogate recovery outside acceptance limits

CLIENT: Conoco, Inc.
Work Order: 0009019
Project: Nell Hall; 2-1363
Test No: SW8021B

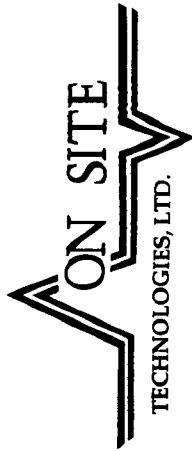
QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
CCV1 BTEX_00070	86.1	91.4	84.1
CCV2 BTEX_00070	86.4	87.5	84
CCV3 BTEX_00070	86.1	90	84.1
LCS WATER	85.6	92.2	84.1
MB1	86.1	91.3	84.8

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	79-101
4BCBZ	= 4-Bromochlorobenzene	78-99
FLBZ	= Fluorobenzene	76-103

* 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: _____

Page: _____ of _____

Purchase Order No.:		Project No. 87499		Name _____ Title _____	
SEND INVOICE TO		Company _____ Dept. _____		Company _____	
Address _____		City, State, Zip _____		Mailing Address _____	
City, State, Zip _____		Telephone No. _____		City, State, Zip _____	
PROJECT LOCATION: N.H. Hall		SAMPLER'S SIGNATURE: [Signature]		Telephone No. _____	
SAMPLE IDENTIFICATION		DATE		ANALYSIS REQUESTED	
TIME		MATRIX		LAB ID	
PRES.					
Relinquished by: [Signature]		Date/Time: 10/1/01		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: 10/1/01		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: 10/1/01		Received by: [Signature]	
Method of Shipment:		Rush		24-48 Hours	
		10 Working Days		By Date	
Authorized by: _____		Date: _____		Special Instructions / Remarks:	
(Client Signature <u>Must</u> Accompany Request)					

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



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

June 20, 2000

Larry Trujillo
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; Nell Hall

Order No.: 0006012

Dear Larry Trujillo,

On Site Technologies, LTD. received 3 samples on 6/5/2000 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 "D 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: 20-Jun-00

CLIENT: On Site Technologies Limited
Project: 2-1363; Nell Hall
Lab Order: 0006012

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).

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

ANALYTICAL REPORT

Date: 21-Jun-00

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0006012	Client Sample ID:	SP-7
Lab ID:	0006012-01A	Matrix:	AQUEOUS
Project:	2-1363; Nell Hall	Collection Date:	6/5/2000 1:20:00 PM
		COC Record:	10730

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	68	25		µg/L	50	6/11/2000
Toluene	ND	25		µg/L	50	6/11/2000
Ethylbenzene	220	25		µg/L	50	6/11/2000
m,p-Xylene	3900	50		µg/L	50	6/11/2000
o-Xylene	ND	25		µg/L	50	6/11/2000

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 1

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0006012	Client Sample ID:	MW-1
Lab ID:	0006012-02A	Matrix:	AQUEOUS
Project:	2-1363; Nell Hall	Collection Date:	6/5/2000 1:45:00 PM
		COC Record:	10730

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DC		
Benzene	100	5		µg/L	10	6/11/2000
Toluene	16	5		µg/L	10	6/11/2000
Ethylbenzene	120	5		µg/L	10	6/11/2000
m,p-Xylene	3000	10		µg/L	10	6/11/2000
o-Xylene	7.2	5		µg/L	10	6/11/2000

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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

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

ANALYTICAL REPORT

Date: 20-Jun-00

Client:	On Site Technologies Limited	Client Sample Info:	Nell Hall
Work Order:	0006012	Client Sample ID:	SP-8
Lab ID:	0006012-03A	Matrix:	AQUEOUS
Project:	2-1363; Nell Hall	Collection Date:	6/5/2000 2:00:00 PM
		COC Record:	10730

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	16	0.5		µg/L	1	6/12/2000
Toluene	ND	0.5		µg/L	1	6/12/2000
Ethylbenzene	31	0.5		µg/L	1	6/12/2000
m,p-Xylene	170	1		µg/L	1	6/12/2000
o-Xylene	ND	0.5		µg/L	1	6/12/2000

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

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- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 20-Jun-00

