

3R - 85

**GENERAL  
CORRESPONDENCE**

**YEAR(S):**

1997-2003



RECEIVED

APR 25 2003

April 21, 2003

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

Conoco Phillips  
Mr. Neal Goates  
RM&R Site Manager  
Threadneedle Office  
PO Box 2197  
Houston, TX 77252-2197

RE: Abandonment of Five Groundwater Monitoring Wells located at the Farmington C Com 1.

On April 14, 2003, *SOUDER MILLER AND ASSOCIATES* STAFF abandoned five monitoring wells; MW-1R, MW-2, MW-3, MW-4, and the Piezometer at the Farmington C Com 1 location. Abandonment was accomplished following the protocols set forth in the New Mexico Oil Conservation Division Guidelines and Regulations.

If you have any questions, please contact me at (505) 325-5667.

*SOUDER MILLER AND ASSOCIATES*

Respectfully submitted,  
John Hagstrom



Environmental Technician

cc: Denny Foust, NMOCD, Aztec, NM  
Bill Olson, NMOCD, Santa Fe, NM  
Monica Rodhall, Conoco Phillips, 5525 Highway 64, Farmington, NM 87401

Tel. (505) 325-5667

Fax (505) 327-1496

P. O. BOX 2606 • FARMINGTON, NM 87499

-TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT-



RECEIVED

February 26, 2003

FEB 28 2003

Bill Olsen,  
New Mexico Oil Conservation Division  
1200 S. St. Francis Drive  
Santa Fe, NM 87505

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

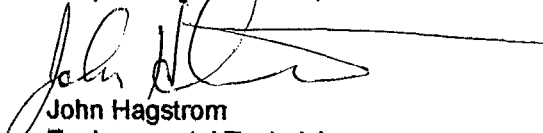
RE: Conoco Groundwater Report Summary

On behalf of ConocoPhillips **Souder Miller and Associates**, is submitting the enclosed 2002 Annual Groundwater report for five (5) locations. Salmon #1 is included on this table although no Annual Report is being submitted.

LOCATION NAME	LEGAL DESCRIPTION	RECOMMENDATION
Farmington B Com 1	Unit H, S 12, T29N, R12W	BTEX has been at or below NMWQCC standards, for four quarters: need to sample for closure during March 2003, and submit Pit Closure forms to OCD.
Nell-Hall # 1	Unit M, S 07, T30N, R11W	Continue to monitor as required in NMCOD letter dated September, 1998.
Farmington C Com 1	Unit L, S 15, T29N, R13W	BTEX has been at or below NMWQCC standards, for four quarters: closure sampling has been accomplished, Pit Closure Forms are attached.
Farmington B Com 1E	Unit O, S 15, T29N, R13W	Free product is still present in MW-1. Sampling stopped at this time IAW NMOCOD direction, more aggressive recovery program being investigated.
Salmon # 1	Unit P, S 30, T29N, R11W	Site has been closed and monitoring wells have been properly plugged and abandoned.
S&K # 1	Unit L, S 29, T29N, R11W	MW-NE and SB 12 have high Benzene levels all others at or below NMWQCC standards, continue monitoring of MW-NE and SB 12.

If there are any questions or concerns on this matter, feel free to contact me at (505) 325-5667.  
Thank you for your time and considerations.

Respectfully submitted,

  
John Hagstrom  
Environmental Technician  
**Souder Miller and Associates**

CC:

Neal Goates, RM&R Site Manager, ConocoPhillips, PO Box 2197, Houston, TX 77252-2197  
Denny Foust, New Mexico Oil Conservation Division, 1000 Rio Brazos, Aztec, NM 87410  
Bill Liess, BLM, 1235 La Plata Hwy., Farmington, NM 87401  
Michael Nelson, ConocoPhillips, PO Box 2197, Houston, TX 77252-2197  
File

Tel. (505) 325-5667 Fax (505) 327-1496  
P. O. BOX 2606 • FARMINGTON, NM 87499

-TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT-



February 22, 2002

RECEIVED

Bill Olson  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive.  
Santa Fe, New Mexico 87505

FEB 25 2002

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

RE: Conoco Groundwater Report Summary

On behalf of Conoco **On Site Technologies Limited Partnership**, is submitting the enclosed 2001 Annual Groundwater report for Ten (10) sites.

LOCATION NAME	LEGAL DESCRIPTION	RECOMMENDATION
Farmington B Com 1	Unit H, S 12, T29N, R12W	WSP-1 still has high BTEX, all other at or below NMWQCC standards, continue monitoring of WSP #1
Nell-Hall#1	Unit M, S 07, T30N, R11W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington C Com 1	Unit L, S 15, T29N, R13W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington B Com 1E	Unit O, S 15, T29N, R13W	Free product is still present in MW-1. Sampling stopped at this time IAW NMOCD direction, more aggressive recovery program being investigated.
Salmon # 1	Unit P, S 30, T29N, R11W	DG#2 has had BTEX levels below NMWQCC standards for the last six quarters. Close site and properly plug and abandon monitoring wells.
S&K1	Unit L, S 29, T29N, R11W	SB 12 still has high BTEX, all others at or below NMWQCC standards, continue monitoring of SB 12.

If there are any questions or concerns on this matter, feel free to contact me at (505) 325-5667.

Thank you for your time and considerations.

Respectfully submitted,

John Hagstrom  
Environmental Technician  
**On Site Technologies Limited Partnership**

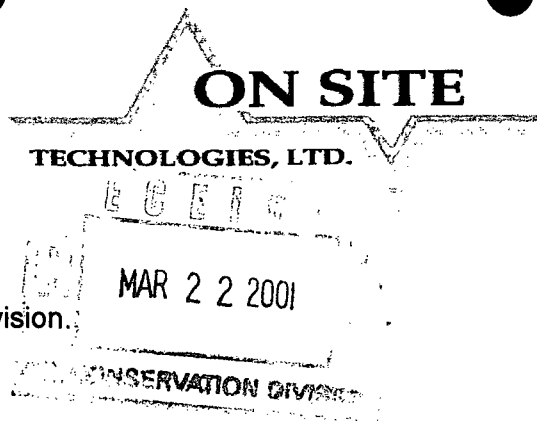
CC:

Gary Ledbetter, SHEAR, Conoco Inc., 3315 Bloomfield HWY, Farmington, NM 87401  
Bill Liess, BLM 1235 La Plata HWY, Farmington, NM 87401  
Denny Foust, NMOCD 1000 Rio Brazos, Aztec, NM 87410  
John Cofer, Sr. Environmental Specialist, Conoco Inc., 3315 Bloomfield HWY, Farmington, NM 87401  
File

PO Box 2606  
Farmington, NM 87499

505-325-5667

FAX: 505-327-1496



February 27, 2001

Mr. Bill Olson  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RE: Conoco Groundwater Report Summary

On behalf of Conoco **On Site Technologies Limited Partnership**, is submitting the enclosed 2000 Annual Groundwater report for Ten (10) sites.

LOCATION NAME	LEGAL DESCRIPTION	RECOMMENDATION
Farmington B Com 1	Unit H, S 12, T29N, R12W	WSP-1 still has high BTEX, all other at or below NMWQCC standards, continue monitoring of WSP #1
Nell-Hall#1	Unit M, S 07, T30N, R11W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington C Com 1	Unit L, S 15, T29N, R13W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington B Com 1E	Unit O, S 15, T29N, R13W	Free product is still present in MW-1. Sampling stopped at this time IAW NMOCD direction, more aggressive recovery program being investigated.
Salmon # 1	Unit P, S 30, T29N, R11W	DG#2 still has high BTEX, Continue monitoring in accordance with NMOCD letter dated September, 1998.
San Juan 28-7#126	Unit M, S 1, T27N, R7W	Research is being done to complete and submit the Pit closure forms and final reports
San Juan 28-7#219	Unit N, S 20, T28N, R7W	Research is being done to complete and submit the Pit closure forms and final reports
S&K1	Unit L, S 29, T29N, R11W	Research is being done to complete and submit the Pit closure forms and final reports
San Juan 28-7#19	Unit G, S 25, T28N, R7W	research is being done to complete and submit the Pit closure forms and final reports
San Juan 28-7#47	Unit A, S 20, T28N, R7W	Research is being done to complete and submit the Pit closure forms and final reports
Farmington Com #1	Unit P, Sec 11, T29N, R13W	Monitoring wells and piezometer plug and abandoned IAW NMOCD Letter dated December 13, 2000
Shephard & Kelsey #1E	Unit D, Sec. 29, T29N, R11W	Monitoring wells plug and abandoned IAW NMOCD Letter dated December 14, 2000

PO Box 2606  
Farmington, NM 87499

505-325-5667

FAX: 505-327-1496

Conoco Inc.  
Summary of 1999 Ground Water Monitoring  
On Site Technologies, Ltd.

February 27, 2001

If there are any questions or concerns on this matter, feel free to contact me at (505) 325-5667.

Thank you for your time and considerations.

Respectfully submitted,



Larry Trujillo, CHMM  
Environmental Specialist  
***On Site Technologies Limited Partnership***

CC:

Gary Ledbetter, SHEAR, Conoco Inc., 3315 Bloomfield HWY, Farmington, NM 87401  
John Cofer, Sr. Environmental Specialist, Conoco Inc., 3315 Bloomfield HWY, Farmington, NM 874  
Denny Foust, NMOCD 1000 Rio Brazos, Aztec, NM 87410  
Bill Liess, BLM 1235 La Plata HWY, Farmington, NM 87401  
File

# ON SITE

TECHNOLOGIES, LTD.

August 9, 1999

Mr. Wm. "Bill" Olsen, Hydrologist  
NMOCD

2040 S. PACHECO ST  
Santa Fe, NM, 87505

RE: Conoco Groundwater Report Summary

On behalf of Conoco Inc., **On Site Technologies Limited Partnership** requests a status of approval for the corrective actions on the following list of well locations.

LOCATION NAME	LEGAL DESCRIPTION	RECOMMENDATION
<b>RECOMMEND</b>	<b>CONTINUED</b>	<b>MONITORING</b>
Farmington B Com 1	Unit H, S 12, T29N, R12W	WSP-1 still has high BTEX, all other at or below NMWQCC standards, continue monitoring of WSP #1
San Juan 28-7#19	Unit G, S 25, T28N, R7W	Continue monitoring, BTEX levels still above NMWQCC standards
San Juan 28-7#47	Unit A, S 20, T28N, R7W	Continue monitoring, BTEX levels still above NMWQCC standards
Nell-Hall#1	Unit M, S 07, T30N, R11W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington C Com 1	Unit L, S 15, T29N, R13W	Continue to monitor as required in NMCOD letter dated September, 1998
Farmington B Com 1E	Unit O, S 15, T29N, R13W	Continue to monitor as required in NMCOD letter dated September, 1998
Salmon # 1	Unit P, S 30, T29N, R11W	DG#2 still has high BTEX, Continue monitoring in accordance with NMOCD letter dated September, 1998
<b>RECOMMEND</b>	<b>CLOSURE</b>	
San Juan 28-7#126	Unit M, S 1, T27N, R7W	4 quarters of sampling below NMWQCC standards, recommend closure
San Juan 28-7#219	Unit N, S 20, T28N, R7W	4 quarters of sampling below NMWQCC standards, recommend closure
S&K1	Unit L, S 29, T29N, R11W	4 quarters of sampling below NMWQCC standards recommend closure.
Farmington Com 1	Unit P, S 11, T29N, R13W	Contamination level in MW 1 below OCD action levels for the last four quarters, MW2 and MW3 historically have not had any contamination above NMWQCC standards. Recommend closure of the location.
S&K1E	Unit D, S 29, T29N, R11W	4 quarters of sampling below OCD action levels recommend closure.

PO Box 2606  
Farmington, NM

505-325-5667

FAX: 505-327-1496

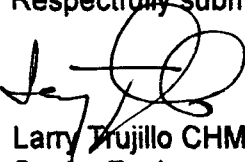
August 9, 1999

Recommendations listed above were included in the 1997 and 1998 Conoco Annual Ground Water Reports. Please advise **On Site** and Conoco of NMOCD's approval, as we are only scheduling the sites requiring continued monitoring.

If there are any questions or concerns on this matter, feel free to contact me at (505) 325-5667.

Thank you for your time and considerations.

Respectfully submitted,



Larry Trujillo CHMM  
Senior Environmental Technician  
**On Site Technologies Limited Partnership**

CC:

Shirley Ebert, SHEAR, Conoco Inc., Farmington Office  
Neal Gostas, Sr. Environmental Specialist, Conoco Inc.





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FEB 19 1999

Letter of Transmittal

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

ATTENTION:

DATE: February 17, 1999

Mr. Bill Olson  
New Mexico Oil Conservation Division.  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RE: Conoco's 1998 Annual Groundwater Report

Dear Mr. Olson:

On behalf of Conoco *On Site Technologies Limited Partnership*, is submitting the enclosed 1998 Annual Groundwater report for ten (10) sites.

Number of Originals	Description
1	Shephard & Kelsey #1E Unit D, Sec. 29, T29N, R11W
1	Shephard & Kelsey #1 Unit L, Sec. 29, T29N, R11W
1	Salmon #1 Unit P, Sec. 30, T29N, R7W
1	Nell-Hall #1 Unit, M, Sec 7, T30N, R11W
1	San Juan 28-7-19 Unit G, Sec. 25, T28N, R7W
1	San Juan 28-7-47 Unit A, Sec. 20, T28N, R7W
1	Farmington Com #1 Unit P, Sec 11, T29N, R13W
1	Farmington B Com #1 Unit H, T29N R13W
1	Farmington C Com 1 Unit L, Sec. 15, T29N, R13W
1	Farmington B Com 1E Unit O, Sec 15, T29, R13W

Thank you,

A handwritten signature in black ink, appearing to read "Larry Trujillo", is written over the typed name.

Larry Trujillo  
Sr. Environmental Technician

CC:

Shirley Ebert  
Neal Goates  
Denny Foust  
File

PO Box 2606  
Farmington, NM

505-325-5667

FAX: 505-327-1496



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

June 5, 1998

**CERTIFIED MAIL**

**RETURN RECEIPT NO. Z-235-437-284**

Ms. Shirley Ebert  
Conoco, Inc.  
3315 Bloomfield Hwy.  
Farmington, New Mexico 87401

**RE: GROUND WATER INVESTIGATIONS  
SAN JUAN BASIN PIT CLOSURES**

Dear Ms. Ebert:

The New Mexico Oil Conservation Division (OCD) has completed a review of Conoco, Inc.'s (Conoco) February 4, 1998 "CONOCO'S 1997 ANNUAL GROUNDWATER REPORT" which was received by the OCD on February 27, 1998. This document, which was submitted on behalf of Conoco by their consultant On Site Technologies, Ltd., contains the results of Conoco's investigation, remediation and monitoring at 12 unlined oil and gas production pit sites with resulting ground water contamination.

