

3R - 84

REPORTS

DATE:

2/26/2001

RECEIVED

MAR 22 2001

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 Groundwater Monitoring Report
Conoco Location: Farmington B Com #1E
Unit 0, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM

Project: 4-1374

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 during March, June, and September of 2000. By direction of New Mexico Oil Conservation Division (NMOCD), MW#4 and Mw#5 were the only well sampled for the referenced events and continue to show water quality at or below New Mexico Water Quality Control Commission standards (NMWQCC). Free product is still present in monitoring well 1 (MW #1) and MW#1 has not been sampled during the past year.

In April of 2000, a passive skimmer was reinstalled in MW#1 and the seven (7) Oxygen Release Compound (ORC) socks from RegenesiTM were removed, the sock had become saturated with free product and rendered ineffective. Ground water elevations and flow are consistent with those previously reported.

NMOCD has accepted the recommendations from the 1999 Annual Ground Water report. Sampling of the site has been discontinued until a more aggressive action can be taken to recover the free product in MW#1.

SAMPLING:

In accordance with the monitoring plan, water levels were measured on the monitoring well prior to purging and sampling. 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 event. 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.

PO Box 2606
Farmington, NM 87499

505-325-5667

FAX: 505-327-1496

SUMMARY AND CONCLUSIONS:

The following conclusions are based on the 2000 ground water monitoring results and trends associated with Farmington B Com 1E well location:

1. Free product remains a problem in MW #1.
2. ORC socks appear to be ineffective, due to saturation by free product.
3. All other monitoring wells (MW#2 through MW#6) exhibit water quality levels below NMWQCC standards.
4. The ground water direction seems to be influenced by an unlined irrigation ditch south of the location, which is a seasonally variable recharge point.

RECOMMENDATIONS

1. Develop and implement a more aggressive method recovering the free product from MW #1.
2. When the free product recovery has been completed, begin ground water monitoring of MW#1 until four (4) quarters of water quality at or below NMWQCC standards.
3. Discontinued the ground water monitoring of MW#2 through MW#6 until MW#1 water quality is below NMWQCC standards.
4. Final sampling of all monitoring wells at the location to be done prior to closure.
5. When ground water monitoring has been complete, Final Pit Closure form to be submitted to NMOCD for approval.
6. Plug and abandoned all monitoring wells at this location in accordance with current regulations.

LIMITATIONS AND CLOSURE:

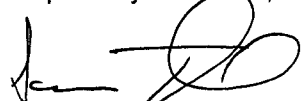
This 2000 groundwater report documents the results of ground water monitoring for the referenced Conoco well location. This report following the Comprehensive Ground Water Remediation and Long-Term Monitoring Plan for Conoco Locations in the San Juan Basin, New Mexico, dated October 15, 1997, and approved by NMOCD on February 16, 1998.

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 this initial 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.

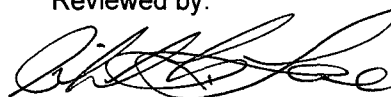
If there are any questions regarding this status report, please contact either Myke Lane or Larry Trujillo at On Site Technologies, (505) 325-5667. Thank you for your consideration.

Respectfully submitted,



Lawrence "Larry" Trujillo, CHMM
Project Manager

Reviewed by:



Michael K. Lane PE
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 Result, Chain of Custody, QA/QC

Acknowledgment:
CONOCO, Inc.

Dary Hulbitts Shear Specialist
(Name/Title)
2/27/01
(Date)

LET/let: 41374-99.doc

REFERENCE:

On Site Technologies, Ltd., April 16, 1997, Letter to Mr. W. L. Brignon, Senior Council Conoco, Inc. Midland Division, regarding: Remediation Summary, Conoco Location, Farmington B Com #1E, Unit 0, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM.

On Site Technologies, Ltd., February 1, 1998, Report to Ms. Shirley Ebert, Field SHEAR Specialist, Conoco, Inc. Mid-Continent Region, regarding: Annual Ground Water Report for 1997, Conoco Location, Farmington B Com #1E, Unit 0, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM

On Site Technologies, Ltd., February 8, 1999, Report to Ms. Shirley Ebert, Field SHEAR Specialist, Conoco, Inc. Mid-Continent Region, regarding: Annual Ground Water Report for 1998, Conoco Location, Farmington B Com #1E, Unit 0, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM

On Site Technologies, Ltd., January 7, 2000 Report to Ms. Shirley Ebert, Field SHEAR Specialist, Conoco, Inc. Mid-Continent Region, regarding: Annual Ground Water Report for 2000, Conoco Location, Farmington B Com #1E, Unit 0, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM

Table 1

BBGS - approximate measurements taken as Below Ground Surface

NM - Not Measured

Table 1

BGS - approximate measurements taken as Below Ground Surface
 BTOC - Below Top of Casing
 NM - Not Measured

Ground Water Level Summary
Farmington B Com 1E
Unit O, Sec.15, T29N, R13W

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 #5	100.52	34.09	2" PVC	19.09 to 34.09	8/25/98	24.49	76.03
					9/15/98	24.83	75.96
					12/29/98	28.27	72.25
					3/3/99	29.71	70.81
					6/15/99	27.58	72.94
					9/15/99	27.17	73.35
					12/14/99	28.15	72.37
					3/27/00	28.96	71.56
					6/5/00	26.62	73.90
					9/11/00	24.29	76.23
					1/23/00	Not	Measured
MW #6	102.14	34.02	2" PVC	19.02 to 34.02	8/25/98	26.00	76.14
					9/15/98	26.19	75.95
					12/29/98	28.98	73.16
					3/3/99	30.71	71.43
					6/15/99	28.92	73.22
					9/15/99	28.36	73.78
					12/14/99	29.22	72.92
					3/27/00	33.37	68.77
					6/5/00	27.97	74.17
					9/11/00	25.72	76.42
					1/23/00	Not	Measured