CLIENT: On Site Technologies Limited
 Work Order: 0006012
 Project: 2-1363; Nell Hall

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000	Prep Date:
Client ID:	0006012	Run ID: GC-1_000611A		SeqNo: 28499	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0637	0.5			J
Ethylbenzene	.0623	0.5			J
m,p-Xylene	.1196	1			J
Methyl tert-Butyl Ether	ND	1			J
o-Xylene	.0999	0.5			J
Toluene	.1549	0.5			J

Sample ID: MB1	Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000	Prep Date:
Client ID:	0006012	Run ID: GC-1_000612A		SeqNo: 28526	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0396	0.5			J
Ethylbenzene	.0711	0.5			J
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0739	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.

CLIENT: On Site Technologies Limited
Work Order: 0006012
Project: 2-1363; Nell Hall

Date: 20-Jun-00

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006013-03AMS		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000		Prep Date:				
Client ID:		0006012	Run ID:	GC-1_000611A	SeqNo:	28500					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	6433	50	4000	2368	101.6%	73	126				
Ethylbenzene	4675	50	4000	678.8	99.9%	88	113				
m,p-Xylene	10100	100	8000	2226	98.5%	83	112				
Methyl tert-Butyl Ether	4145	100	4000	258.9	97.2%	81	125				
o-Xylene	4492	50	4000	438.8	101.3%	93	110				
Toluene	6509	50	4000	2430	102.0%	76	126				

Sample ID: 0006013-03AMSD		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000		Prep Date:			
Client ID:		0006012	Run ID:	GC-1_000611A	SeqNo:	28501				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit	Qual
Benzene	6267	50	4000	2368	97.5%	73	126	6433	2.6%	6
Ethylbenzene	4556	50	4000	678.8	96.9%	88	113	4675	2.6%	5
m,p-Xylene	9862	100	8000	2226	95.4%	83	112	10100	2.4%	7
Methyl tert-Butyl Ether	4095	100	4000	258.9	95.9%	81	125	4145	1.2%	9
o-Xylene	4403	50	4000	438.8	99.1%	93	110	4492	2.0%	6
Toluene	6349	50	4000	2430	98.0%	76	126	6509	2.5%	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

CLIENT: On Site Technologies Limited
Work Order: 0006012
Project: 2-1363; Nell Hall

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006020-02AMS		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:	
Client ID: 0006012		Run ID: GC-1_000612A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPD Ref Val	%RPD
Benzene	205.6	2.5	200	13	96.3%	73	126	
Ethylbenzene	187.4	2.5	200	9	89.2%	88	113	
m,p-Xylene	402.1	5	400	20	95.5%	83	112	
Methyl tert-Butyl Ether	208.2	5	200	2	103.1%	81	125	
o-Xylene	207.5	2.5	200	11	98.2%	93	110	
Toluene	206.7	2.5	200	10	98.3%	76	126	

Sample ID: 0006020-02AMS		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000		Prep Date:	
Client ID: 0006012		Run ID: GC-1_000612A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result						RPD Ref Val	%RPD
Benzene	204	2.5	200	13	95.5%	73	126	
Ethylbenzene	182.8	2.5	200	9	86.9%	88	113	
m,p-Xylene	397.9	5	400	20	94.5%	83	112	
Methyl tert-Butyl Ether	211.9	5	200	2	105.0%	81	125	
o-Xylene	209	2.5	200	11	99.0%	93	110	
Toluene	205.1	2.5	200	10	97.6%	76	126	

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: 20-Jun-00

CLIENT: On Site Technologies Limited
 Work Order: 0006012
 Project: 2-1363; Nell Hall

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/11/2000		Prep Date:				
Client ID:		0006012	Run ID: GC-1_000611A		SeqNo: 28498						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41	0.5	40	0.0637	102.3%	89	112				
Ethylbenzene	40.91	0.5	40	0.0623	102.1%	93	112				
m,p-Xylene	80.6	1	80	0.1196	100.6%	88	108				
Methyl tert-Butyl Ether	41.85	1	40	0	104.6%	87	115				
o-Xylene	41.25	0.5	40	0.0999	102.9%	93	112				
Toluene	41.21	0.5	40	0.1549	102.6%	92	111				