Upon a review of the above referenced documents, the OCD has the following comments and requirements:

1. The data in the reports for the sites listed below show that the complete extent of ground water contamination has not been determined. The OCD requires that Conoco complete the definition of the extent of ground water contamination at these sites pursuant to Conoco's prior approved ground water investigation and remediation plan for the San Juan Basin.

- Farmington B Com #1	Unit H, Sec. 12, T29N, R12W.
- Farmington C Com #1	Unit L, Sec. 15, T29N, R13W.
- Farmington Com #1	Unit P, Sec. 11, T29N, R13W.
- Nell-Hall #1	Unit M, Sec. 07, T30N, R11W.
- Salmon #1	Unit P, Sec. 30, T29N, R11W.
  
2. The ground water metals data for the site listed below shows that the concentrations of barium, chromium and lead in ground water are above the New Mexico Water Quality Control Commission (WQCC) ground water standards. The OCD requires that Conoco conduct additional metals sampling at this site

- Farmington Com #1	Unit P, Sec. 11, T29N, R13W.
---------------------	------------------------------

Ms. Shirley Ebert  
June 5, 1998  
Page 2

3. Some of the report site maps do not show the former locations of the pits, the excavated areas nor the locations of all monitor wells (former and current) . The OCD requires that Conoco include this information in future reports.
4. Some of the reports do not contain quarterly ground water potentiometric maps. The OCD requires that Conoco's future reports include ground water potentiometric maps for each sampling event. The maps will be created using the water table elevation in all site monitor wells.
5. Some of the report summary tables do not contain the results of all past water quality sampling. It is difficult for the OCD to evaluate remedial progress at a site without this data. The OCD requires that Conoco's future reports include summary tables that contain the results of all past and present water quality sampling.

If you have any questions, please call me at (505) 827-7154.

Sincerely,



William C. Olson  
Hydrologist  
Environmental Bureau

xc: Denny Foust, OCD Aztec District Office  
Larry Trujillo, On Site Technologies, Ltd.

FEB 27 1998

Environmental Bureau  
Oil Conservation Division

## Letter of Transmittal

**ATTENTION:**

**DATE:** February 4, 1998

Mr. Bill Olson  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

RE: Conoco's 1997 Annual Groundwater Report.

**REMARKS:**

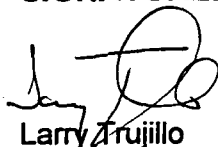
Dear Mr. Olson:

On behalf of Conoco, *On Site Technologies Limited Partnership*, is submitting the enclosed 1997 Annual Groundwater report for the twelve (12) sites

**We are sending you:**

No. Originals	No. Copies	Description
1		Farmington B Com 1, Unit H, Sec. 12, T29N, R12W
1		San Juan 28-7-19, Unit G, Sec. 25, T28N, R7W
1		San Juan 28-7-47, Unit A, Sec. 20, T28N, R7W
1		San Juan 28-7-126, Unit M, Sec. 1, T27N, R7W
1		San Juan 28-7-219, Unit N, Sec. 20, T28N, R7W
1		Shephard & Kelsey #1, Unit L, Sec. 29, T29N, R11W
1		Nell-Hall #1, Unit, Sec. 1, T30N, R11W
1		Farmington Com #1, Unit P, Sec. 11, T29N, R13W
1		Farmington C Com #1, Unit L, Sec. 15, T29N, R13W
1		Farmington B Com #1E, Unit O, Sec. 15, T29N, R13W
1		Salmon #1, Unit P Sec. 30, T29N, R11W
1		Shephard & Kelsey 1E, Unit D, Sec. 29, T29W, R11W

**SIGNATURE:**



Larry Trujillo  
Sr. Environmental Technician  
CC:

Denny Foust  
Shirley Ebert  
Neal Goates

***On Site Technologies, Ltd.***

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JAN - 6 1998

CONSERVATION DIVISION

## Letter of Transmittal

**DATE: January 5, 1998**

**ATTENTION:**

Mr. Bill Olson  
New Mexico Oil Conservation Division  
2040 South Pacheco  
Santa Fe, NM 87505

**PROJECT REFERENCE:**

**PROJECT No. 4-1373 & 4-1374**

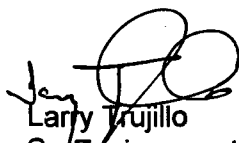
No. Originals	No. Copies	Description
	2	FMTN C-COM1 & FMTN B-COM 1E

**REMARKS:**

Dear Mr. Olson,

At Conoco's request, we are sending you copies of the excavation summaries for Farmington C-Com 1, Unit L Sec. 15, T29N, R13W and Farmington B-Com 1E, Unit O, Sec. 15, T29N, R13W.

**SIGNATURE:**

  
Larry Trujillo

Sr. Environmental Technician

***On Site Technologies Limited Partnership***



Conoco, Inc., Midland Division  
Exploration and Production, North America  
10 Desta Drive, Suite 100W  
Midland, Texas 79705-4500

November 26, 1997

Attn: Mr. Neal Goates, Senior Environmental Specialist

RE: Remediation of Summary  
Farmington C Com #1  
Unit L, Sec. 15, T29W, R13W, NMPM  
San Juan County, New Mexico

Project No: 4-1373

The following correspondence has been prepared by ***On Site Technologies Limited Partnership*** for Conoco. This correspondence is to summarize the excavation efforts done at Farmington C Com #1 during September 4 and 5, 1997.

**PROJECT BRIEF:**

On March 11, 1997, 22 test holes were drilled using a pick up mounted hydraulic punch and auger unit at the Farmington C Com #1 site. Soil sample were taken from auger cutting at each test hole. Each sample was field tested for hydrocarbon per NMOCD Field Heated Headspace Method. Selected samples were split, split and placed in clean jars with Teflon® closure. Samples were labeled, placed on ice for delivery to laboratory. Lab samples were tested for TPH per EPA Method 8015M and selected samples were tested for BTEX per EPA Method 8020 (On Site report Dated April 16, 1997).

Three monitoring wells were installed, one up gradient and two down gradient in area of suspected contamination. On March 17, 1997, the monitoring wells were purged by bailing approximately three well volumes. Samples were taken from each well and placed in 40 ml VOA glass vials, preserved with 2% Mercuric Chloride labeled, placed on ice and transported to laboratory for analysis. Samples were tested for BTEX per EPA Method 8020 (On Site report Dated April 16, 1997).

Laboratory results indicated that ground water had been impacted. Soil contamination was found from approximately three to six feet below ground surface in three areas: south of production tank, in tank berm, west of production tank in a surface depression, and under and west of the separator/dehy tank. Recommendation was made to excavate impacted soil above NMOCD's maximum contamination levels for TPH and to be transported off site contaminated soils for proper disposal/remediation.

PO Box 2606  
Farmington, NM  
PHONE: 505-325-5667 FAX: 505-327-1496

### **SUMMARY OF REMEDIATION EFFORTS:**

On September 4 and 5, 1997, *On Site* and Consolidated Contractors excavated contaminated soils from all three areas of concern noted previously. Approximately 424 cubic yards of contaminated soil was removed from the site. During the excavation efforts Mr. Denny Foust, NMOCD Deputy Oil & Gas Inspector, witnessed some of the project progress.

#### **Excavation Site #1**

Excavation site number one was the area immediately around the separator/dehy tank (pit) and extending west of the well location approximately 40 feet. The top two to four feet of uncontaminated soil was removed and stockpiled on site for later use. Contaminated soil was excavated to the ground water surface, and laterally to the extent practical. A total of 226 cubic yards of contaminated soil was removed. Ground water was encountered at approximately six to eight feet below ground surface.

The area of heaviest soil contamination was located at near test hole 19 (refer to Site Sketch). A former work over pit was suspected to have been in this proximity. With Mr. Foust's concurrence, an estimated 25 cubic yards of contaminated soil located under the existing separator/dehydrator pit was left in place to avoid disruption of gas production.

To monitor the excavation progress, a total of ten soil samples were taken and field tested for volatile hydrocarbons per the NMOCD Field Heated Headspace Method. Selected samples were split and placed in clean jars with Teflon® closure, and put on ice for delivery to the laboratory.

#### **Excavation Site #2**

Excavation site number two was in a depression west of the production tank and northeast of the pump jack. The extent of the excavation was approximately 12 feet by 15 feet. Surface soils showed signs of staining and contaminated soil was excavated to the ground water surface. A total of 19 cubic yards of contaminated soil was removed. Ground water was encountered at approximately six to eight feet below ground surface.

To monitor the excavation progress, a total of three soil samples were taken for excavation bottom and sidewalls. Each sample was field tested for volatile hydrocarbons per the NMOCD Field Heated Headspace Method. Selected samples were split and placed in clean jars with Teflon® closure and put on ice for delivery to the laboratory.

#### **Excavation Site #3**

Excavation site number three was south of the production tank and within the fire break berm. The fire break and top two to four feet of uncontaminated soils were removed and stockpiled on site for later use. The area of excavation measured approximately 25 feet by 40 feet. Ground water was encountered at six to eight feet. A total of 179 cubic yards of contaminated soil was removed.

The area of heaviest soil contamination was located at near test hole 14 (refer to the Site Sketch). A former tank drain pit was suspected to have been in this proximity. With Mr.

Foust's concurrence, an estimated 10-15 cubic yards of contaminated soil located under the existing production tank was left in place to avoid disruption of the wells production.

To monitor the excavation progress, a total eight samples were taken from the excavated site. Each sample was field tested for volatile hydrocarbons per the NMOCD Field Heated Headspace Method. Selected samples were split and placed in clean jars with Teflon® closure and put on ice for delivery to the laboratory.

Following soil removal, clean material was imported as backfill and the excavation areas mounded. Refer to the attached site sketch for the approximate extent of the excavations and location of soil samples.

#### **Monitor Well Installation:**

During excavation, MW-1 installed during the March, 1997, site assessment and adjacent to the separator/dehydrator pit was removed. This monitoring well has been replaced and an additional monitoring well has been installed in a down-gradient location, per Mr. Foust's request.

#### **SUMMARY OF SAMPLING EFFORTS:**

All soil samples delivered to the laboratory were analyzed for Total Petroleum Hydrocarbon (TPH) per EPA Method 8015 modified. Samples with a field headspace reading over 100 were analyzed for BTEX per EPA Method 8020. Results of the field screening and laboratory analyses are shown on the following table.

Excavation Location	Date	Time	Sample	PID Units	TPH (ppm)	Benzene (ppm)	Total BTEX (ppm)
Excavation #1	9/4/97	1102	S-1	277.0	892.0	ND	38.4
		1340	S-6	97.0	2.3		
		1411	S-7	76.0	9.5		
		1557	S-10	141.0	9.3	ND	0.53
Excavation # 2	9/5/97	0724	S-1	135.0	442.0	0.43	10.7
		0725	S-2	102.0	1610.0	0.197	15.1
Excavation # 3	9/5/97	0817	S-2	23.2	21.05		
		0818	S-3	52.3	81.1		
		0845	S-4	105.0	687.0	0.021	0.147
		1213	S-8	18.5	ND		

ND, Non Detect  
ppm Part Per Million

Copies of the laboratory reports, quality control/quality assurance and Chain-of-Custody are attached.



### **RECOMMENDATION:**

Based on visual and laboratory results associated with the excavation efforts performed at Farmington C Com #1, the following is recommended:

1. Following Conoco's proposed Comprehensive Ground Water Remediation and Long-Term Monitoring Plan, ground water monitoring should be performed on a periodic basis until four consecutive sample events measure hydrocarbon contamination below current WQCC standards.
2. No further excavation or soil treatment is needed at the present time, as the vast majority of soil contamination is believed to have been removed. If ground water monitoring indicates further deterioration of the water quality, additional measures may need to be taken to eliminate the source.

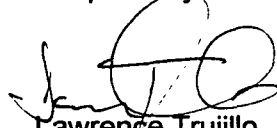
### **LIMITATION AND CLOSURE:**

This summary documents visual observation of the site, subsurface conditions encountered during this excavation, and analysis of soil samples collected during the excavation. This summary does not reflect subsurface variations which may exist between sampling points or subsurface changes which may occur due to seasonal variation.

The scope of our services consisted of the performance of site reclamation by soil excavation and removal, project management and sampling during soil excavation efforts, field and lab testing of soil for hydrocarbon contamination, and preparation of a summary. All work has been performed in accordance with generally accepted professional practices in geotechnical, 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 report, please contact either Larry Trujillo or Myke Lane at On Site Technologies, (505) 325-5667. Thank you for allowing On Site to assist you with this matter.