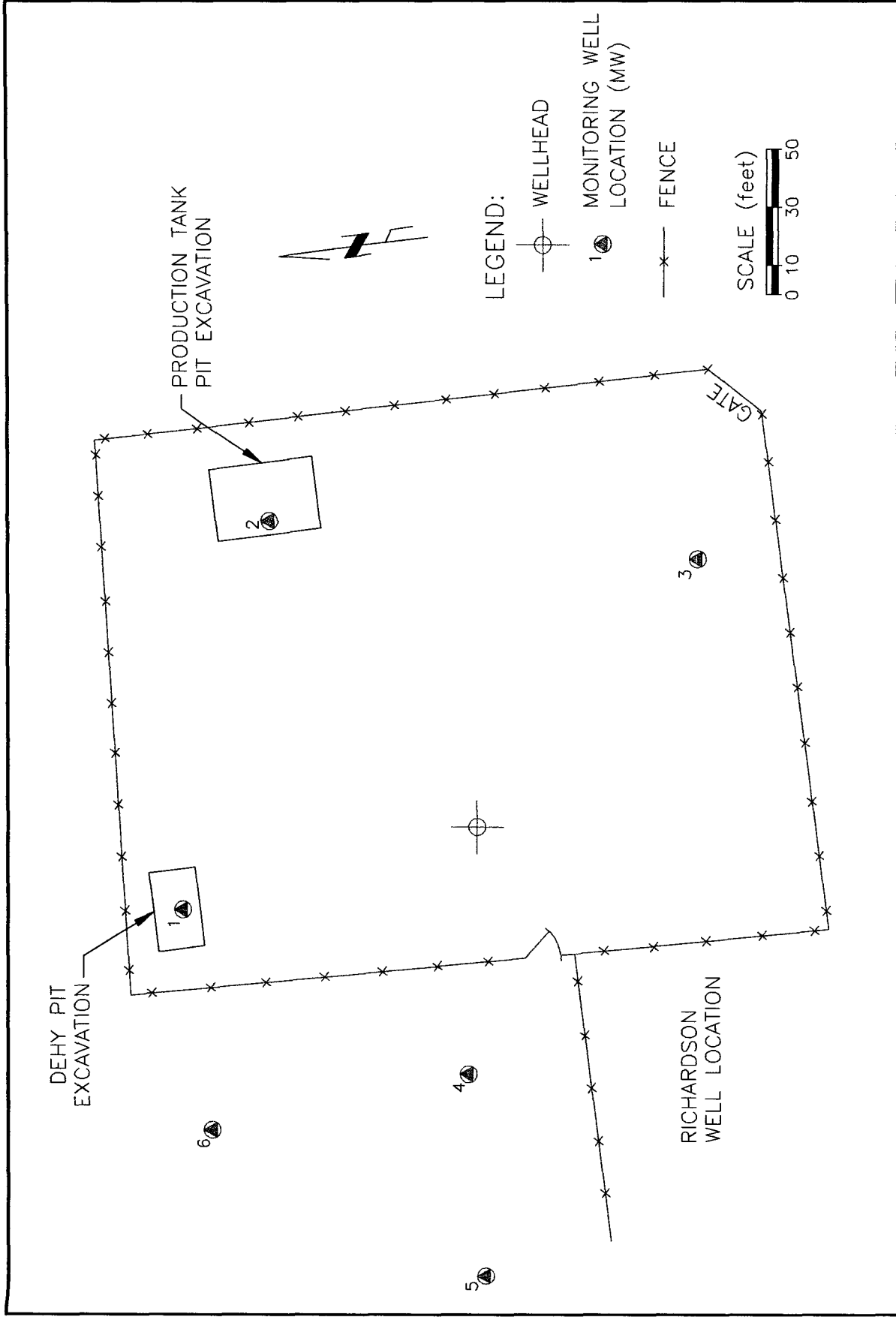
BGS = approximate measurements taken as Below Ground Surface
BTOC = Below Top of Casing
NM = Not Measured

Table 2
BTEX Ground Water Analytical Summary
Farmington B Com 1E
Unit O, Sec. 15 T29N, R13W