Sample ID: LCS WATER		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000				Prep Date:		
Client ID:		0006012	Run ID: GC-1_000612A		SeqNo: 28525						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.93	0.5	40	0.0396	99.7%	89	112				
Ethylbenzene	40.45	0.5	40	0.0711	100.9%	93	112				
m,p-Xylene	78.29	1	80	0	97.9%	88	108				
Methyl tert-Butyl Ether	39.47	1	40	0	98.7%	87	115				
o-Xylene	40.59	0.5	40	0	101.5%	93	112				
Toluene	40.4	0.5	40	0.0739	100.8%	92	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: 0006012
 Project: 2-1363; Nell Hall

Date: 20-Jun-00

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/11/2000		Prep Date:	
Client ID:		0006012	Run ID: GC-1_000611A			SeqNo: 28495			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit Qual
Benzene	20	0.5	20	0	100.0%	85	115		
Ethylbenzene	20.1	0.5	20	0	100.5%	85	115		
m,p-Xylene	39.34	1	40	0	98.4%	85	115		
Methyl tert-Butyl Ether	20.51	1	20	0	102.6%	85	115		
o-Xylene	20.32	0.5	20	0	101.6%	85	115		
Toluene	20.15	0.5	20	0	100.7%	85	115		
1,4-Difluorobenzene	90.27	0	100	0	90.3%	80	105		
4-Bromochlorobenzene	86.68	0	100	0	86.7%	78	108		
Fluorobenzene	90.45	0	100	0	90.4%	78	108		

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/11/2000		Prep Date:	
Client ID:		0006012	Run ID: GC-1_000611A			SeqNo: 28496			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit Qual
Benzene	19.73	0.5	20	0	98.6%	85	115		
Ethylbenzene	19.78	0.5	20	0	98.9%	85	115		
m,p-Xylene	38.53	1	40	0	96.3%	85	115		
Methyl tert-Butyl Ether	20.32	1	20	0	101.6%	85	115		
o-Xylene	20.12	0.5	20	0	100.6%	85	115		
Toluene	19.9	0.5	20	0	99.5%	85	115		
1,4-Difluorobenzene	89.99	0	100	0	90.0%	80	105		
4-Bromochlorobenzene	82.9	0	100	0	82.9%	78	108		
Fluorobenzene	89.18	0	100	0	89.2%	78	108		

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: 0006012
Project: 2-1363; Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000611	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/11/2000		Prep Date:	
Client ID:		0006012		Run ID: GC-1_000611A		SeqNo: 28497			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
Benzene	42.22	0.5	40	0	105.6%	85	115		
Ethylbenzene	42.32	0.5	40	0	105.8%	85	115		
m,p-Xylene	82.02	1	80	0	102.5%	85	115		
Methyl tert-Butyl Ether	41.88	1	40	0	104.7%	85	115		
o-Xylene	42.6	0.5	40	0	106.5%	85	115		
Toluene	42.54	0.5	40	0	106.3%	85	115		
1,4-Difluorobenzene	89.76	0	100	0	89.8%	80	105		
4-Bromochlorobenzene	87.82	0	100	0	87.8%	78	108		
Fluorobenzene	88.91	0	100	0	88.9%	78	108		

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/12/2000		Prep Date:	
Client ID:		0006012		Run ID: GC-1_000612A		SeqNo: 28522			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
Benzene	20.04	0.5	20	0	100.2%	85	115		
Ethylbenzene	20.53	0.5	20	0	102.6%	85	115		
m,p-Xylene	39.53	1	40	0	98.8%	85	115		
Methyl tert-Butyl Ether	20.16	1	20	0	100.8%	85	115		
o-Xylene	20.7	0.5	20	0	103.5%	85	115		
Toluene	20.42	0.5	20	0	102.1%	85	115		
1,4-Difluorobenzene	89.79	0	100	0	89.8%	80	105		
4-Bromochlorobenzene	87	0	100	0	87.0%	78	108		
Fluorobenzene	88.66	0	100	0	88.7%	78	108		

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: 0006012
Project: 2-1363; Nell Hall