Respectfully submitted by,



Lawrence Trujillo  
Sr. Environmental Technician

Reviewed by,



Michael K. Lane  
Sr. Engineer

**On Site Technologies Limited Partnership**

CC: Shirley Ebert, Conoco Farmington Office

Attachments:

Lab results, QA/QC & Chain of Custody's  
Bills of Lading  
Site Sketch  
Tailgate Safety Forms

OFF: (505) 325-5667



LAB: (505) 325-1556

**ANALYTICAL REPORT**

Attn: *Larry Trujillo*  
 Company: *On Site Technologies, Ltd. c/o Conoco, Inc.*  
 Address: *612 E. Murray Drive*  
 City, State: *Farmington, NM 87401*

Date: *16-Sep-97*  
 COC No.: *6750*  
 Sample No.: *16072*  
 Job No.: *4-1373*

Project Name: *Conoco, Inc. - Farmington C Com 1*  
 Project Location: *EXC-1; S-1*  
 Sampled by: *LT*  
 Analyzed by: *DC/HR*  
 Sample Matrix: *Soil*

Date: *4-Sep-97* Time: *11:02*  
 GRO Date: *9-Sep-97*  
 DRO Date: *12-Sep-97*

**Laboratory Analysis**

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
<i>Gasoline Range Organics (C5 - C9)</i>	<i>329</i>	<i>mg/kg</i>	<i>50</i>	<i>mg/kg</i>
<i>Diesel Range Organics (C10 - C28)</i>	<i>563</i>	<i>mg/kg</i>	<i>10</i>	<i>mg/kg</i>

ND - Not Detected at Limit of Quantitation

**Quality Assurance Report**

GRO QC No.: 0537-STD

DRO QC No.: 0555-STD

**Continuing Calibration Verification**

Parameter	Method Blank	Unit of Measure	True Value	Analyzed Value	RPD	RPD Limit
<i>Gasoline Range (C5 - C9)</i>	<i>ND</i>	<i>ppb</i>	<i>1,801</i>	<i>1,952</i>	<i>8.1</i>	<i>15%</i>
<i>Diesel Range (C10 - C28)</i>	<i>ND</i>	<i>ppm</i>	<i>200</i>	<i>192</i>	<i>4.3</i>	<i>15%</i>

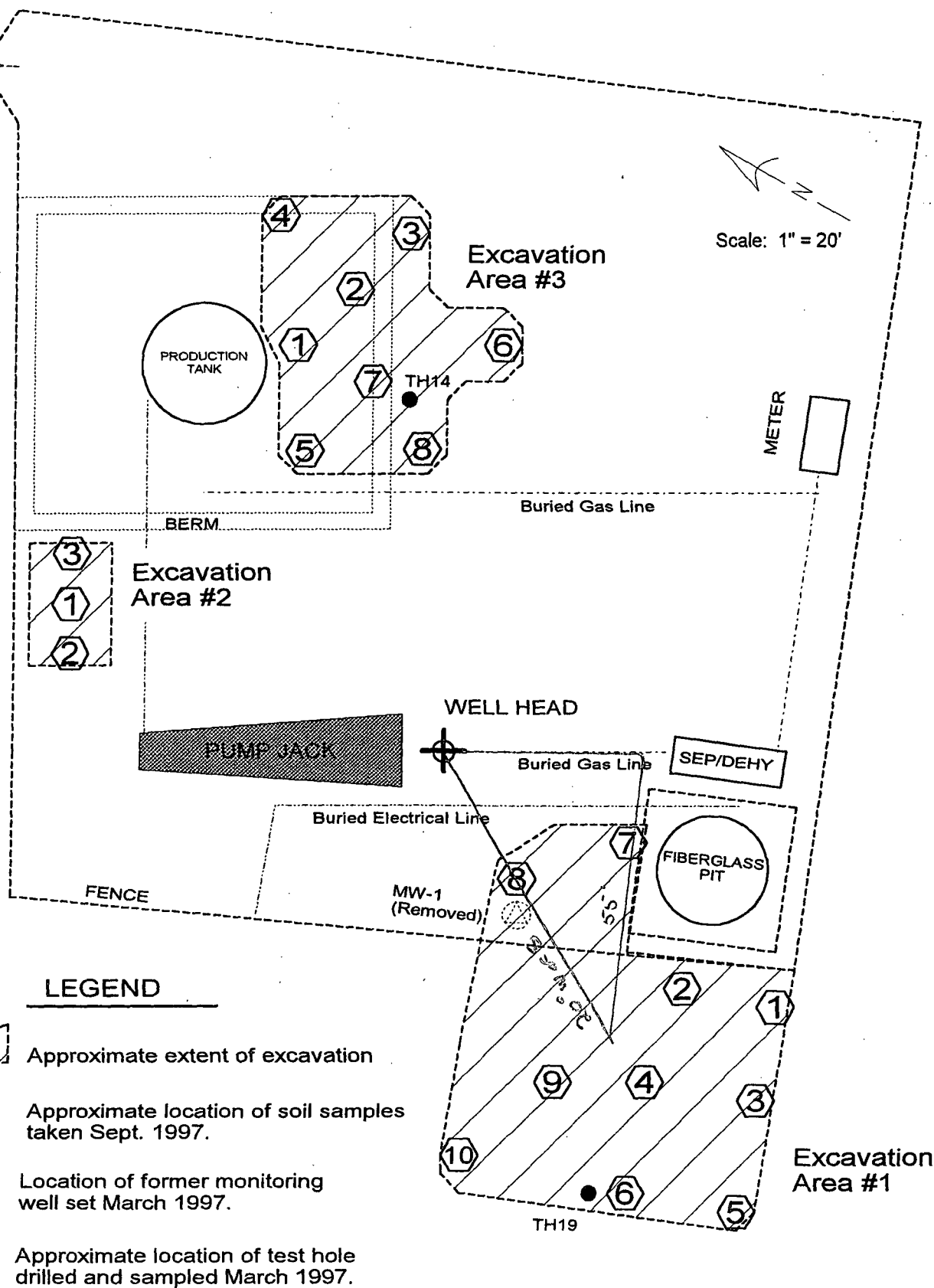
**Matrix Spike**


Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	RPD	RPD Limit
<i>Gasoline Range (C5-C9)</i>	<i>85</i>	<i>88</i>	<i>(80-120)</i>	<i>4</i>	<i>20%</i>
<i>Diesel Range (C10-C28)</i>	<i>88</i>	<i>73</i>	<i>(75-125)</i>	<i>14</i>	<i>20%</i>

**Method:** *SW-846 EPA Method 8015A mod. - Nonhalogenated Volatile Hydrocarbons by Gas Chromatography*Approved by: *[Signature]*Date: *9/16/97*

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -



FARMINGTON "C" COM #1 Unit L, S15, T29W, R13W SAN JUAN BASIN, NM		SITE SKETCH		 ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667
		DRWN: 11-03-97		
PROJECT NO: 4-1373		DRWN BY: MKL		
FIGURE: A-1	FILE: 41303S4.CAD	PROJECT: SITE RECLAMATION		

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 1 copy to  
appropriate  
District Office  
and 1 copy to  
the Santa Fe Office

(Revised 3/9/94)

## PIT REMEDIATION AND CLOSURE REPORT

Operator: ConocoPhillips

Telephone: (505) 599-3400

Address: 5525 US Hwy. 64, Farmington, NM 87401

Well Name: Farmington C Com 1

Location: Unit or Qtr/Qtr Sec: Unit L Sec 15 T 29N R 13W County San Juan, NM

Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Surface Depression Excavation 2  
Land Type: BLM \_\_\_\_\_, State \_\_\_\_\_, Fee \_\_\_\_\_ Other Private

Pit Location: Pit dimensions: length 15', width 12', depth 7'  
(Attach diagram)

Reference: wellhead X, other \_\_\_\_\_

Footage from reference: Approximately 35'

Direction from reference: Approximately 7 Degrees West of North

Depth To Ground Water	Less than 50 feet	Yes	(20 points)
(Vertical distance from	50 feet to 99 feet		(10 points)
contaminants to seasonal	Greater than 100 feet		( 0 points) <u>20</u>
high water elevation of			
ground water.)			

Wellhead Protection Area:		NO	(20 points)
(Less than 200 feet from a private			( 0 points) <u>0</u>
domestic water source, or; less than			
1000 feet from all other water sources.)			

Distance To Surface Water:	Less than 200 feet		(20 points)
(Horizontal distance to perennial	200 feet to 1000 feet		(10 points)
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	Yes	( 0 points) <u>0</u>
irrigation canals and ditches.)			

RANKING SCORE (TOTAL POINTS): 20

Date Remediation Started: 1997 Date completed 9/17/02

Remediation Method: Excavation X Approx. cubic yards 19

(Check all appropriate  
sections.)

Landfarmed \_\_\_\_\_

Insitu Bioremediation \_\_\_\_\_

Other Disposed at Envirotech OCD landfarm

Remediation Location: Onsite \_\_\_\_\_ Offsite: X  
(i.e. landfarmed onsite,  
name and location of  
offsite facility) Envirotech Landfarm #2

General Description of Remedial Action: The pit was excavated and approximately 19 cubic yards of contaminated soil was removed from the site, and disposed of properly. The excavation was backfilled with clean imported material. Monitoring wells were installed to monitor ground water quality. Refer to Conoco Annual Ground Water Report 2002 for final ground water sample results

Ground Water Encountered: No \_\_\_\_\_ Yes: X Depth: Approximately seven feet.

Final Pit:  
Closure Sampling:  
(if multiple samples,  
attach sample results  
and diagram of sample  
locations and depths)

Sample location: Refer to Farmington C Com #1 Excavation Summary. On Site Technologies, 11/26/97. Refer to Conoco Annual Ground Water Report 2002 for final ground water sample results.

Sample depth \_\_\_\_\_

Sample Date \_\_\_\_\_ Sample time \_\_\_\_\_

Sample Results

Benzene(ppm) \_\_\_\_\_

Total BTEX(ppm) \_\_\_\_\_

Field headspace(ppm) \_\_\_\_\_

Ground Water Sample:

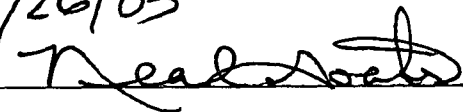
TPH \_\_\_\_\_

Yes X No \_\_\_\_\_ (If yes, attach sample results)

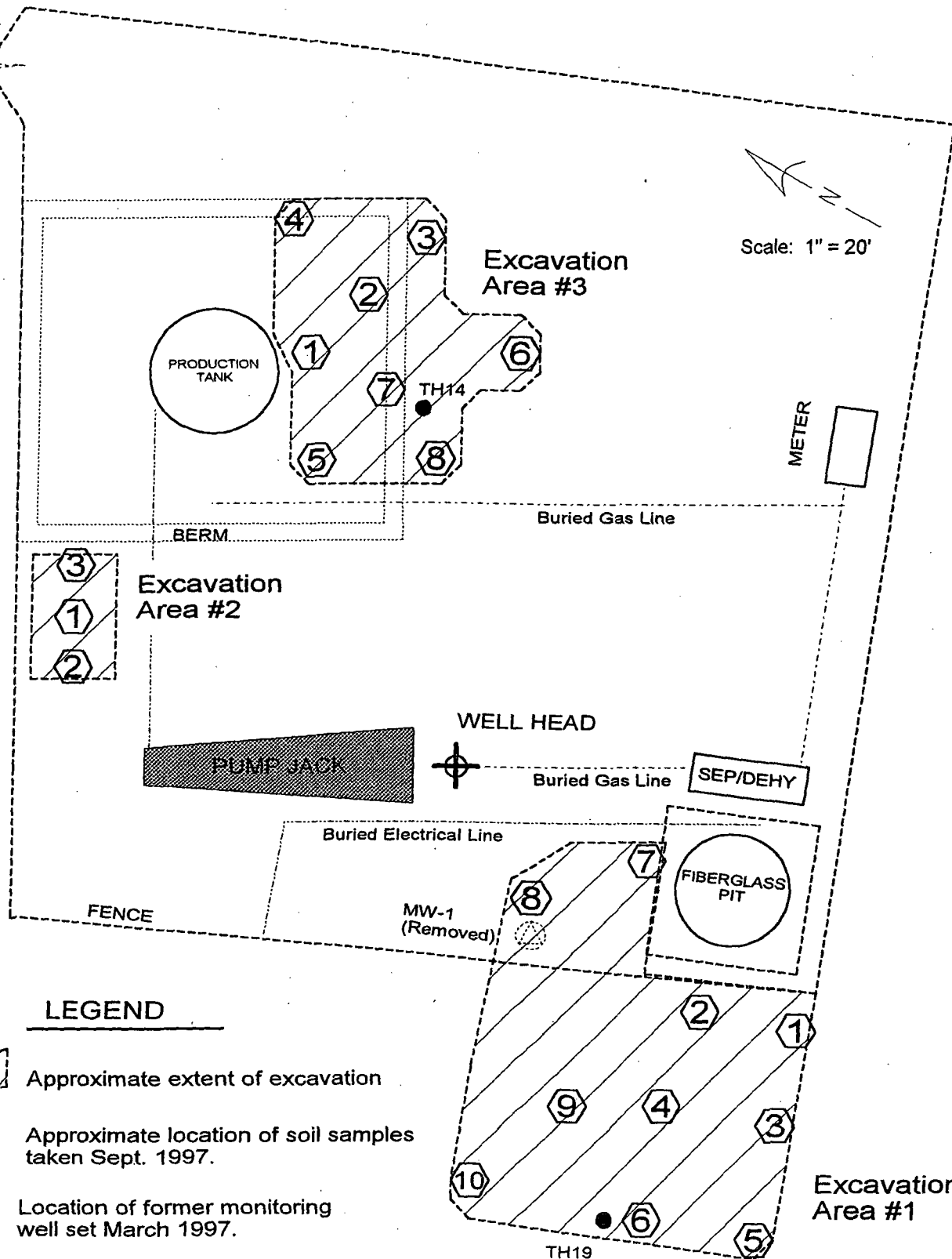
I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Date: 2/26/03

Signature



Printed Name: Neal Goates  
and Title: RM&R Site Manager



### LEGEND

- Approximate extent of excavation
- Approximate location of soil samples taken Sept. 1997.
- Location of former monitoring well set March 1997.
- TH# Approximate location of test hole drilled and sampled March 1997.