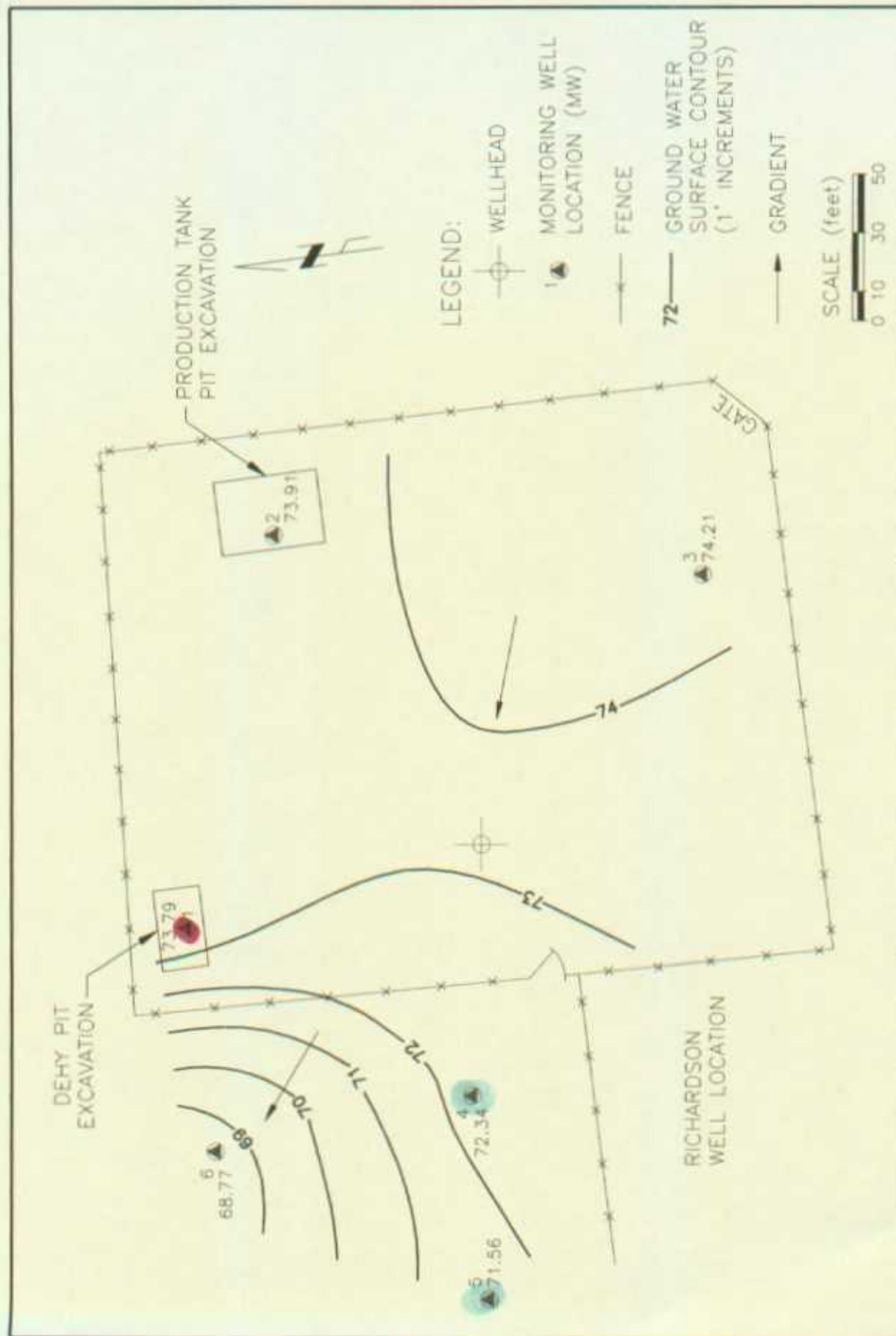
Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)				
				Benzene	Toluene	Ethylbenzene	Total-Xylene	
2/19/98	9802020-01A	MW#1	On Site Lab.	210.0	34.0	370.0	2044.0	
6/12/98	3" of free product	in the bailer						
9/15/98	Not Sampled	free product	in well					
12/29/98	9812053-04A			350.0	BDL	420	2800.0	
No	Water	Samples	Taken	in	1999			
2/19/98	9802020-02A	MW#2	On Site Lab.	2.4	5.3	16.0	470.0	
6/12/98	9806055-02A			0.8	2.7	32.0	171.0	
9/15/98	9809035-01A			1.3	2.5	39.0	33.3	
12/29/98	9812053-05A			BDL	0.6	2.1	35.0	
3/3/99	9903012-05A			BDL	BDL	64	119.0	
6/15/99	9906055-05A			BDL	BDL	BDL	BDL	
9/15/99	9909054-05A			BDL	BDL	4.1	68.1	
12/14/99	9912018-05A			BDL	BDL	1.8	36.4	
2/19/98	9802020-03A	MW#3	On Site Lab.	0.9	1.2	1.6	5.3	
06/12/98	9806055-01A			BDL	BDL	0.5	2.0	
9/15/98	9809035-02A			BDL	BDL	BDL	BDL	
12/29/98	9812053-06A			BDL	BDL	BDL	BDL	
3/3/99	9903012-04A			BDL	BDL	BDL	BDL	
6/15/99	9906055-04A			BDL	0.9	3.1	56.0	
9/15/99	9909054-04A			BDL	0.6	BDL	BDL	
12/14/99	9912018-04A			BDL	BDL	BDL	BDL	
WQCC	Action	Levels		10.0	750.0	750.0	620.0	

Table 2
BTEX Ground Water Analytical Summary
Farmington B Com 1E
Unit O, Sec. 15 T29N, R13W

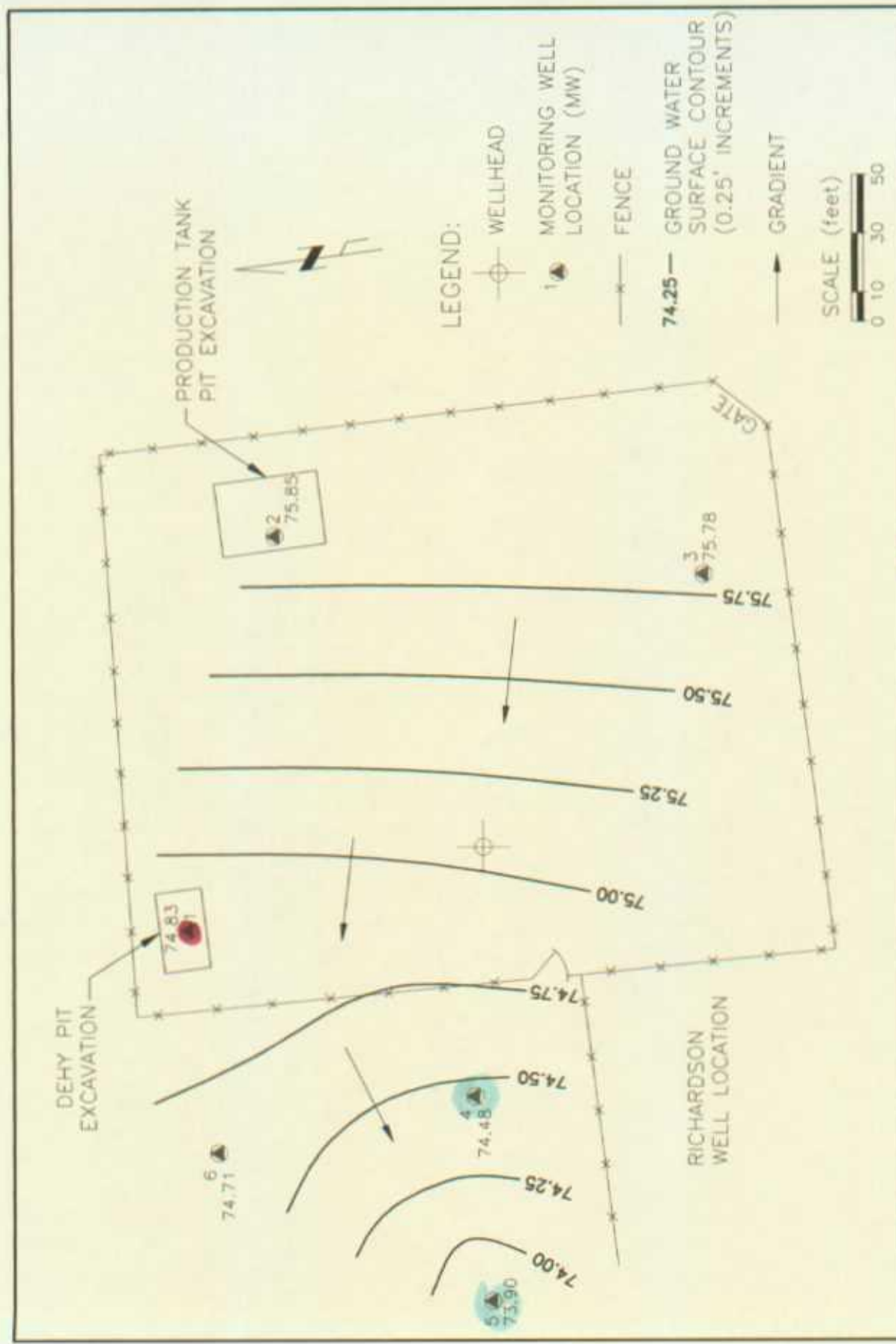
Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)				
9/15/98	9809035-03A	MW#4	On Site Lab.	BDL	BDL	BDL	BDL	BDL
12/29/98	9812053-03A			BDL	BDL	0.6		BDL
3/3/99	9903012-03A			BDL	BDL	BDL		BDL
6/15/99	9906055-03A			BDL	BDL	BDL		BDL
9/15/99	9909054-03A			BDL	BDL	BDL		BDL
12/14/99	9912018-03A			BDL	0.7	BDL		BDL
3/27/00	0003041-01A			BDL	BDL	BDL		BDL
6/5/00	0006009-02A			BDL	BDL	BDL		BDL
9/11/00	0009020*01A			BDL	BDL	BDL		BDL
9/15/98	9809035-04A	MW#5	On Site Lab.	BDL	BDL	BDL		BDL
12/29/98	9812053-02A			BDL	BDL	BDL		BDL
3/3/99	9903012-02A			BDL	BDL	BDL		BDL
6/15/99	9906055-02A			BDL	BDL	BDL		BDL
9/15/99	9909054-02A			BDL	BDL	BDL		BDL
12/14/99	9912018-02A			BDL	0.8	BDL		BDL
3/27/00	0003041-02A			BDL	BDL	BDL		BDL
6/5/00	0006009-01A			BDL	BDL	BDL		BDL
9/11/00	0009020-02A			BDL	BDL	BDL		BDL
9/15/98	9809035-05A	MW#6	On Site Lab.	BDL	BDL	BDL		BDL
12/29/98	9812053-01A			BDL	BDL	BDL		BDL
3/3/99	9903012-01A			BDL	BDL	BDL		BDL
6/15/99	9906055-01A			BDL	BDL	BDL		BDL
9/15/99	9909054-01A			BDL	0.7	1.1		BDL
12/14/99	9912018-01A			BDL	1.8	0.7		1.9
WQCC	Action	Levels		10.0	750.0	750.0		620.0