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000				Prep Date:		
Client ID:		0006012	Run ID: GC-1_000612A		SeqNo: 28523						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.98	0.5	20	0	99.9%	85	115				
Ethylbenzene	20.48	0.5	20	0	102.4%	85	115				
m,p-Xylene	39.64	1	40	0	99.1%	85	115				
Methyl tert-Butyl Ether	21.55	1	20	0	107.7%	85	115				
o-Xylene	20.81	0.5	20	0	104.1%	85	115				
Toluene	20.38	0.5	20	0	101.9%	85	115				
1,4-Difluorobenzene	89.68	0	100	0	89.7%	80	105				
4-Bromochlorobenzene	87.48	0	100	0	87.5%	78	108				
Fluorobenzene	88.1	0	100	0	88.1%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_000612	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/12/2000			Prep Date:			
Client ID:		0006012	Run ID: GC-1_000612A		SeqNo: 28524						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.97	0.5	40	0	99.9%	85	115				
Ethylbenzene	40.46	0.5	40	0	101.1%	85	115				
m,p-Xylene	77.8	1	80	0	97.3%	85	115				
Methyl tert-Butyl Ether	41.57	1	40	0	103.9%	85	115				
o-Xylene	40.92	0.5	40	0	102.3%	85	115				
Toluene	40.55	0.5	40	0	101.4%	85	115				
1,4-Difluorobenzene	89.34	0	100	0	89.3%	80	105				
4-Bromochlorobenzene	86.73	0	100	0	86.7%	78	108				
Fluorobenzene	88.11	0	100	0	88.1%	78	108				

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: 20-Jun-00

CLIENT: On Site Technologies Limited

Work Order: 0006012

Project: 2-1363; Nell Hall

Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006005-11A	90.6	84.7	104
0006005-12A	89.3	82.6	88.4
0006006-01A	90.7	81.9	89.5
0006006-02A	90.7	85.4	90.3
0006006-03A	90.6	85	90.1
0006006-04A	90.1	81.5	89.5
0006006-05A	90.4	83.8	89.7
0006007-01A	82.5	84.3	96.4
0006007-02A	89.8	86.6	90.9
0006007-03A	90.2	84.2	90.2
0006012-01A	90.8	85.3	89.9
0006012-02A	90.7	88.4	90.8
0006012-03A	89.5	86	88.3
0006013-01A	90.6	85.2	89.9
0006013-02A	90.8	84.6	90.2
0006013-03A	89.7	82.5	89.1
0006013-03AMS	89.3	83.2	89
0006013-03AMSD	89.5	82.5	89
0006013-04A	90.6	85.1	89.2
0006013-05A	90.2	83.5	90
0006013-06A	87.8	85.3	87
0006020-02AMS	88.2	85.1	87
0006020-02AMSD	88	84.6	87
0006021-01A	83.6	86.2	83.8
0006021-02A	88.7	83.6	87
0006021-03A	88	87.2	87
0006021-04A	87.7	81.5	86.4

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits

CLIENT: On Site Technologies Limited
Work Order: 0006012
Project: 2-1363; Nell Hall
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0006021-05A	88.2	83.7	87.1
0006021-06A	89.9	84.1	88.8
0006021-07A	90.2	84	88.6
0006021-08A	87.2	84.7	86.5
0006021-09A	90.1	83.5	88.5
0006021-10A	86.4	84.3	85.6
0006023-01A	90.8	85.2	90
0006023-02A	90	85.6	89.1
0006023-03A	89.9	86	89.1
0006023-04A	90	86.1	88.7
0006023-05A	90.1	86.2	89.1
0006023-06A	90.4	86.8	89.1
0006026-02A	87.2	83.4	86.2
CCV1 BTEX_00040	89.8	87	88.6
CCV2 BTEX_00040	89.7	87.5	88.1
CCV3 BTEX_00040	89.3	86.7	88.1
LCS WATER	89.4	87.6	88.4
MB1	90.1	86.4	89.1

Acronym	Surrogate	QC Limits
14FBZ	= 1,4-Difluorobenzene	80-105
4BCBZ	= 4-Bromochlorobenzene	78-108
FLBZ	= Fluorobenzene	78-108

* Surrogate recovery outside acceptance limits



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