FARMINGTON "C" COM #1  
Unit L, S15, T29W, R13W  
SAN JUAN BASIN, NM

### SITE SKETCH

DRWN: 11-03-97

PROJECT NO: 4-1373

DRWN BY: MKL

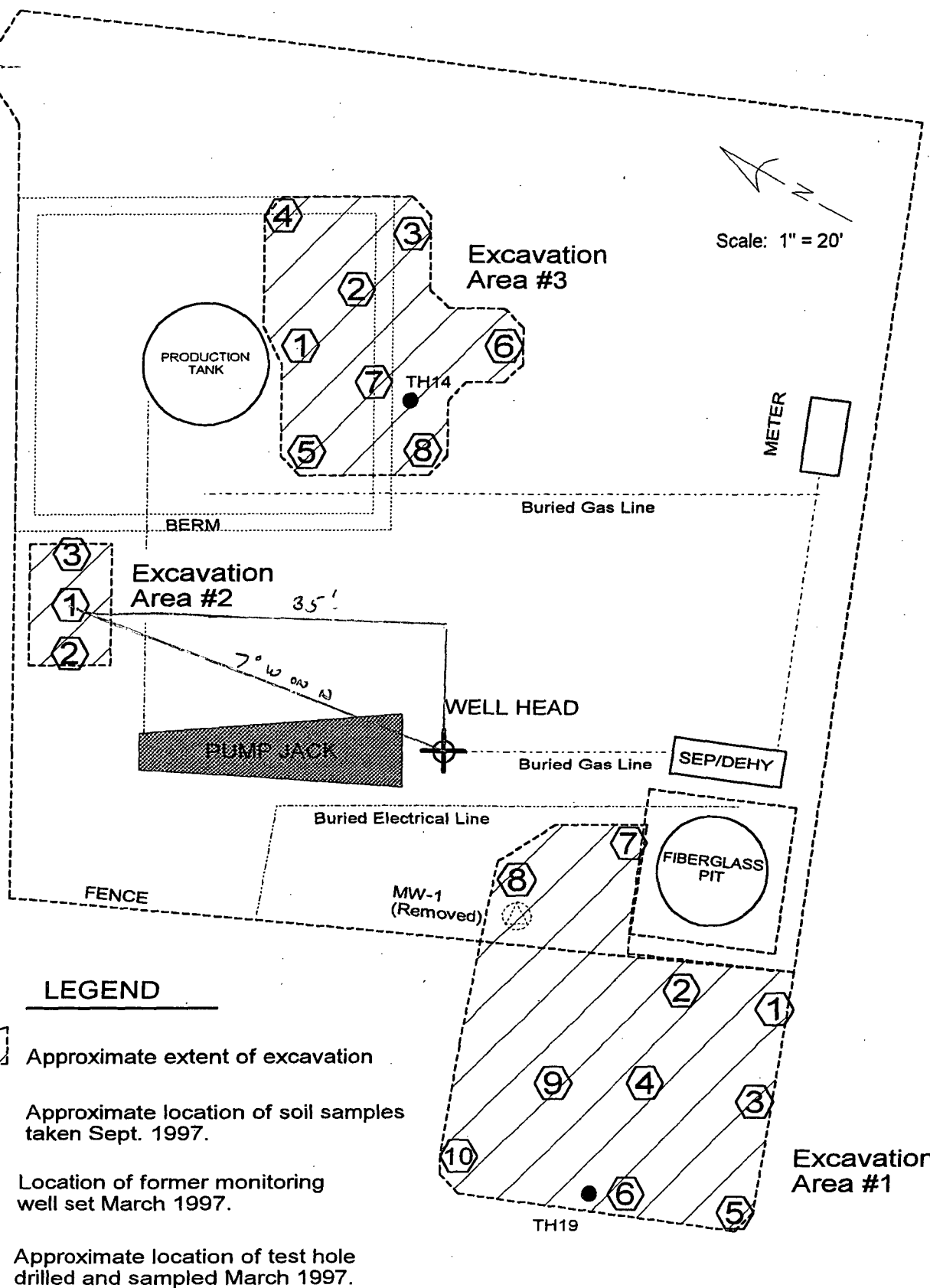
FIGURE: A-1


FILE: 41303S4.CAD

PROJECT: SITE RECLAMATION

ON SITE TECHNOLOGIES, LTD.

P.O. BOX 2606, FARMINGTON, NM 87499  
(505) 325-5667



FARMINGTON "C" COM #1 Unit L, S15, T29W, R13W SAN JUAN BASIN, NM		SITE SKETCH		 ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667
		DRWN: 11-03-97		
PROJECT NO: 4-1373		DRWN BY: MKL		
FIGURE: A-1	FILE: 41303S4.CAD	PROJECT: SITE RECLAMATION		

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State of New Mexico  
Energy Minerals and Natural Resources

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1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit 1 copy to  
appropriate  
District Office  
and 1 copy to  
the Santa Fe Office

(Revised 3/9/94)

## PIT REMEDIATION AND CLOSURE REPORT

Operator: ConocoPhillips

Telephone: (505) 599-3400

Address: 5525 US Hwy. 64, Farmington, NM 87401

Well Name: Farmington C Com 1

Location: Unit or Qtr/Qtr Sec: Unit L Sec 15 T 29N R 13W County San Juan, NM

Pit Type: Separator \_\_\_\_\_ Dehydrator \_\_\_\_\_ Other Tank Drain Pit Excavation 3

Land Type: BLM \_\_\_\_\_, State \_\_\_\_\_, Fee \_\_\_\_\_ Other Private

Pit Location: Pit dimensions: length 40', width 25', depth 7'  
(Attach diagram)

Reference: wellhead X, other \_\_\_\_\_

Footage from reference: Approximately 55'

Direction from reference: Approximately 45 Degrees East of North

Depth To Ground Water	Less than 50 feet	Yes	(20 points)
(Vertical distance from	50 feet to 99 feet		(10 points)
contaminants to seasonal	Greater than 100 feet		( 0 points) <u>20</u>
high water elevation of			
ground water.)			

Wellhead Protection Area:	NO	(20 points)
(Less than 200 feet from a private		( 0 points) <u>0</u>
domestic water source, or; less than		
1000 feet from all other water sources.)		

Distance To Surface Water:	Less than 200 feet	(20 points)
(Horizontal distance to perennial	200 feet to 1000 feet	(10 points)
lakes, ponds, rivers, streams, creeks,	Greater than 1000 feet	Yes ( 0 points) <u>0</u>
irrigation canals and ditches.)		

RANKING SCORE (TOTAL POINTS): 20

Date Remediation Started: 1997 Date completed 9/17/02

Remediation Method: Excavation X Approx. cubic yards 179

(Check all appropriate  
sections.)

Landfarmed \_\_\_\_\_

Insitu Bioremediation \_\_\_\_\_

Other Disposed at Envirotech OCD landfarm



Remediation Location: Onsite \_\_\_\_\_ Offsite: ☒   
(i.e. landfarmed onsite,   
name and location of   
offsite facility) Envirotech Landfarm #2

General Description of Remedial Action: The tank drain pit was excavated and approximately 179 cubic yards of contaminated soil was removed from the site, and disposed of it properly. The excavation was backfilled with clean imported material. Monitoring wells were installed to monitor ground water quality. Refer to Conoco Annual Ground Water Report 2002 for ground water sample results

Ground Water Encountered: No \_\_\_\_\_ Yes: ☒ Depth: Approximately seven feet.

Final Pit:   
Closure Sampling:   
(if multiple samples,   
attach sample results   
and diagram of sample   
locations and depths)

Sample location: Refer to Farmington C Com #1 Excavation Summary. (On Site Technologies, 11/26/97 for soil sample results. Refer to Conoco Annual Ground Water Report 2002 for ground water sample results

Sample depth \_\_\_\_\_

Sample Date \_\_\_\_\_ Sample time \_\_\_\_\_

Sample Results

Benzene(ppm) \_\_\_\_\_

Total BTEX(ppm) \_\_\_\_\_

Field headspace(ppm) \_\_\_\_\_

Ground Water Sample:

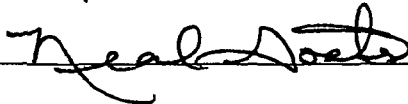
TPH \_\_\_\_\_

Yes ☒ No \_\_\_\_\_ (If yes, attach sample results)

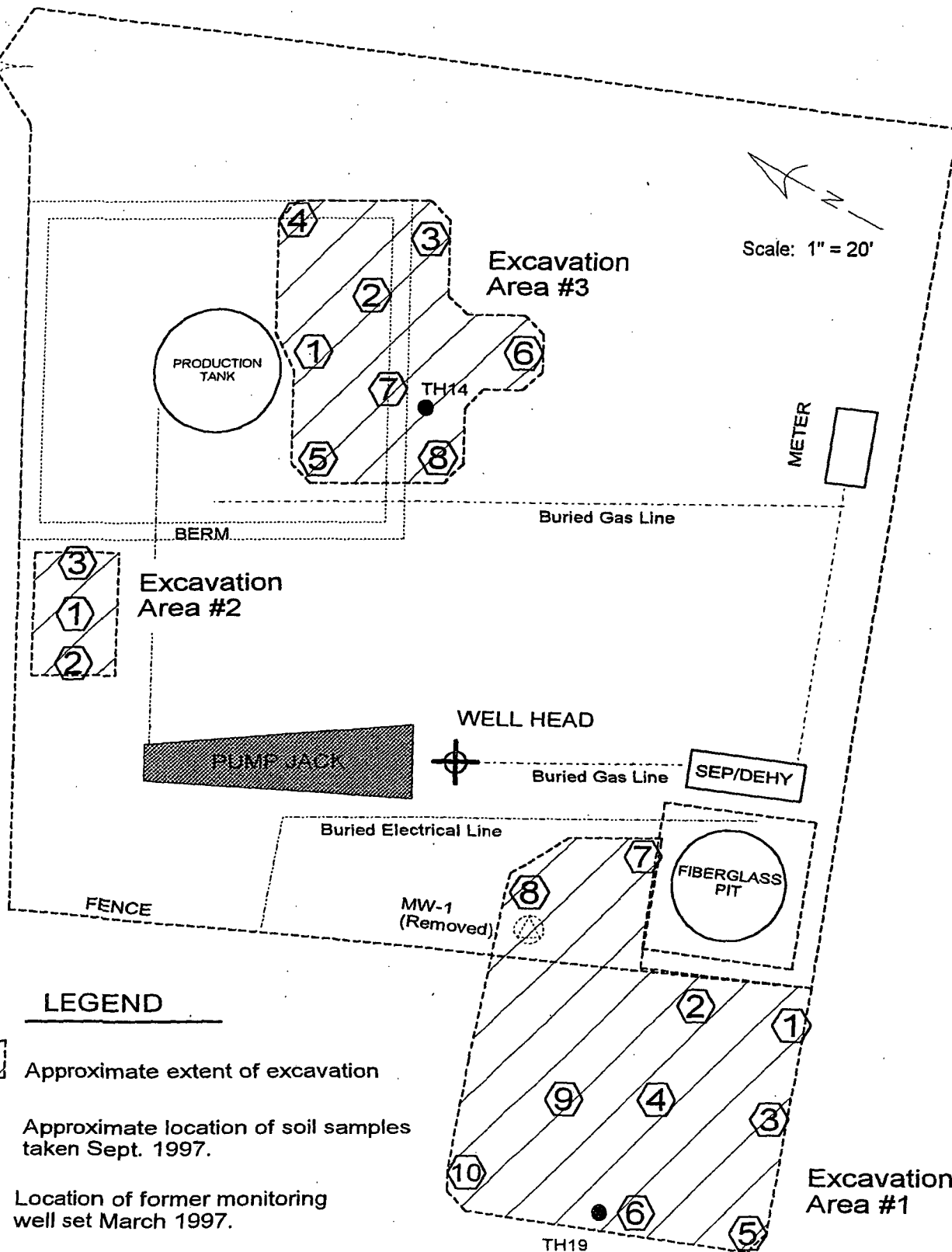
I hereby certify that the information above is true and complete to the best of my knowledge and belief.


Date: 2/26/03

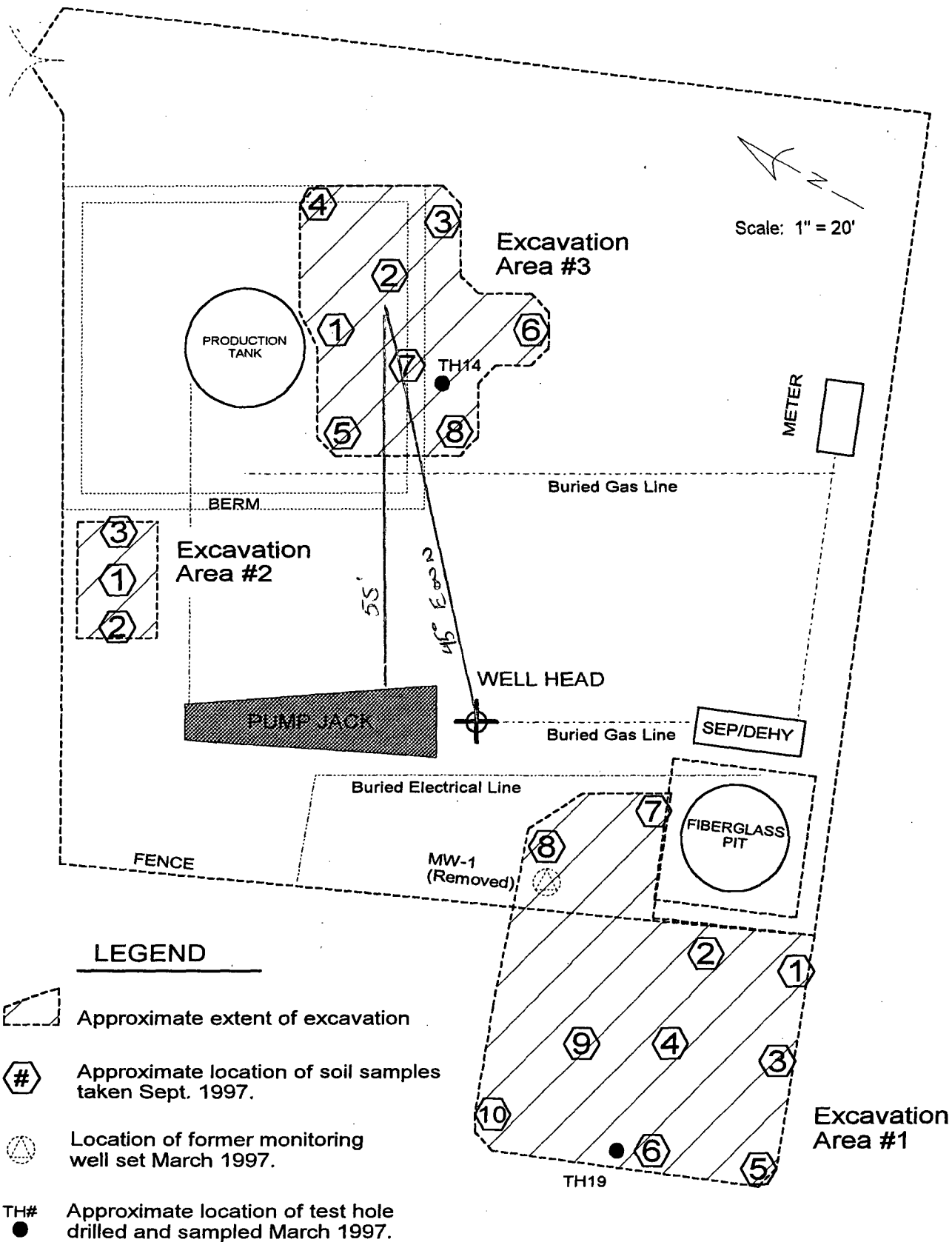
Signature



Printed Name: Neal Goates   
and Title: RM&R Site Manager



FARMINGTON "C" COM #1 Unit L, S15, T29W, R13W SAN JUAN BASIN, NM		SITE SKETCH		 ON SITE TECHNOLOGIES, LTD. P.O. BOX 2606, FARMINGTON, NM 87499 (505) 325-5667
		DRWN: 11-03-97		
PROJECT NO: 4-1373		DRWN BY: MKL		
FIGURE: A-1	FILE: 41303S4.CAD	PROJECT: SITE RECLAMATION		



FARMINGTON "C" COM #1  
Unit L, S15, T29W, R13W  
SAN JUAN BASIN, NM

## SITE SKETCH

DRWN: 11-03-97

PROJECT NO: 4-1373

DRWN BY: MKL

FIGURE: A-1

FILE: 41303S4.CAD

PROJECT: SITE RECLAMATION





February 18, 2003

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

RE: 2002 Annual Ground Water Report  
ConocoPhillips Location: Farmington C Com 1  
Unit L, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM  
Project No.: 4-1373

Dear Mr. Goates:

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

**SUMMARY OF 2002 ACTIVITIES:**

Ground water sampling was conducted during March, and June, of 2001. Water levels were measured in each ground water monitoring well and the piezometer. Ground water samples were taken from MW#1 for laboratory analysis. Sampling for closure was conducted in September 2002.