 ON SITE TECHNOLOGIES, LTD. Limited Partnership	APPROVED:	SITE PLAN		
	DRWN BY: MED	CONOCO B COM #1E		
	CHK'D BY:	FARMINGTON, NM		
	PROJECT NO: 4-1374			
612 E. MURRAY DR. FARMINGTON, NM 87401		PH. (505) 326-6667 FAX (505) 327-1496		SHEET: 1 OF 4



ON SITE TECHNOLOGIES, LTD. <i>Unified Partnership</i> 810 E. MURRAY DR. PH. (606) 888-6667 FARMINGTON, NM 87401 FAX (606) 887-1490		GROUND WATER POTENTIOMETER SURFACE MAP MARCH, 2000 CONOCO B COM #1E FARMINGTON, NM	
APPROVED:	DATE:		
DRWN BY: MED	DATE: 2/14/01		
CHK'D BY:	DATE:		
PROJECT NO: 4-1374	SHEET: 2 OF 4		



GROUND WATER POTENTIOMETER SURFACE MAP

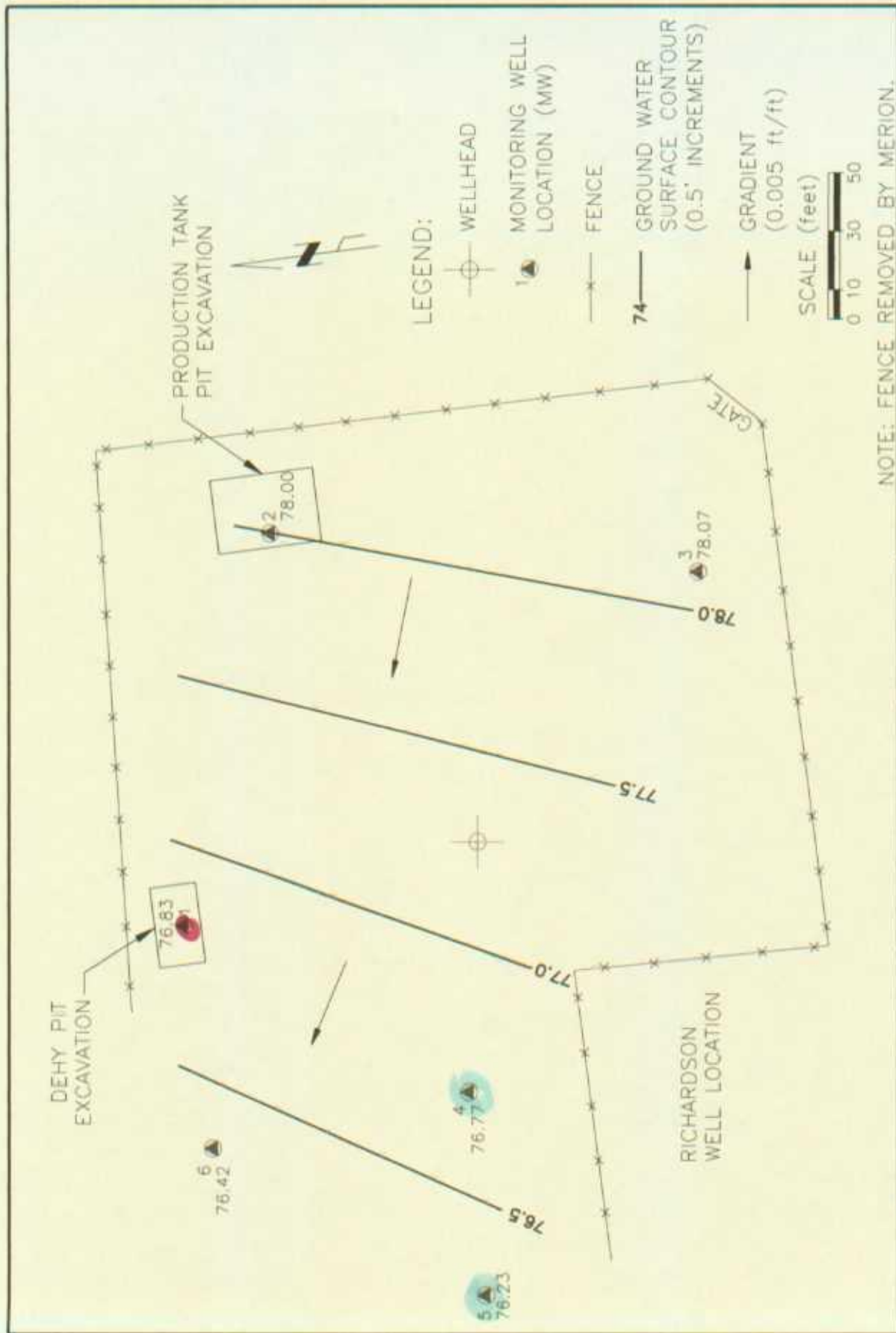
JUNE, 2000
CONOCO B COM #1E
FARMINGTON, NM

APPROVED:	DATE:
DRWN BY: MED	DATE: 2/14/01
CHK'D BY:	DATE:
PROJECT NO: 4-1374	SHEET: 3 OF 4

ON SITE
TECHNOLOGIES, LTD.
Limited Partnership

818 E. MURRAY DR.
FARMINGTON, NM 87401

PH. (505) 885-5687
FAX (505) 887-1486



ON SITE TECHNOLOGIES, LTD. United Partnership		APPROVED: DRWN BY: MED CHK'D BY:	DATE: DATE: 2/14/01 DATE:
812 E. MURRAY DR. PM. (505) 322-5087 FARMINGTON, NM 87401 FAX (505) 322-1498		PROJECT NO: 4-1374	SHEET: 4 OF 4
GROUND WATER POTENTIOMETER SURFACE MAP SEPTEMBER, 2000 CONOCO B COM #1E FARMINGTON, NM		NOTE: FENCE REMOVED BY MERION.	

On Site Technologies, LTD.

Date: 13-Jun-00

CLIENT: On Site Technologies Limited
 Work Order: 0006009
 Project: 4-1374; Farmington B-Com 1E

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000609	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/7/2000	Prep Date:
Client ID:	0006009	Run ID: GC-1_000609A		SeqNo: 28420	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0382	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.0696	0.5			J

Sample ID: MB1	Batch ID: GC-1_000609	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/9/2000	Prep Date:
Client ID:	0006009	Run ID: GC-1_000609A		SeqNo: 28421	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	.0452	0.5			J
Ethylbenzene	.0537	0.5			J
Toluene	.0762	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: 13-Jun-00

CLIENT: On Site Technologies Limited
 Work Order: 0006009
 Project: 4-1374; Farmington B-Com 1E

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0006005-11AMS		Batch ID: GC-1_000609		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/9/2000		Prep Date:	
Client ID:		0006009		Run ID:		GC-1_000609A		SeqNo: 28422			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	402	5	400	0.423	100.4%	73	126				
Ethylbenzene	399.2	5	400	1.056	99.5%	88	113				
m,p-Xylene	789.7	10	800	0	98.7%	83	112				
Methyl tert-Butyl Ether	795.7	10	400	406.2	97.4%	81	125				
o-Xylene	401.8	5	400	0	100.5%	93	110				
Toluene	404.1	5	400	1.459	100.7%	76	126				

Sample ID: 0006005-11AMSD		Batch ID: GC-1_000609		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/9/2000		Prep Date:												
Client ID:		0006009		Run ID:		GC-1_000609A		SeqNo: 28423														
Analyte		Result		PQL		SPK value		SPK Ref Val		%REC		LowLimit		HighLimit		RPD Ref Val		%RPD		RPDLimit		Qual
Benzene		392.2		5		400		0.423		97.9%		73		126		402		2.5%		6		
Ethylbenzene		387.2		5		400		1.056		96.5%		88		113		399.2		3.1%		5		
m,p-Xylene		769		10		800		0		96.1%		83		112		789.7		2.6%		7		
Methyl tert-Butyl Ether		795.7		10		400		406.2		97.4%		81		125		795.7		0.0%		9		
o-Xylene		392		5		400		0		98.0%		93		110		401.8		2.5%		6		
Toluene		393.7		5		400		1.459		98.1%		76		126		404.1		2.6%		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: 13-Jun-00

CLIENT: On Site Technologies Limited
Work Order: 0006009
Project: 4-1374; Farmington B-Com 1E

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000609	Test Code: SW8021B	Units: µg/L	Analysis Date: 6/9/2000			Prep Date:					
Client ID:	0006009	Run ID:	GC-1_000609A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	41.36			0.5	40	0.0382	103.3%	89	112				
Ethylbenzene	41.94			0.5	40	0	104.9%	93	112				
m,p-Xylene	79.07			1	80	0	98.8%	88	108				
Methyl tert-Butyl Ether	40.94			1	40	0	102.4%	87	115				
o-Xylene	41.7			0.5	40	0	104.3%	93	112				
Toluene	41.72			0.5	40	0.0696	104.1%	92	111				

Sample ID: LCS WATER		Batch ID: GC-1_000609		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/9/2000		Prep Date:	
Client ID:		0006009		Run ID: GC-1_000609A				SeqNo: 28419			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.01	0.5	40	0.0452	102.4%	89	112				
Ethylbenzene	41.12	0.5	40	0.0537	102.7%	93	112				
m,p-Xylene	81.2	1	80	0	101.5%	88	108				
Methyl tert-Butyl Ether	36.59	1	40	0	91.5%	87	115				
o-Xylene	41.27	0.5	40	0	103.2%	93	112				
Toluene	41.13	0.5	40	0.0762	102.6%	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.