MW-1 had BTEX levels at or below New Mexico Water Quality Commission (NMWQCC) levels for the last four quarters. Sampling for closure of all sampling points at this location was conducted during September 2002. Laboratory analysis showed BTEX levels at or below New Mexico Water Quality Commission (NMWQCC) standards.

**SAMPLING:**

Following the approved monitoring plan, during each sampling event, water levels were measured on all monitoring wells prior to purging and sampling. Samples were collected in laboratory supplied containers, preserved as needed, and proper chain-of-custody protocol followed. Laboratory analyses ordered followed the monitoring plan.

Table 1 summarizes the monitoring well data and water levels measured during each sampling event. Table 2 summarizes the laboratory results for BTEX compounds from all water sampling completed at the referenced site, including assessment data.

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

Tel. (505) 325-5667 Fax (505) 327-1496  
P. O. BOX 2606 • FARMINGTON, NM 87499

-TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT-

**SUMMARY AND CONCLUSIONS:**

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

1. MW-1 BTEX levels have dropped below New Mexico Water Quality Control Commission (NMWQCC) standards for the last four sampling events.
2. Sampling for closure has been conducted and BTEX levels are below New Mexico Water Quality Commission standards

**RECOMMENDATIONS:**

1. Final Pit Closure form be filed with NMOCD.
2. When Final Pit Closure is approved, all monitor wells at the referenced site be abandoned following current OCD regulations.

**LIMITATIONS AND CLOSURE:**

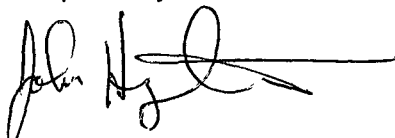
This annual ground water report documents the results of ground water monitoring for the referenced Conoco well location during the calendar year 2002. This report follows the monitoring plan, dated October 15, 1997.

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

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

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

Respectfully submitted,



John Hagstrom  
Environmental Technician

Reviewed by:



Lawrence "Larry" Trujillo, CHMM  
Environmental Specialist

**SOUDER MILLER AND ASSOCIATES**

Attachments: Table 1: Monitoring Well Details and Ground Water Levels Summary  
Table 2: Ground Water BTEX Analytical Summary  
Figure 1: Site Sketch  
Figures: 2, 3, & 4: Ground Water Potentiometric Map  
Laboratory results, QA/QC, Chain of Custody

Acknowledgment:  
CONOCOPHILLIPS, Inc.

Neal Goates / Site Manager  
(Name/Title)  
2-21-03  
(Date)

JPH/jph: 41374-02.doc

**REFERENCES:**

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

*On Site Technologies, Ltd., November 26, 1997: Letter to Mr. Neal Goates, Senior Environmental Specialist, Conoco, Inc. Midland Division, regarding: Remediation Summary, Conoco Location, Farmington C Com #1, Unit L, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM.*

*On Site Technologies, Ltd., February 1, 1997: Letter to Ms. Shirley Ebert, Field SHEAR Specialist Conoco, Inc. Midland Division, regarding: 1997 Annual Ground Water Report, Conoco Location, Farmington C Com #1, Unit L, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM.*

*On Site Technologies, Ltd., January 5, 1999: Letter to Ms. Shirley Ebert, Field SHEAR Specialist Conoco, Inc. Midland Division, regarding: 1997 Annual Ground Water Report, Conoco Location, Farmington C Com #1, Unit L, Sec. 15, T29N, R13W, NMPM, San Juan Co., NM*

Table 1  
Groundwater Elevation Summary  
Farmington C-Com 1  
Unit L, 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#1	99.87	8.87	2" PVC	3.0 to 8.0	12/4/97	6.63	93.24
					3/12/98	6.51	93.36
					6/11/98	7.18	92.69
					9/17/98	7.99	91.88
					12/21/98	6.17	93.70
					3/2/99	6.52	93.35
					6/16/99	7.27	92.60
					9/14/99	7.29	92.58
					12/14/99	6.51	93.36
					3/13/00	6.49	93.38
					6/5/00	7.37	92.50
					9/11/00	NMW	
					01/23/01	6.21	93.66
					3/20/01	5.9	94.62
MW-1R	100.52	13.0	2" PVC	3.0 to 13.0	8/10/01	8.0	92.52
					9/18/01	8.76	91.76
					12/13/01	6.89	93.63
					3/12/02	6.6	93.92
					6/19/02	8.29	92.23
					9/17/02	7.75	92.77

BGS - approximate measurements taken as Below Ground Surface  
 BTOC - Below Top of Casing  
 NM - Not Measured  
 Re Survey 2/16/02



Table 1  
Groundwater Elevation Summary  
Farmington C-Com 1  
Unit L, 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#2	100.25	7.70	2" PVC	2.7 to 7.7	12/5/97	6.48	93.77
					3/12/98	6.63	93.62
					6/11/98	7.07	93.18
					9/17/98	No Measurable Water	
					12/21/98	6.21	94.01
					3/2/99	6.92	93.35
					6/16/99	7.31	92.94
					9/14/99	7.42	92.83
					12/14/99	6.61	93.64
					3/13/00	6.70	93.55
					6/5/00	7.45	92.80
					9/11/00	NMW	
					12/14/99	6.71	94.40
					01/23/01	6.29	93.96
MW#2	100.58				3/20/01	6.02	94.56
					6/14/01	7.36	93.22
					9/18/01	NMW	
					12/13/01	6.33	94.25
					3/12/02	6.43	94.15
					6/19/02	NMW	
					9/17/02	6.71	93.87

BGS - approximate measurements taken as Below Ground Surface

BTOC - Below Top of Casing

NM - Not Measured

Re-Survey 2/16/02

Table 1

BGS - approximate measurements taken as Below Ground Surface  
BTOC - Below Top of Casing  
NM - Not Measured  
Re Survey 2/16/02

Table 1  
Groundwater Elevation Summary  
Farmington C-Com 1  
Unit L, 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#4	99.69	8.51	2" PVC	3.51 to 8.51	12/5/97	6.43	93.26
					3/12/98	6.59	93.10
					6/11/98	7.32	92.37
					9/17/98	8.11	91.58
					12/21/98	6.32	93.37
					3/2/99	6.61	93.35
					6/16/99	7.59	92.37
					9/14/99	7.69	92.27
					12/14/99	6.60	93.36
					3/13/00	6.64	93.32
					6/5/00	7.72	92.24
					9/11/00	NMW	
					01/23/01	6.32	93.64
MW#4	100.0				3/20/01	6.09	93.91
					6/14/01	7.62	92.38
					9/18/01	8.26	91.74
					12/13/01	6.44	93.56
					3/12/02	6.41	93.59
					6/19/02	8.23	91.77
					9/17/02	7.39	92.61

BGS - approximate measurements taken as Below Ground Surface  
BTOC - Below Top of Casing  
NM - Not Measured  
Re Survey 2/16/02

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)
Piezometer	99.35	9.35	2" PVC	9.35 to 3.35	12/21/98	5.96	91.82
					3/2/99	6.39	91.40
					6/16/99	7.31	90.48
					9/14/99	7.34	90.45
					12/14/99	6.32	91.47
					3/13/00	6.37	91.42
					6/5/00	7.48	90.31
					9/11/00	NMW	
					01/23/01	6.01	93.34
Piezometer	99.76				3/20/01	5.76	94.0
					6/14/01	7.31	92.45
					9/18/01	7.84	91.51
					12/13/01	6.8	92.96
					3/12/02	6.6	93.16
					6/19/02	7.79	91.97
					9/17/02	6.96	92.8

**BGS** - approximate measurements taken as Below Ground Surface

BTOC - Below Top of Casing

NM - Not Measured

Re Survey 2/16/02

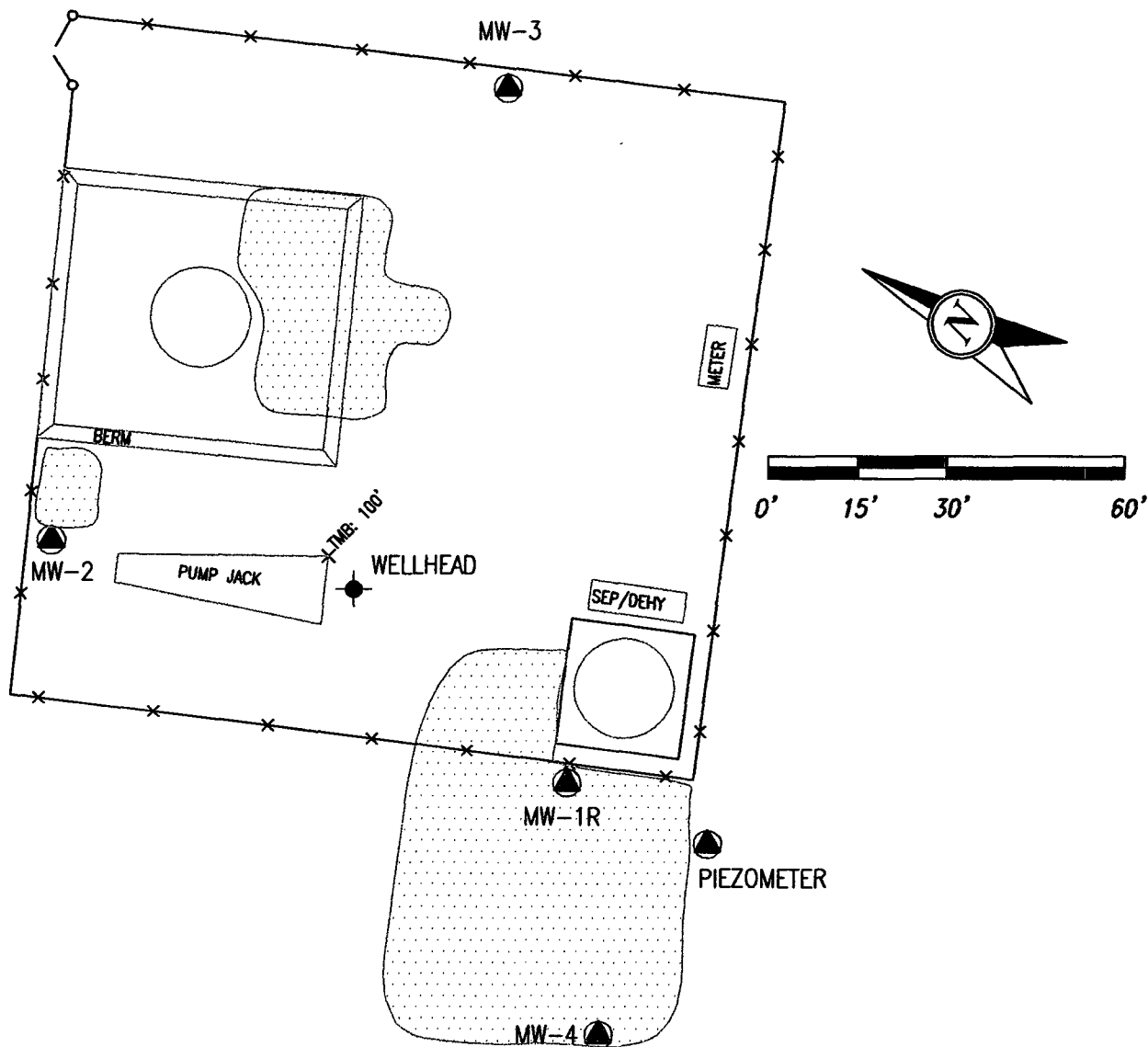
Table 2  
BTEX Analytical Summary  
Farmington C-COM 1  
Unit L, Sec. 15, T29N, R13W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)			
				Benzene	Toluene	Ethylbenzene	Total Xylene
12/4/97	17043	#1	On Site Lab.	109.1	1.0	91.0	77.7
3/12/98	9803039-01A			67.0	1.2	150.0	25.0
6/11/98	9806041-01A			51.0	0.7	25.0	1.4
9/18/98	9809051-02A			74.0	BDL	13.0	86
12/21/98	9812047-01A			76.0	BDL	78.0	120.0
3/2/99	990310-01A			92.0	1.2	82.0	30.0
6/16/99	9906060-01A			110.0	1.6	110.0	2.7
9/14/99	9909046-01A			41.0	1.1	BDL	20.4
12/14/99	9912017-01A			46.0	1.3	70.0	51.5
3/13/00	0003020-01A			64.0	1.4	94.0	81.0
6/5/00	0006008-01A			BDL	BDL	BDL	24.0
9/11/00			No Measurable	Water			
01/23/01	0101030-01A			93.0	1.2	92.0	121.1
3/20/01	0103019-01A			110	1.2	20.0	140.0
8/10/01	0108011-01A	#1R		1.2	BDL	1.6	2.0
9/18/01	0109019-01A			10.0	BDL	3.7	4.3
12/13/01	0112013-01A			1.8	BDL	1.4	1.6
3/12/02	0203021-01A			1.5	BDL	0.5	1.4
6/19/02	0206029-01A			1.7	BDL	1.2	1.3
9/17/02	0209016-01A			0.94	BDL	BDL	BDL
12/4/97	17044	#2	On Site Lab.	0.4	BDL	BDL	BDL
3/12/98	9803039-02A			BDL	BDL	BDL	BDL
6/11/98				BDL	BDL	BDL	BDL
			insufficient	water	to	sample	
9/17/02	0209016-02A			BDL	BDL	BDL	BDL
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0


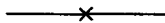

Table 2  
BTEX Analytical Summary  
Farmington C-COM 1  
Unit L, Sec. 15, T29N, R13W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)				
12/5/97	17046	#3	On Site Lab.	BDL	0.3	BDL	0.2	BDL
3/12/98	9803039-03A			BDL	BDL	BDL	BDL	BDL
6/11/98	9806040-01A			BDL	BDL	BDL	BDL	BDL
9/18/98	9809051-03A			BDL	BDL	BDL	BDL	BDL
9/17/02	0209016-03A			BDL	BDL	BDL	BDL	BDL
12/5/97	17047	#4	On Site Lab.	Benzene	Toluene	Ethylbenzene	Total Xylene	
03/12/98	9803039-04A			0.7	1.5	2.2	3.7	
6/11/98	9806041-03A			BDL	BDL	1.8	8.1	
9/18/98	9809051-01A			BDL	0.8	1.2	BDL	
9/17/02	0209016-04A			BDL	BDL	BDL	BDL	
12/21/98		Piezometer	On Site Lab.	BDL	BDL	BDL	BDL	
9/17/02	0209016-05A			BDL	BDL	BDL	BDL	
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0	

BDL Below Detection Levels



#### LEGEND

-  MONITORING WELL LOCATIONS
-  FENCE
-  SPILL EXTENTS (APPROXIMATE)

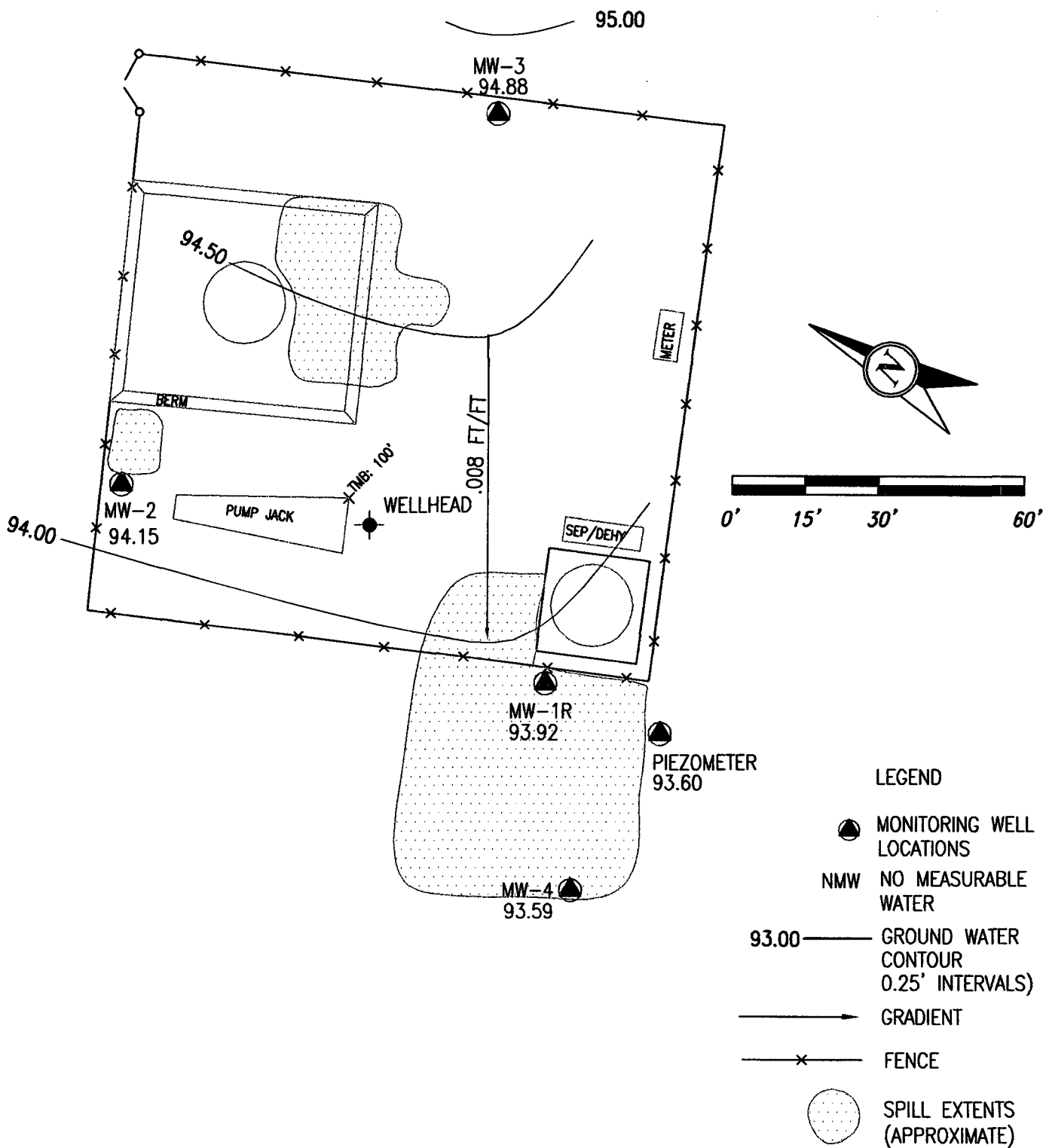


Civil / Environmental  
Scientists & Engineers  
612 E. MURRAY DR. PH. (505) 325-5687  
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:	DATE:
DRWN BY: JNAKAI	DATE: 2/24/03
CHK'D BY:	DATE:
PROJECT NO: 4-1373	SHEET: 1 OF 4

#### SITE SKETCH

FARMINGTON "C" COM #1  
UNIT 1, SEC. 15, T29N, R13W, NMPM  
SAN JUAN BASIN, NEW MEXICO



Civil / Environmental  
Scientists & Engineers

612 E. MURRAY DR. PH. (505) 325-5667  
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:

DRWN BY: JNAKAI

CHK'D BY:

PROJECT NO: 4-1373

DATE:

DATE: 2/24/03

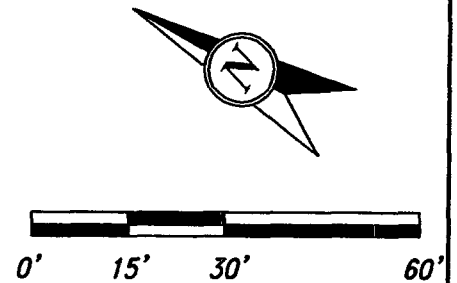
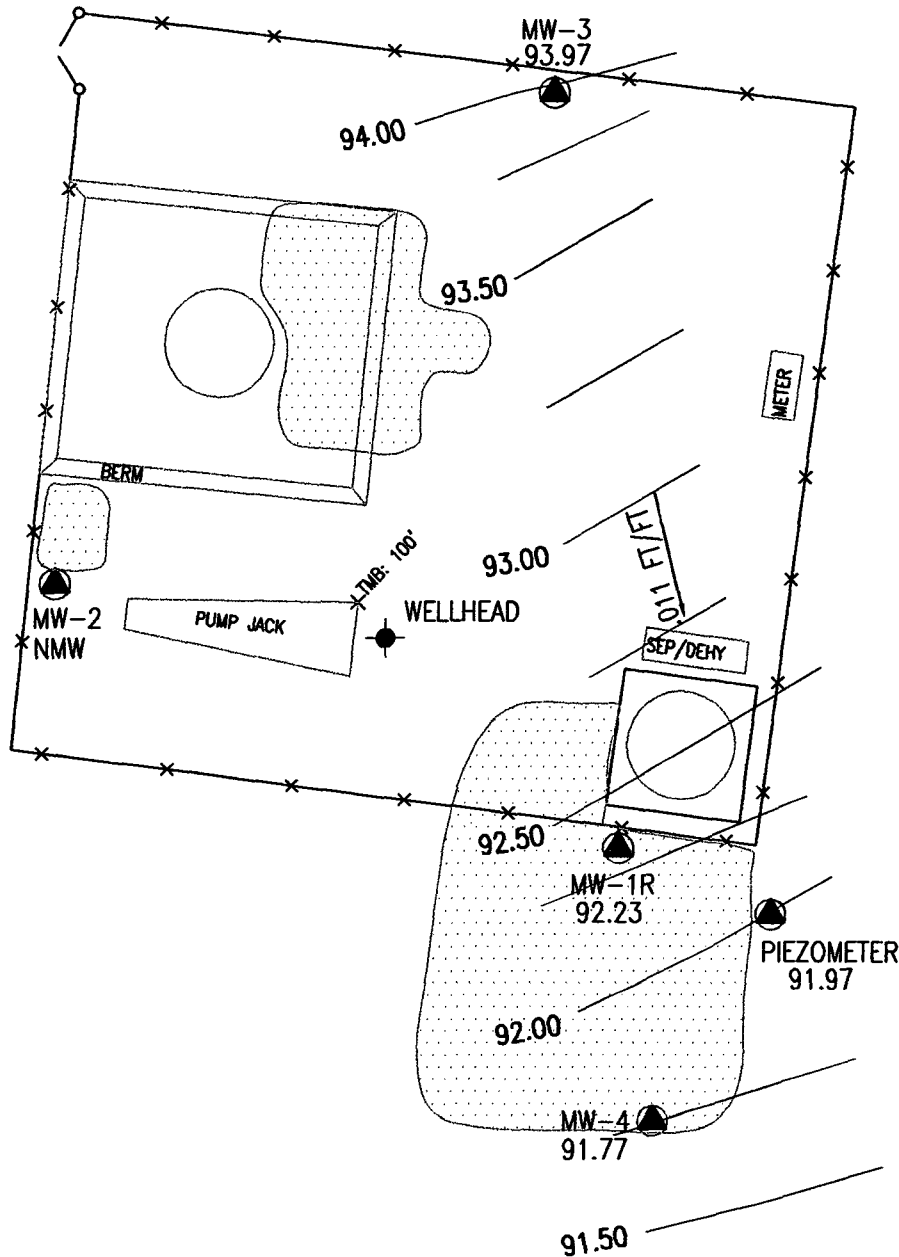
DATE:

SHEET: 2 OF 4

GROUND WATER POTENTIOMETRIC MAP  
MARCH 12, 2002

FARMINGTON "C" COM #1  
UNIT 1, SEC. 15, T29N, R13W, NMPM  
SAN JUAN BASIN, NEW MEXICO





#### LEGEND

- MONITORING WELL LOCATIONS
- NMW NO MEASURABLE WATER
- 93.00 — GROUND WATER CONTOUR (0.25' INTERVALS)
- GRADIENT
- FENCE
- SPILL EXTENTS (APPROXIMATE)



612 E. MURRAY DR. PH. (505) 325-5667  
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:

DRWN BY: JNAKAI

CHK'D BY:

PROJECT NO: 4-1373

DATE:

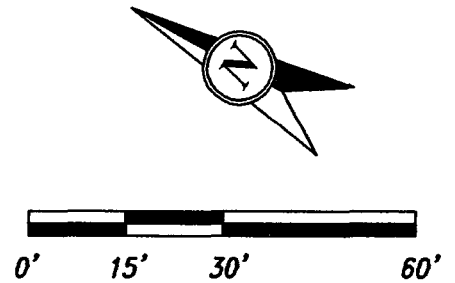
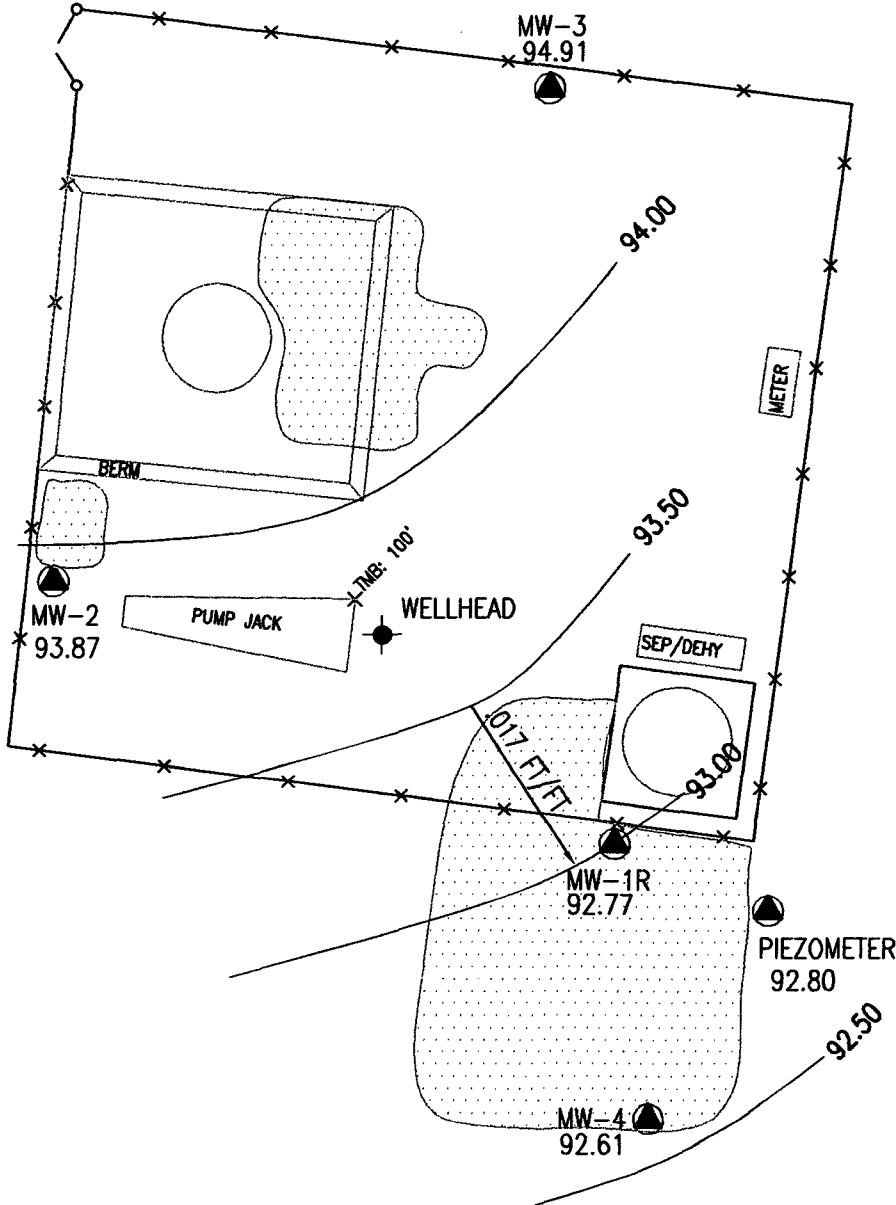
DATE: 2/24/02

DATE:

SHEET: 3 OF 4

GROUND WATER POTENTIOMETRIC MAP  
JUNE 19, 2002

FARMINGTON "C" COM #1  
UNIT L, SEC. 15, T29N, R13W, NMPM  
SAN JUAN BASIN, NEW MEXICO



#### LEGEND

- MONITORING WELL LOCATIONS
- NMW NO MEASURABLE WATER
- 93.00 — GROUND WATER CONTOUR 0.25' INTERVALS)
- GRADIENT
- FENCE
- SPILL EXTENTS (APPROXIMATE)



612 E. MURRAY DR. PH. (505) 325-5667  
FARMINGTON, NM 87401 FAX (505) 327-1496

APPROVED:

DRWN BY: JNAKAI

CHK'D BY:

PROJECT NO: 4-1373

DATE:

DATE: 2/24/03

DATE:

SHEET: 4 OF 4

GROUND WATER POTENTIOMETRIC MAP  
SEPTEMBER 17, 2002

FARMINGTON "C" COM #1  
UNIT 1, SEC. 15, T29N, R13W, NMPM  
SAN JUAN BASIN, NEW MEXICO

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



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

March 18, 2002

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

RE: 4-1373; Conoco "C" Com 1

Order No.: 0203021

Dear John Hagstrom,

On Site Technologies, LTD. received 1 sample on 03/12/2002 for the analyses presented in the following report.

The Samples were analyzed for the following tests:  
Aromatic Volatiles by GC/PID (SW8021B)

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

If you have any questions regarding these 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:** 18-Mar-02

---

**CLIENT:** On Site Technologies Limited  
**Project:** 4-1373; Conoco "C" Com 1  
**Lab Order:** 0203021

---

**CASE NARRATIVE**

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

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

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

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

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FAX: (505) 327-1496



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

## ANALYTICAL REPORT

Date: 18-Mar-02

<b>Client:</b>	On Site Technologies Limited	<b>Client Sample Info:</b>	Conoco "C" Com 1
<b>Work Order:</b>	0203021	<b>Client Sample ID:</b>	MW 1
<b>Lab ID:</b>	0203021-01A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	4-1373; Conoco "C" Com 1	<b>Collection Date:</b>	03/12/2002 1:45:00 PM
		<b>COC Record:</b>	11821

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: HNR		
Benzene	1.5	0.5		µg/L	1	03/17/2002
Toluene	ND	0.5		µg/L	1	03/17/2002
Ethylbenzene	0.5	0.5		µg/L	1	03/17/2002
m,p-Xylene	1.4	1		µg/L	1	03/17/2002
o-Xylene	ND	0.5		µg/L	1	03/17/2002

**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

Surrogate - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

TECHNOLOGIES, LTD. SERVING THE ENVIRONMENT

# On Site Technologies, LTD.

Date: 18-Mar-02

CLIENT: On Site Technologies Limited  
 Work Order: 0203021  
 Project: 4-1373; Conoco "C" Com 1

## QC SUMMARY REPORT

Method Blank

Sample ID: MB_020317	Batch ID: GC-1_020317	Test Code: SW8021B	Units: µg/L	Analysis Date: 03/17/2002	Prep Date:						
Client ID:	0203021	Run ID: GC-1_020317A		SeqNo: 48743							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.5									J
Ethylbenzene	.0837	0.5									
m,p-Xylene	ND	1									
Methyl tert-Butyl Ether	.2475	1									J
o-Xylene	ND	0.5									
Toluene	.1165	0.5									J
1,4-Difluorobenzene	104.6	0									
4-Bromochlorobenzene	114.9	0									
Fluorobenzene	105	0									

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

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

B - Analyte detected in the associated Method Blank

# On Site Technologies, LTD.

Date: 18-Mar-02

CLIENT: On Site Technologies Limited  
 Work Order: 0203021  
 Project: 4-1373; Conoco "C" Com 1

## QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0203007-03AMS		Batch ID: GC-1_020317		Test Code: SW8021B		Units: µg/L		Analysis Date: 03/17/2002		Prep Date:	
Client ID: 0203021		Run ID: GC-1_020317A		SeqNo: 48744							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	48.42	0.5	40	10.27	95.4%	70	130				
Ethylbenzene	68.92	0.5	40	29.88	97.6%	70	130				
m,p-Xylene	309.5	1	80	220.2	111.6%	70	130				E
Methyl tert-Butyl Ether	39.75	1	40	0.2069	98.9%	70	130				
o-Xylene	157.9	0.5	40	116.5	103.5%	70	130				
Toluene	57.03	0.5	40	19.27	94.4%	70	130				
1,4-Difluorobenzene	104	0	110	0	94.6%	70	130				
4-Bromochlorobenzene	122.1	0	110	0	111.0%	70	130				
Fluorobenzene	104.2	0	110	0	94.7%	70	130				

Sample ID: 0203007-03AMSD		Batch ID: GC-1_020317		Test Code: SW8021B		Units: µg/L		Analysis Date: 03/17/2002		Prep Date:	
Client ID: 0203021		Run ID: GC-1_020317A		SeqNo: 48745							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	47.88	0.5	40	10.27	94.0%	70	130	48.42	1.1%	15	
Ethylbenzene	68.11	0.5	40	29.88	95.6%	70	130	68.92	1.2%	15	
m,p-Xylene	305.8	1	80	220.2	107.0%	70	130	309.5	1.2%	15	E
Methyl tert-Butyl Ether	40.03	1	40	0.2069	99.6%	70	130	39.75	0.7%	15	
o-Xylene	156.6	0.5	40	116.5	100.2%	70	130	157.9	0.9%	15	
Toluene	56.36	0.5	40	19.27	92.7%	70	130	57.03	1.2%	15	
1,4-Difluorobenzene	104.4	0	110	0	94.9%	70	130	0	0.0%	0	
4-Bromochlorobenzene	121.6	0	110	0	110.5%	70	130	0	0.0%	0	
Fluorobenzene	104.2	0	110	0	94.7%	70	130	0	0.0%	0	

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

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

B - Analyte detected in the associated Method Blank

# On Site Technologies, LTD.

Date: 18-Mar-02

CLIENT: On Site Technologies Limited  
 Work Order: 0203021  
 Project: 4-1373; Conoco "C" Com 1

## QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020317		Batch ID: GC-1_020317		Test Code: SW8021B		Units: µg/L		Analysis Date: 03/17/2002		Prep Date:	
Client ID:		0203021		Run ID:		GC-1_020317A		SeqNo: 48742			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	37.93	0.5	40	0	94.8%	80	120				
Ethylbenzene	38.98	0.5	40	0.0837	97.3%	80	120				
m,p-Xylene	77.37	1	80	0	96.7%	80	120				
Methyl tert-Butyl Ether	40.34	1	40	0.2475	100.2%	80	120				
o-Xylene	38.69	0.5	40	0	96.7%	80	120				
Toluene	37.58	0.5	40	0.1165	93.7%	80	120				
1,4-Difluorobenzene	104.2	0	110	0	94.8%	70	130				
4-Bromochlorobenzene	120.9	0	110	0	109.9%	70	130				
Fluorobenzene	104.5	0	110	0	95.0%	70	130				

### Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



# On Site Technologies, LTD.

Date: 18-Mar-02

CLIENT: On Site Technologies Limited  
Work Order: 0203021  
Project: 4-1373; Conoco "C" Com 1

## QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020317	Batch ID: GC-1_020317	Test Code: SW8021B	Units: µg/L	Analysis Date: 03/17/2002				Prep Date:					
Client ID:	0203021	Run ID:	GC-1_020317A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result												
Benzene	19.12		0.5		20	0	95.6%	85	115				
Ethylbenzene	21.5		0.5		20	0	107.5%	85	115				
m,p-Xylene	40.95		1		40	0	102.4%	85	115				
Methyl tert-Butyl Ether	20		1		20	0	100.0%	85	115				
o-Xylene	19.54		0.5		20	0	97.7%	85	115				
Toluene	18.96		0.5		20	0	94.8%	85	115				
1,4-Difluorobenzene	104.5		0		110	0	95.0%	70	130				
4-Bromochlorobenzene	123.2		0		110	0	112.0%	70	130				
Fluorobenzene	104.9		0		110	0	95.4%	70	130				

Sample ID: CCV2_020317	Batch ID: GC-1_020317	Test Code: SW8021B	Units: µg/L	Analysis Date: 03/17/2002				Prep Date:			
Client ID:	0203021	Run ID: GC-1_020317A			SeqNo: 48740						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.74	0.5	40	0	96.8%	85	115				
Ethylbenzene	39.5	0.5	40	0	98.7%	85	115				
m,p-Xylene	78.34	1	80	0	97.9%	85	115				
Methyl tert-Butyl Ether	40.45	1	40	0	101.1%	85	115				
o-Xylene	39.14	0.5	40	0	97.9%	85	115				
Toluene	38.14	0.5	40	0	95.4%	85	115				
1,4-Difluorobenzene	104.6	0	110	0	95.1%	70	130				
4-Bromochlorobenzene	121.6	0	110	0	110.6%	70	130				
Fluorobenzene	105	0	110	0	95.5%	70	130				

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

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

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited  
 Work Order: 0203021  
 Project: 4-1373; Conoco "C" Com 1

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3\_020317 Batch ID: GC-1\_020317 Test Code: SW8021B Units: µg/L  
 Client ID: 0203021 Run ID: GC-1\_020317A

Prep Date:

Analysis Date: 03/17/2002

SeqNo: 48741

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.16	0.5	20	0	95.8%	85	115				
Ethylbenzene	19.5	0.5	20	0	97.5%	85	115				
m,p-Xylene	38.58	1	40	0	96.4%	85	115				
Methyl tert-Butyl Ether	19.98	1	20	0	99.9%	85	115				
o-Xylene	19.22	0.5	20	0	96.1%	85	115				
Toluene	18.89	0.5	20	0	94.4%	85	115				
1,4-Difluorobenzene	104.8	0	110	0	95.3%	70	130				
4-Bromochlorobenzene	121	0	110	0	110.0%	70	130				
Fluorobenzene	104.8	0	110	0	95.3%	70	130				

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

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

B - Analyte detected in the associated Method Blank

On Site Technologies, LTD.

Date: 18-Mar-02

CLIENT: On Site Technologies Limited  
Work Order: 0203021  
Project: 4-1373; Conoco "C" Com 1  
Test No: SW8021B

## QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0203006-01A	96	110	96.5
0203007-03A	95.4	110	95.6
0203007-03AMS	94.6	111	94.7
0203007-03AMSD	94.9	110	94.7
0203014-01A	96.7	110	97.4
0203014-02A	96.5	109	96.7
0203016-01A	93.6	108	94
0203016-02A	87.2	104	88.3
0203021-01A	96.5	110	96.8
0203022-01A	93.6	110	94.4
0203022-02A	85.9	103	92
0203022-03A	96.2	111	96.5
0203023-01A	85.9	101	91.9
CCV1_020317	95	112	95.4
CCV2_020317	95.1	110	95.5
CCV3_020317	95.3	110	95.3
LCS_020317	94.8	110	95
MB_020317	95.1	104	95.5

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

\* Surrogate recovery outside acceptance limits



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

Date: 3/1/2008 Page: 1 of 1

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

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

July 10, 2002

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

RE: 4-1373; Conoco C Com 1

Order No.: 0206029

Dear John Hagstrom,

On Site Technologies, LTD. received 1 sample on 06/19/2002 for the analyses presented in the following report.

The Samples were analyzed for the following tests:

Aromatic Volatiles by GC/PID (SW8021B)

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

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

Sincerely,

A handwritten signature in black ink, appearing to be 'DC' or 'D Cox', written in a cursive style.

David Cox

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



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

**On Site Technologies, LTD.**

**Date:** 10-Jul-02

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**CLIENT:** On Site Technologies Limited  
**Project:** 4-1373; Conoco C Com 1  
**Lab Order:** 0206029

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**CASE NARRATIVE**

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

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

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

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

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## ANALYTICAL REPORT

Date: 10-Jul-02

<b>Client:</b>	On Site Technologies Limited	<b>Client Sample Info:</b>	Conoco C Com 1
<b>Work Order:</b>	0206029	<b>Client Sample ID:</b>	MW-1
<b>Lab ID:</b>	0206029-01A	<b>Matrix:</b>	AQUEOUS
<b>Project:</b>	4-1373; Conoco C Com 1	<b>Collection Date:</b>	06/19/2002 2:30:00 PM
		<b>COC Record:</b>	11982

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
AROMATIC VOLATILES BY GC/PID		SW8021B		Analyst: DWC		
Benzene	1.7	0.5		µg/L	1	06/27/2002
Toluene	ND	0.5		µg/L	1	06/27/2002
Ethylbenzene	1.2	0.5		µg/L	1	06/27/2002
m,p-Xylene	1.3	1		µg/L	1	06/27/2002
o-Xylene	ND	0.5		µg/L	1	06/27/2002

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

P.O. BOX 2606 • FARMINGTON, NM 87499

EMAIL: ONSITE@ONSITELTD.COM

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT -

# On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited  
 Work Order: 0206029  
 Project: 4-1373; Conoco C Com 1

## QC SUMMARY REPORT

Method Blank

Sample ID: MB_020627	Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002	Prep Date: 06/27/2002
Client ID:	0206029	Run ID: GC-1_020627A		SeqNo: 52887	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	ND	0.5			
Ethylbenzene	ND	0.5			
m,p-Xylene	ND	1			
Methyl tert-Butyl Ether	ND	1			
o-Xylene	ND	0.5			
Toluene	.1054	0.5			
1,4-Difluorobenzene	107.6	0			
4-Bromochlorobenzene	118.6	0			
Fluorobenzene	109.7	0			J

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



# On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited  
 Work Order: 0206029  
 Project: 4-1373; Conoco C Com 1

## QC SUMMARY REPORT

Sample Matrix Spike

Sample ID: 0206041-01AMS		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID: 0206029		Run ID: GC-1_020627A		SeqNo: 52888							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1171	5	400	769.1	100.6%	70	130				
Ethylbenzene	763.9	5	400	352.2	102.9%	70	130				
m,p-Xylene	1554	10	800	774.5	97.4%	70	130				
Methyl tert-Butyl Ether	601.3	10	400	205	99.1%	70	130				
o-Xylene	474.6	5	400	88.25	96.6%	70	130				
Toluene	597.6	5	400	204.9	98.2%	70	130				
1,4-Difluorobenzene	1065	0	1100	0	96.8%	70	130				
4-Bromochlorobenzene	1210	0	1100	0	110.0%	70	130				
Fluorobenzene	1087	0	1100	0	98.8%	70	130				

Sample ID: 0206041-01AMSD		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID: 0206029		Run ID: GC-1_020627A		SeqNo: 52889							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1127	5	400	769.1	89.6%	70	130	1171	3.8%	15	
Ethylbenzene	735.7	5	400	352.2	95.9%	70	130	763.9	3.8%	15	
m,p-Xylene	1498	10	800	774.5	90.5%	70	130	1554	3.6%	15	
Methyl tert-Butyl Ether	591.9	10	400	205	96.7%	70	130	601.3	1.6%	15	
o-Xylene	460.1	5	400	88.25	93.0%	70	130	474.6	3.1%	15	
Toluene	574.8	5	400	204.9	92.5%	70	130	597.6	3.9%	15	
1,4-Difluorobenzene	1054	0	1100	0	95.9%	70	130	0	0.0%	0	
4-Bromochlorobenzene	1208	0	1100	0	109.8%	70	130	0	0.0%	0	
Fluorobenzene	1084	0	1100	0	98.5%	70	130	0	0.0%	0	

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

# On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited  
 Work Order: 0206029  
 Project: 4-1373; Conoco C Com 1

## QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID: LCS_020627		Batch ID: GC-1_020627		Test Code: SW8021B		Units: µg/L		Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID:		0206029		Run ID: GC-1_020627A				SeqNo: 52886			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	38.85	0.5	40	0	97.1%	80	120				
Ethylbenzene	39.46	0.5	40	0	98.7%	80	120				
m,p-Xylene	78.4	1	80	0	98.0%	80	120				
Methyl tert-Butyl Ether	39.58	1	40	0	99.0%	80	120				
o-Xylene	38.05	0.5	40	0	95.1%	80	120				
Toluene	37.88	0.5	40	0.1054	94.4%	80	120				
1,4-Difluorobenzene	106.6	0	110	0	97.0%	70	130				
4-Bromochlorobenzene	120.1	0	110	0	109.2%	70	130				
Fluorobenzene	108.9	0	110	0	99.0%	70	130				

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

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

B - Analyte detected in the associated Method Blank

# On Site Technologies, LTD.

Date: 10-Jul-02

CLIENT: On Site Technologies Limited  
 Work Order: 0206029  
 Project: 4-1373; Conoco C Com 1

## QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV1_020627		Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID: 0206029		Run ID: GC-1_020627A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	20.08		0.5	20	0	100.4%	85	115
Ethylbenzene	20.33		0.5	20	0	101.6%	85	115
m,p-Xylene	40.7		1	40	0	101.7%	85	115
Methyl tert-Butyl Ether	19.9		1	20	0	99.5%	85	115
o-Xylene	19.56		0.5	20	0	97.8%	85	115
Toluene	19.51		0.5	20	0	97.5%	85	115
1,4-Difluorobenzene	106.7		0	110	0	97.0%	70	130
4-Bromochlorobenzene	117.7		0	110	0	107.0%	70	130
Fluorobenzene	109.6		0	110	0	99.6%	70	130

Sample ID: CCV2_020627		Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002		Prep Date: 06/27/2002	
Client ID: 0206029		Run ID: GC-1_020627A	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit
Analyte	Result							
Benzene	19.17		0.5	20	0	95.9%	85	115
Ethylbenzene	19.37		0.5	20	0	96.9%	85	115
m,p-Xylene	38.18		1	40	0	95.4%	85	115
Methyl tert-Butyl Ether	18.95		1	20	0	94.7%	85	115
o-Xylene	18.69		0.5	20	0	93.5%	85	115
Toluene	18.54		0.5	20	0	92.7%	85	115
1,4-Difluorobenzene	109.1		0	110	0	99.2%	70	130
4-Bromochlorobenzene	123.6		0	110	0	112.4%	70	130
Fluorobenzene	111.7		0	110	0	101.6%	70	130

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

CLIENT: On Site Technologies Limited  
 Work Order: 0206029  
 Project: 4-1373; Conoco C Com 1

# QC SUMMARY REPORT

Continuing Calibration Verification Standard

Sample ID: CCV3_020627	Batch ID: GC-1_020627	Test Code: SW8021B	Units: µg/L	Analysis Date: 06/27/2002	Prep Date: 06/27/2002
Client ID: 0206029	Run ID: GC-1_020627A	PQL	SPK value	SPK Ref Val	%REC
Analyte	Result	QOL	SPK value	SPK Ref Val	%REC
Benzene	38.74	0.5	40	0	96.8%
Ethylbenzene	38.89	0.5	40	0	97.2%
m,p-Xylene	76.38	1	80	0	95.5%
Methyl tert-Butyl Ether	38.49	1	40	0	96.2%
o-Xylene	37.42	0.5	40	0	93.5%
Toluene	37.56	0.5	40	0	93.9%
1,4-Difluorobenzene	107.9	0	110	0	98.1%
4-Bromochlorobenzene	119.1	0	110	0	108.3%
Fluorobenzene	111.5	0	110	0	101.4%

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

**CLIENT:** On Site Technologies Limited  
**Work Order:** 0206029  
**Project:** 4-1373; Conoco C Com 1  
**Test No:** SW8021B

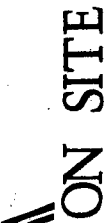
## QC SUMMARY REPORT SURROGATE RECOVERIES

Aromatic Volatiles by GC/PID

Sample ID	14FBZ	4BCBZ	FLBZ
0206028-01A	88	100	105
0206029-01A	99.2	109	102
0206030-01A	90.1	103	102
0206030-03A	96.5	111	100
0206031-02A	98.4	110	102
0206031-04A	92.1	107	95.5
0206039-01A	91.8	112	95.2
0206041-01A	96.6	110	99
0206041-01AMS	96.8	110	98.8
0206041-01AMSD	95.8	110	98.5
0206041-02A	98.1	112	101
0206048-01A	97.7	109	101
0206049-01A	97.6	106	100
0206049-02A	95.9	107	99.7
0206050-02A	99.5	113	102
0206052-01A	96.3	106	100
CCV1_020627	97	107	99.6
CCV2_020627	99.2	112	102
CCV3_020627	98.1	108	101
LCS_020627	97	109	99
MB_020627	97.8	108	99.8

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

\* Surrogate recovery outside acceptance limits



# CHAIN OF CUSTODY RECORD

1982

Date: 6/19/02

Page: 1 of 7

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[illegible]

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October 08, 2002

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

TEL: (505) 325-5667

FAX (505) 327-1496

RE: 4-1373; Conoco C "Com" 1

Order No.: 0209016

Dear John Hagstrom:

iina ba, Ltd. received 5 samples on 9/17/2002 for the analyses presented in the following report.

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

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

Sincerely,



David Cox

612 E. Murray Drive  
Farmington, NM 87401

Off: (505) 327-1072

*iiná bá*

P.O. Box 2606  
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Fax: (505) 327-1496

Date: 08-Oct-02

**CLIENT:** On Site Technologies Limited  
**Work Order:** 0209016  
**Project:** 4-1373; Conoco C "Com" 1  
**Lab ID:** 0209016-01A

**Client Sample Info:** Conoco C "Com" 1  
**Client Sample ID:** MW #1R  
**Collection Date:** 9/17/2002 9:40:00 AM  
**Matrix:** AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: HNR		
Benzene	0.94	0.50		µg/L	1	9/25/2002
Ethylbenzene	ND	0.50		µg/L	1	9/25/2002
m,p-Xylene	ND	1.0		µg/L	1	9/25/2002
o-Xylene	ND	0.50		µg/L	1	9/25/2002
Toluene	ND	0.50		µg/L	1	9/25/2002

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

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

Page 1 of 5

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT



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Date: 08-Oct-02

CLIENT: On Site Technologies Limited  
Work Order: 0209016  
Project: 4-1373; Conoco C "Com" 1  
Lab ID: 0209016-02A

Client Sample Info: Conoco C "Com" 1  
Client Sample ID: MW #2  
Collection Date: 9/17/2002 9:20:00 AM  
Matrix: AQUEOUS

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

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

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

Page 2 of 5

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Date: 08-Oct-02

CLIENT: On Site Technologies Limited  
Work Order: 0209016  
Project: 4-1373; Conoco C "Com" 1  
Lab ID: 0209016-03A

Client Sample Info: Conoco C "Com" 1  
Client Sample ID: MW #3  
Collection Date: 9/17/2002 9:00:00 AM  
Matrix: AQUEOUS

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

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

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

Page 3 of 5

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Date: 08-Oct-02

**CLIENT:** On Site Technologies Limited  
**Work Order:** 0209016  
**Project:** 4-1373; Conoco C "Com" 1  
**Lab ID:** 0209016-04A

**Client Sample Info:** Conoco C "Com" 1  
**Client Sample ID:** MW #4  
**Collection Date:** 9/17/2002 10:00:00 AM  
**Matrix:** AQUEOUS

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

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

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

Page 4 of 5

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

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Date: 08-Oct-02

**CLIENT:** On Site Technologies Limited  
**Work Order:** 0209016  
**Project:** 4-1373; Conoco C "Com" 1  
**Lab ID:** 0209016-05A

**Client Sample Info:** Conoco C "Com" 1  
**Client Sample ID:** Pie 2  
**Collection Date:** 9/17/2002 10:10:00 AM  
**Matrix:** AQUEOUS

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
<b>AROMATIC VOLATILES BY GC/PID</b>		<b>SW8021B</b>		Analyst: HNR		
Benzene	ND	1.0		µg/L	2	9/25/2002
Ethylbenzene	ND	1.0		µg/L	2	9/25/2002
m,p-Xylene	ND	2.0		µg/L	2	9/25/2002
o-Xylene	ND	1.0		µg/L	2	9/25/2002
Toluene	ND	1.0		µg/L	2	9/25/2002

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

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

Page 5 of 5

MAINTAINING HARMONY BETWEEN MAN AND HIS ENVIRONMENT

iina ba, Ltd.

Date: 08-Oct-02

CLIENT: On Site Technologies Limited

Work Order: 0209016

Project: 4-1373; Conoco C "Com" 1

# ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

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

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

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

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

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

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

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited  
 Work Order: 0209016  
 Project: 4-1373; Conoco C "Com" 1

# ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

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

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

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

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

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

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

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

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

B - Analyte detected in the associated Method Blank

CLIENT: On Site Technologies Limited  
 Work Order: 0209016  
 Project: 4-1373; Conoco C "Com" 1

# ANALYTICAL QC SUMMARY REPORT

BatchID: R3933

Sample ID	CCV2_020925	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58368					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	41.37	0.50	40	0	103	85	115	0	0		
Ethylbenzene	41.99	0.50	40	0	105	85	115	0	0		
m,p-Xylene	83.76	1.0	80	0	105	85	115	0	0		
o-Xylene	40.38	0.50	40	0	101	85	115	0	0		
Toluene	40.53	0.50	40	0	101	85	115	0	0		
Surr: 1,4-Difluorobenzene	106	0	110	0	96.3	82	112	0	0		
Surr: 4-Bromochlorobenzene	125	0	110	0	114	95	124	0	0		
Surr: Fluorobenzene	107.9	0	110	0	98.1	84	114	0	0		

Sample ID	CCV3_020925	SampType: CCV	TestCode: BTEX_W	Units: µg/L	Prep Date: 9/25/2002	Run ID: GC-1_020925A					
Client ID: ZZZZZ		Batch ID: R3933	TestNo: SW8021B		Analysis Date: 9/25/2002	SeqNo: 58369					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	19.87	0.50	20	0	99.3	85	115	0	0		
Ethylbenzene	20.26	0.50	20	0	101	85	115	0	0		
m,p-Xylene	39	1.0	40	0	97.5	85	115	0	0		
o-Xylene	19.64	0.50	20	0	98.2	85	115	0	0		
Toluene	19.41	0.50	20	0	97.1	85	115	0	0		
Surr: 1,4-Difluorobenzene	107.4	0	110	0	97.6	82	112	0	0		
Surr: 4-Bromochlorobenzene	122.3	0	110	0	111	95	124	0	0		
Surr: Fluorobenzene	109.1	0	110	0	99.2	84	114	0	0		

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

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

B - Analyte detected in the associated Method Blank

iina ba, Ltd.

Date: 08-Oct-02

CLIENT: On Site Technologies Limited

Work Order: 0209016

Project: 4-1373; Conoco C "Com" 1

Test No: SW8021B

Matrix: W

## QC SUMMARY REPORT SURROGATE RECOVERIES

Sample ID	14FBZ	4BCBZ	FLBZ					
0209016-01A	97.8	114	100					
0209016-02A	98.1	114	99.1					
0209016-03A	99.1	115	99.8					
0209016-04A	98.3	115	100					
0209016-05A	99.0	115	100					
0209018-03AMS	92.9	111	94.3					
0209018-03AMSD	93.7	112	94.5					
CCV1_020925	97.7	110	99.1					
CCV2_020925	96.3	114	98.1					
CCV3_020925	97.6	111	99.2					
LCS_020925	97.6	112	98.3					
MB_020923	97.8	107	100					

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

\* Surrogate recovery outside acceptance limits



# CHAIN OF CUSTODY RECORD

**B 1421**

Page 1 of 1

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

Purchase Order No.:		Job No.		4-1373	
Name		J. HAGSTROM		Dept.	
Company		J. HAGSTROM			
Address					
City, State, Zip					
Sampling Location:		CONOCO C "CON" 1 FARMINGTON, NM			
Sampler:		JOHN HAGSTROM			
SAMPLE IDENTIFICATION		SAMPLE DATE		TIME	
C CON 1		9/17/02		0940	
MW2		9/17/02		0920	
MW3		9/17/02		0900	
MW4		9/17/02		1000	
PIEZ		9/17/02		1010	
MATRIX		H2O		HCL	
PRES.		↓		↓	
RELINQUISHED BY:		JOHN HAGSTROM		9/17/02 1530	
RELINQUISHED BY:					
RELINQUISHED BY:					
Method of Shipment:					
Authorized by:		JOHN HAGSTROM		9/17/02	
Date		9/17/02			

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