Date: 13-Jun-00

CLIENT: On Site Technologies Limited
Work Order: 0006009
Project: 4-1374; Farmington B-Com IE

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000609	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/9/2000		Prep Date:	
Client ID: 0006009		Run ID: GC-1_000609A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	20.38		0.5	20	0	101.9%	85	115	
Ethylbenzene	20.94		0.5	20	0	104.7%	85	115	
m,p-Xylene	39.2		1	40	0	98.0%	85	115	
Methyl tert-Butyl Ether	19.75		1	20	0	98.7%	85	115	
o-Xylene	20.78		0.5	20	0	103.9%	85	115	
Toluene	20.49		0.5	20	0	102.5%	85	115	
1,4-Difluorobenzene	89.52		0	100	0	89.5%	80	105	
4-Bromochlorobenzene	88.03		0	100	0	88.0%	78	108	
Fluorobenzene	89.11		0	100	0	89.1%	78	108	

Sample ID: CCV1 BTEX_0004		Batch ID: GC-1_000609	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/9/2000		Prep Date:	
Client ID: 0006009		Run ID: GC-1_000609A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val
Analyte	Result								
Benzene	40.49		0.5	40	0	101.2%	85	115	
Ethylbenzene	40.7		0.5	40	0	101.7%	85	115	
m,p-Xylene	80.29		1	80	0	100.4%	85	115	
Methyl tert-Butyl Ether	37.36		1	40	0	93.4%	85	115	
o-Xylene	40.97		0.5	40	0	102.4%	85	115	
Toluene	40.72		0.5	40	0	101.8%	85	115	
1,4-Difluorobenzene	90.94		0	100	0	90.9%	80	105	
4-Bromochlorobenzene	88.49		0	100	0	88.5%	78	108	
Fluorobenzene	90.86		0	100	0	90.9%	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: 0006009
Project: 4-1374; Farmington B-Com 1E

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV2 BTEX_0004		Batch ID: GC-1_0006009		Test Code: SW8021B		Units: µg/L		Analysis Date: 6/9/2000		Prep Date:	
Client ID:		0006009		Run ID: GC-1_0006009A				SeqNo: 28416			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.48	0.5	20	0	97.4%	85	115				
Ethylbenzene	19.41	0.5	20	0	97.1%	85	115				
m,p-Xylene	38.05	1	40	0	95.1%	85	115				
Methyl tert-Butyl Ether	19.34	1	20	0	96.7%	85	115				
o-Xylene	19.73	0.5	20	0	98.6%	85	115				
Toluene	19.5	0.5	20	0	97.5%	85	115				
1,4-Difluorobenzene	90.97	0	100	0	91.0%	80	105				
4-Bromochlorobenzene	88.56	0	100	0	88.6%	78	108				
Fluorobenzene	91.78	0	100	0	91.8%	78	108				

Sample ID: CCV3 BTEX_0004		Batch ID: GC-1_0006009	Test Code: SW8021B	Units: µg/L		Analysis Date: 6/9/2000			Prep Date:		
Client ID:		0006009	Run ID:	GC-1_000609A		SeqNo: 28417					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	39.88	0.5	40	0	99.7%	85	115				
Ethylbenzene	39.16	0.5	40	0	97.9%	85	115				
m,p-Xylene	77.51	1	80	0	96.9%	85	115				
Methyl tert-Butyl Ether	40.58	1	40	0	101.5%	85	115				
o-Xylene	39.83	0.5	40	0	99.6%	85	115				
Toluene	39.73	0.5	40	0	99.3%	85	115				
1,4-Difluorobenzene	90.96	0	100	0	91.0%	80	105				
4-Bromochlorobenzene	86.32	0	100	0	86.3%	78	108				
Fluorobenzene	91.76	0	100	0	91.8%	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: 13-Jun-00

CLIENT: On Site Technologies Limited
Work Order: 0006009
Project: 4-1374; Farmington B-Com 1E
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ				
0006002-07A	102	87.6	93				
0006004-04A	91.4	90.1	91.7				
0006005-03A	91.1	87.9	91.6				
0006005-04A	68.6 *	90.4	34 *				
0006005-05A	91.8	86.7	92				
0006005-06A	92.4	86.6	92.6				
0006005-07A	91.2	86.8	92.2				
0006005-08A	91.8	86.8	92.6				
0006005-09A	90.2	86.6	91.2				
0006005-10A	90.4	85.2	91.2				
0006005-11A	91.4	87.2	97.6				
0006005-11AMS	90	88.2	96				
0006005-11AMSD	90.4	88.6	96.4				
0006005-12A	90.6	85.6	91.8				
0006005-13A	79.4 *	90.9	33.3 *				
0006005-14A	90	90.1	34.1 *				
0006008-01A	89.4	85.7	90.7				
0006009-01A	92.5	86.4	92.8				
0006009-02A	91.2	86.5	92.5				
0006010-01A	90.2	86	91.9				
0006011-01A	89.5	85.8	91.2				
CCV1 BTEX_00040	90.9	88.5	90.8				
CCV2 BTEX_00040	91	88.6	91.8				
CCV3 BTEX_00040	91	86.3	91.8				
LCS WATER	91.1	89.6	91.1				
MBI	90.8	88.4	91.1				

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

* Surrogate recovery outside acceptance limits

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



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

June 13, 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: 4-1374; Farmington B-Com 1E

Order No.: 0006009

Dear Larry Trujillo,

On Site Technologies, LTD. received 2 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 "DC" or "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: 13-Jun-00

CLIENT: On Site Technologies Limited
Project: 4-1374; Farmington B-Com 1E
Lab Order: 0006009

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: 13-Jun-00

Client:	On Site Technologies Limited	Client Sample Info:	Farmington B-Com 1E
Work Order:	0006009	Client Sample ID:	MW #5
Lab ID:	0006009-01A	Matrix:	AQUEOUS
Project:	4-1374; Farmington B-Com 1E	Collection Date:	6/5/2000 9:10:00 AM
		COC Record:	10727

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	6/9/2000
Toluene	ND	0.5		µg/L	1	6/9/2000
Ethylbenzene	ND	0.5		µg/L	1	6/9/2000
m,p-Xylene	ND	1		µg/L	1	6/9/2000
o-Xylene	ND	0.5		µg/L	1	6/9/2000

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: 13-Jun-00

Client:	On Site Technologies Limited	Client Sample Info:	Farmington B-Com 1E
Work Order:	0006009	Client Sample ID:	MW #4
Lab ID:	0006009-02A	Matrix:	AQUEOUS
Project:	4-1374; Farmington B-Com 1E	Collection Date:	6/5/2000 9:35:00 AM
		COC Record:	10727

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	6/9/2000
Toluene	ND	0.5		µg/L	1	6/9/2000
Ethylbenzene	ND	0.5		µg/L	1	6/9/2000
m,p-Xylene	ND	1		µg/L	1	6/9/2000
o-Xylene	ND	0.5		µg/L	1	6/9/2000

Qualifiers:
PQL - Practical Quantitation Limit
ND - Not Detected at Practical Quantitation Limit
J - Analyte detected below Practical Quantitation Limit
B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range
Surr: - Surrogate

2 of 2

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



10

of _____

TECHNOLOGIES, LTD.

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

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: Farmington B Com 1E; 4-1374

Order No.: 0009020

Dear Larry Trujillo,

On Site Technologies, LTD. received 3 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", with a stylized flourish at the end.

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: Farmington B Com 1E; 4-1374
Lab Order: 0009020

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:	Farmington B Com 1E
Work Order:	0009020	Client Sample ID:	MW 4
Lab ID:	0009020-01A	Matrix:	AQUEOUS
Project:	Farmington B Com 1E; 4-1374	Collection Date:	9/11/2000 12:30:00 PM
		COC Record:	10918

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	ND	0.5		µg/L	1	9/19/2000
m,p-Xylene	ND	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

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:	Farmington B Com 1E
Work Order:	0009020	Client Sample ID:	MW 5
Lab ID:	0009020-02A	Matrix:	AQUEOUS
Project:	Farmington B Com 1E; 4-1374	Collection Date:	9/11/2000 12:10:00 PM
		COC Record:	10918

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	ND	0.5		µg/L	1	9/19/2000
m,p-Xylene	ND	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

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:	Farmington B Com 1E
Work Order:	0009020	Client Sample ID:	MW 1
Lab ID:	0009020-03A	Matrix:	AQUEOUS
Project:	Farmington B Com 1E; 4-1374	Collection Date:	9/11/2000 12:50:00 PM
		COC Record:	10918

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	470	5		µg/L	10	9/19/2000
Toluene	ND	5		µg/L	10	9/19/2000
Ethylbenzene	460	5		µg/L	10	9/19/2000
m,p-Xylene	3800	10		µg/L	10	9/19/2000
o-Xylene	9.3	5		µg/L	10	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

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 25-Sep-00

CLIENT: Conoco, Inc.
Work Order: 0009020
Project: Farmington B Com 1E; 4-1374

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date: 9/19/2000	Prep Date:
Client ID:	0009020	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: 0009020
Project: Farmington B Com 1E; 4-1374

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: 0009020	Run ID: GC-1_000919A	PQL	SPK value	SeqNo: 31271	
Analyte	Result	SPK	SPK Ref Val	LowLimit	HighLimit
Benzene	210.6	2.5	200	23	88
Ethylbenzene	297.7	2.5	200	100	86
m,p-Xylene	965.9	5	400	590	85
Methyl tert-Butyl Ether	210.1	5	200	10	86
o-Xylene	249.5	2.5	200	62	92
Toluene	205.3	2.5	200	0	88

Sample ID: 0009018-01AMSD	Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000	Prep Date:
Client ID: 0009020	Run ID: GC-1_000919A	PQL	SPK value	SeqNo: 31272	
Analyte	Result	SPK	SPK Ref Val	LowLimit	HighLimit
Benzene	206.7	2.5	200	23	88
Ethylbenzene	293.5	2.5	200	100	86
m,p-Xylene	952.2	5	400	590	85
Methyl tert-Butyl Ether	215.2	5	200	10	86
o-Xylene	247.1	2.5	200	62	92
Toluene	203.3	2.5	200	0	88

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: 0009020
Project: Farmington B Com 1E; 4-1374

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000919	Test Code: SW8021B	Units: µg/L	Analysis Date 9/19/2000	Prep Date:					
Client ID:		0009020	Run ID: GC-1_000919A		SeqNo: 31269						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
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

CLIENT: Conoco, Inc.

Work Order: 0009020

Project: Farmington B Com 1E; 4-13/74

QC SUMMARY REPORT

Continuing Calibration Verification Standard

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:		0009020		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				

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:		0009020		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: 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: 0009020
Project: Farmington B Com 1E; 4-1374
Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0009018-01A	81.2	86.8	80.5					
0009018-01AMS	80.4	89	79					
0009018-01AMSD	80.4	89.8	79.6					
0009019-02A	87.3	90.9	85.5					
0009020-01A	86.5	91.6	84.6					
0009020-02A	86.5	91.3	84.5					
0009020-03A	84.6	92.7	82.4					
0009024-02A	82.4	88.7	80.4					
CCV1 BTEX_00070	86.1	91.4	84.1					
CCV2 BTEX_00070	86.4	87.5	84					
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



Page:

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

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

OFF: (505) 325-5667



LAB: (505) 325-1556

April 05, 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: 4-1374; Farmington B Com 1E

Order No.: 0003041

Dear Larry Trujillo,

On Site Technologies, LTD. received 2 samples on 3/27/2000 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", with a stylized flourish at the end.

David Cox

OFF: (505) 325-5667



LAB: (505) 325-1556

On Site Technologies, LTD.

Date: 05-Apr-00

CLIENT: On Site Technologies Limited

Project: 4-1374; Farmington B Com 1E

Lab Order: 0003041

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.

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 05-Apr-00

Client: On Site Technologies Limited

Client Sample Info: Farmington B Com 1E

Work Order: 0003041

Client Sample ID: MW-4

Lab ID: 0003041-01A Matrix: AQUEOUS

Collection Date: 3/27/2000 10:05:00 AM

Project: 4-1374; Farmington B Com 1E

COC Record: 106717

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	3/29/2000
Toluene	ND	0.5		µg/L	1	3/29/2000
Ethylbenzene	ND	0.5		µg/L	1	3/29/2000
m,p-Xylene	ND	1		µg/L	1	3/29/2000
o-Xylene	ND	0.5		µg/L	1	3/29/2000

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 2

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 05-Apr-00

Client:	On Site Technologies Limited	Client Sample Info:	Farmington B Com 1E
Work Order:	0003041	Client Sample ID:	MW-5
Lab ID:	0003041-02A	Matrix:	AQUEOUS
Project:	4-1374; Farmington B Com 1E	Collection Date:	3/27/2000 9:35:00 AM
		COC Record:	106717

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DM		
Benzene	ND	0.5		µg/L	1	3/29/2000
Toluene	ND	0.5		µg/L	1	3/29/2000
Ethylbenzene	ND	0.5		µg/L	1	3/29/2000
m,p-Xylene	ND	1		µg/L	1	3/29/2000
o-Xylene	ND	0.5		µg/L	1	3/29/2000

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

On Site Technologies, LTD.

Date: 05-Apr-00

CLIENT: On Site Technologies Limited
Work Order: 0003041
Project: 4-1374; Farmington B Com 1E

QC SUMMARY REPORT

Method Blank

Sample ID: MB1	Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L	Analysis Date 3/29/2000	Prep Date:						
Client ID:	0003041	Run ID: GC-1_000329A		SeqNo: 26156							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	.0678	0.5									J
Ethylbenzene	ND	0.5									J
m,p-Xylene	.1187	1									J
Methyl tert-Butyl Ether	ND	1									J
o-Xylene	.0803	0.5									J
Toluene	.1724	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: 05-Apr-00

CLIENT: On Site Technologies Limited
Work Order: 0003041
Project: 4-1374; Farmington B Com IE

QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0003033-01AMS		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L	Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	4817		50	4000	693.9	103.1%	73	126
Ethylbenzene	5124		50	4000	1082	101.1%	88	113
m,p-Xylene	16330		100	8000	9012	91.5%	83	112
Methyl tert-Butyl Ether	4132		100	4000	0	103.3%	81	125
o-Xylene	6425		50	4000	2512	97.8%	93	110
Toluene	4353		50	4000	232.1	103.0%	76	126

Sample ID: 0003033-01AMSD		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L	Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	4688		50	4000	693.9	99.8%	73	126
Ethylbenzene	4990		50	4000	1082	97.7%	88	113
m,p-Xylene	15910		100	8000	9012	86.3%	83	112
Methyl tert-Butyl Ether	4074		100	4000	0	101.8%	81	125
o-Xylene	6282		50	4000	2512	94.3%	93	110
Toluene	4238		50	4000	232.1	100.2%	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: 05-Apr-00

CLIENT: On Site Technologies Limited
Work Order: 0003041
Project: 4-1374; Farmington B Com 1E

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS WATER		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L		Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26155
Analyte	Result						RPD Limit	RPD Ref Val	%RPD
Benzene	41.87	0.5	0.0678	40	0	104.5%	89	112	
Ethylbenzene	41.56	0.5	0	40	0	103.9%	93	112	
m,p-Xylene	77.75	1	0.1187	80	0	97.0%	88	108	
Methyl tert-Butyl Ether	41.1	1	0	40	0	102.7%	87	115	
o-Xylene	40.86	0.5	0.0803	40	0	101.9%	93	112	
Toluene	41.28	0.5	0.1724	40	0	102.8%	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.

Date: 05-Apr-00

CLIENT: On Site Technologies Limited
Work Order: 0003041
Project: 4-1374; Farmington B Com 1E

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1 BTEX_0001		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L		Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26152
Analyte	Result								
Benzene	21.44		0.5	20	0	107.2%	85	115	
Ethylbenzene	21.48		0.5	20	0	107.4%	85	115	
m,p-Xylene	40.01		1	40	0	100.0%	85	115	
Methyl tert-Butyl Ether	21.22		1	20	0	106.1%	85	115	
o-Xylene	21.1		0.5	20	0	105.5%	85	115	
Toluene	21.1		0.5	20	0	105.5%	85	115	
1,4-Difluorobenzene	90.77		0	100	0	90.8%	80	105	
4-Bromochlorobenzene	89.42		0	100	0	89.4%	78	108	
Fluorobenzene	88.2		0	100	0	88.2%	78	108	

Sample ID: CCV2 BTEX_0001		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L		Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	SeqNo: 26153
Analyte	Result								
Benzene	20.48		0.5	20	0	102.4%	85	115	
Ethylbenzene	20.59		0.5	20	0	103.0%	85	115	
m,p-Xylene	37.84		1	40	0	94.6%	85	115	
Methyl tert-Butyl Ether	21.29		1	20	0	106.4%	85	115	
o-Xylene	20.34		0.5	20	0	101.7%	85	115	
Toluene	20.21		0.5	20	0	101.1%	85	115	
1,4-Difluorobenzene	90.62		0	100	0	90.6%	80	105	
4-Bromochlorobenzene	89.53		0	100	0	89.5%	78	108	
Fluorobenzene	88.36		0	100	0	88.4%	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: 0003041
Project: 4-1374; Farmington B Com IE

QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3 BTEX_0001		Batch ID: GC-1_000329	Test Code: SW8021B	Units: µg/L	Analysis Date 3/29/2000		Prep Date:	
Client ID: 0003041		Run ID: GC-1_000329A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	39.4		0.5	40	0	98.5%	85	115
Ethylbenzene	39.37		0.5	40	0	98.4%	85	115
m,p-Xylene	71.48		1	80	0	89.3%	85	115
Methyl tert-Butyl Ether	41.5		1	40	0	103.8%	85	115
o-Xylene	39.02		0.5	40	0	97.5%	85	115
Toluene	39.11		0.5	40	0	97.8%	85	115
1,4-Difluorobenzene	90.09		0	100	0	90.1%	80	105
4-Bromochlorobenzene	89.61		0	100	0	89.6%	78	108
Fluorobenzene	87.56		0	100	0	87.6%	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: 05-Apr-00

CLIENT: On Site Technologies Limited
 Work Order: 0003041
 Project: 4-1374; Farmington B Com 1E
 Test No: SW8021B

QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ					
0003033-01A	90.8	89.6	88.4					
0003033-01AMS	89.1	89.8	87.8					
0003033-01AMSD	89.8	89	87.3					
0003035-02A	90.6	89.8	89.2					
0003035-04A	91.1	89.8	89					
0003035-05A	91	90	89.6					
0003035-06A	90.4	90.6	89.5					
0003035-07A	91	89.8	89.6					
0003035-08A	90.6	89.8	89.3					
0003035-09A	90.9	89.5	89.7					
0003035-13A	90.6	90.6	89.6					
0003035-14A	90.2	89.7	89.7					
0003035-15A	94.5	85.4	88.9					
0003035-16A	90.4	89.2	88.8					
0003035-17A	90.9	90	89.2					
0003041-01A	90.8	90.1	89.4					
0003041-02A	90.7	90.2	89.5					
CCV1 BTEX_00010	90.8	89.4	88.2					
CCV2 BTEX_00010	90.6	89.5	88.4					
CCV3 BTEX_00010	90.1	89.6	87.6					
LCS WATER	89.3	89.8	87.9					
MB1	90.6	89	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



Page: