3R - 95

REPORTS

DATE:
1997

ON SITE
TECHNOLOGIES, LTD.

February 1, 1998

Conoco, Inc., Mid-Continent Region
Attn.: Ms. Shirley Ebert, Field SHEAR Specialist
3314 Bloomfield Hwy.
Farmington, NM 87401

RE: 1997 Annual Ground Water Report
Conoco Location: San Juan 28-7-126
Unit M, Sec. 01, T27N, R7W, NMPM, San Juan Co., NM

Dear Ms. Ebert:

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 covered the prior calendar year of 1997, 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*, submitted to the New Mexico Oil Conservation Division on October 15, 1997.

SUMMARY OF 1997 ACTIVITIES:

This report will only cover the sampling events conducted during 1997. Due to non-detectable levels of contamination New Mexico Oil Conservation Division (NMOCD), has granted an exemption to this location. The exemption allows Conoco to consider water quality monitoring complete, when four (4) consecutive quarters of sampling shows water quality levels below New Mexico Water Quality Control Commission (NMWQCC) standards. Refer to the following correspondence.

New Mexico Oil Conservation Division , January 31, 1997. letter to Mr. Neal. Goates, Senior Environmental Specialist, Conoco, Inc. Midland Division, regarding: *Ground Water Contamination Assessment San Juan Unit Wells #219, #47, #19, #126., Conoco Location, San Juan 28-7 #19, Unit G, Sec. 25, T28N, R7W, NMPM, San Juan Co., NM.*

SAMPLING:

Following the approved Conoco 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. The laboratory analyses ordered, followed the Conoco Ground Water 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. Table 3, summarizes the laboratory results for RCRA metals and API water quality testing, as required by NMOCD.

Copies of all laboratory reports for the calendar year 1997, along with all laboratory QA/QC documentation and chains-of-custody, are attached with this report.

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

SUMMARY AND CONCLUSIONS:

The following conclusions are based on the 1997 ground water monitoring results and trends associated with a former production pit at the San Juan 28-7-126 well location:

1. BTEX contamination, has been below the NMWQCC standards during the last four (4) quarters of 1997.
2. API water analysis indicates high TDS (i.e., 1,438 mg/L) with high sulfate concentrations. This water quality is typical for ground water at similar sites in the Largo Canyon and is not suspected to have been a result of the ongoing oil and gas production at the site.
3. The site should be considered closed and no further remedial actions will need to be taken due to BTEX contamination levels below NMWQCC standards.

RECOMMENDATION:

1. BTEX contamination levels have remained below NMWQCC for the last four (4) quarters. The monitoring well should be plug and abandon in accordance with appropriate regulations.
2. No further remedial action will need to be taken.
3. Upon completion of ground water monitoring action, a Final Pit Closure Report will have to be submitted to NMOCD for approval.

LIMITATIONS AND CLOSURE:

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

The scope of On Site Technologies' services consisted of project management, periodic water sampling and measurement of water levels, laboratory testing for ground water quality, and preparation of the annual report. All work has been performed in accordance with generally accepted professional practices in 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 status report, please contact either Myke Lane or Larry Trujillo at On Site Technologies, (505) 325-5667. Thank you for your consideration.

Respectfully submitted,

Larry Trujillo
Project Manager

Reviewed by:

Michael K. Lane, P.E.
Senior Engineer

On Site Technologies, Limited Partnership

Attachments:
Table 1: Monitoring Well Details and Ground Water Levels Summary
Table 2: Ground Water BTEX Analytical Summary
Table 3: Other Constituents Analytical Summary
Figure 1: Site Sketch
Figure 2: Ground Water Potentiometric Map (Not Applicable)
Boring Logs and Monitoring Well Diagrams (Not Available)
Laboratory Results, QA/QC, Chain of Custody

Acknowledgment:
CONOCO, Inc.

Shirley K. Ebert Health Spec.
(Name/Title)

2/19/98
(Date)

MKL/mkl: 41360-97.doc

On Site Technologies
Table 1
Ground Water Level Summary
San Juan 28-7-126
Unit M, Sec. 01, T27N, R7W

Well Number	Elevation at Ground Surface (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	6170.00	82.79			06/10/97	75.42	6094.58
					10/09/97	75.61	6094.39
					12/22/97	75.56	6094.44

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

gwl1360.doc

On Site Technologies
Table 2
BTEX Analytical Summary
San Juan 28-7-126
Unit M, Sec. 01, T27N, R7W

Sample Date	Sample ID#	Monitor Well	Remarks	BTEX per EPA 8020 (ppb)				
				Benzene	Toluene	Ethylbenzene	Total Xylene	Total BTEX
08/11/95	G01374	MW#1	IML	238.0	3,190.0	164.0	1941.0	5533.0
03/12/96	039600353	MW#1	IML	BDL	19.0	13.0	201.0	233.0
07/17/96	0396G01349	MW#1	IML	BDL	10.7	7.4	24.5	42.6
03/26/97	14048	MW#1	On Site Lab.	0.3	1.0	0.8	2.2	4.3
06/10/97	14896	MW#1	On Site Lab.	BDL	1.0	0.7	2.2	3.9
10/9/97	16561	MW#1	On Site Lab.	BDL	1.0	BDL	0.7	1.8
12/22/97	17209	MW#1	On Site Lab.	BDL	2.7	0.3	3.1	6.1
WQCC	ACTION	LEVELS		10.0	750.0	750.0	620.0	

BDL, Below Detection Levels

On Site Technologies
Table 3
Other Constitutes Analytical Summary
San Juan 28-7-126
Unit M, Sec. 01, T27N, R7W

API Results

CATIONs						ANIONs				
PARAMETER		RESULTS	UNIT of MEASURE	WQCC Standards	UNIT OF MEASURE	PARAMETER		RESULTS	UNIT OF MEASURE	WQCC Standards	UNIT OF MEASURE
Sodium	Na	112.0	mg/L			Chloride	Cl	8.0	mg/L	250.0	mg/L
Calcium	Ca	270.0	mg/L			Sulfate	SO_4	771	mg/L	600.0	mg/L
Magnesium	Mg	44.0	mg/L			Carbonate	CO_3	<1	mg/L		
Potassium	K	3.69	mg/L			Bicarbonate	HCO_3	230.0	mg/L		
						Hydroxide	HO	<1	mg/L		
						Sulfide	S_2	NA	mg/L		
						Iron	Fe	<0.05	mg/L	1.0	mg/L
						Total Dissolved Solids		1438.0	mg/L	1000.0	mg/L
						pH		7.03		between 6 and 9	
						Resistivity		5.1948		ohm-m	
						Specific Gravity		1.0017			
						Total hardness of $CaCO_3$		855.0		mg/L	

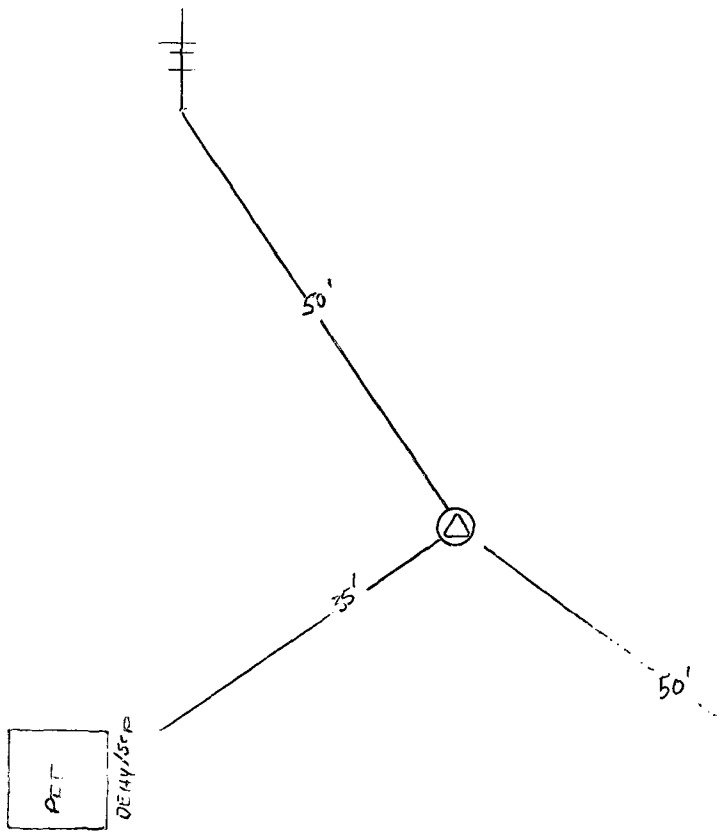
Sample Date: September 15.1997

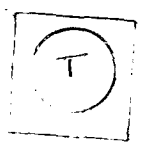
Cation-Anion Balance

Difference Cation-Anion me/L	2.03
Total Cation-Anion me/L	42.09
Difference Cation-Anion	4.8%

RCRA Metals
Test Method SW-846

PARAMETER	RESULTS	UNITS	WQCC	UNITS
Mercury by CVAA	<0.0005	mg/L	0.002	mg/L
Arsenic by ICP	<0.15	mg/L	0.1	mg/L
Barium by ICP	0.29	mg/L	1.0	mg/L
Cadmium by ICP	<0.020	mg/L	0.01	mg/L
Chromium by ICP	<0.050	mg/L	0.05	mg/L
Lead by ICP	<0.20	mg/L	0.05	mg/L
Selenium by ICP	<0.35	mg/L	0.05	mg/L
Silver by ICP	<0.030	mg/L	0.05	mg/L





N

San Juan 28-7-12.6

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Larry Trujillo*	Date:	30-Dec-97
Company:	*On Site Technologies, Ltd.*	COC No.:	*6781*
Address:	*612 E. Murray Drive*	Sample No.:	*17209*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1360*

Project Name:	***Conoco, Inc. - San Juan 28-7-126***				
Project Location:	***28-7-126***				
Sampled by:	LT	Date:	22-Dec-97	Time:	7:57
Analyzed by:	HR	Date:	26-Dec-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	2.7	ug/L	0.2	ug/L
Ethylbenzene	0.3	ug/L	0.2	ug/L
m,p-Xylene	2.4	ug/L	0.2	ug/L
o-Xylene	0.7	ug/L	0.2	ug/L
TOTAL	6.1	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 12/30/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 26-Dec-97

Internal QC No.: 0559-STD
Surrogate QC No.: 0567-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	20.8	4	15%
Toluene	ppb	20.0	21.7	8	15%
Ethylbenzene	ppb	20.0	21.2	6	15%
m,p-Xylene	ppb	40.0	40.9	2	15%
o-Xylene	ppb	20.0	20.9	4	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	91	92	(39-150)	1	20%
Toluene	98	98	(46-148)	0	20%
Ethylbenzene	90	94	(32-160)	2	20%
m,p-Xylene	92	95	(35-145)	3	20%
o-Xylene	96	96	(35-145)	0	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*	*Laboratory Identification*	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovered	(70-130)		*Limit Percent Recovered*	(70-130)	
17209-6781	93				
				12/31/97	12/30/97

S1: *Flourobenzene*

6781

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.
657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/22/97

Purchase Order No.:	Job No. 2-1360
SEND INVOICE TO Name	Larry Trujillo
Company	Conoco
Dept.	
Address	
City, State, Zip	
Sampling Location:	[illegible] Juan 23-7-126
Sampler:	LT

REPORT RESULTS TO	
Name	Larry Trujillo
Title	
Company	Conoco
Mailing Address	
City, State, Zip	
Telephone No.	
Telefax No.	

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX								LAB ID
23 7-126	12/22/97	[illegible]	H₂O	[illegible]	2	✓								[illegible]

Relinquished by:	Date/Time	Received by: [signature]	Date/Time 12/22/97 [illegible]
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Rush | 24-48 Hours | 10 Working Days | Special Instructions:

Authorized by: ____________________ Date ________
(Client Signature Must Accompany Request)

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

CHAIN OF CUSTODY RECORD

6181

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 12/20/11

Page 1 of 1

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name	Title
Company	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.
Sampling Location:		Number of Containers	ANALYSIS REQUESTED
Sampler:			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	LAB ID

Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Larry Trujillo*	Date:	22-Oct-97
Company:	*On Site Technologies, Ltd. C/o Conoco, Inc.*	COC No.:	*6518*
Address:	*612 E. Murray Drive*	Sample No.:	*16563*
City, State:	*Farmington, NM 87401*	Job No.:	*2-1360*

Project Name:	***Conoco, Inc. - 28-7-126***				
Project Location:	***28-7-126-#1***				
Sampled by:	LT	Date:	9-Oct-97	Time:	12:00
Analyzed by:	DC	Date:	20-Oct-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	1.0	ug/L	0.2	ug/L
Ethylbenzene	ND	ug/L	0.2	ug/L
m,p-Xylene	0.5	ug/L	0.2	ug/L
o-Xylene	0.2	ug/L	0.2	ug/L
TOTAL	1.8	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:
Date: 10/22/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 20-Oct-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	*Result*	*Unit of Measure*
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	*Unit of Measure*	*True Value*	*Analyzed Value*	*RPD*	*Limit*
Benzene	ppb	20.0	18.5	8	15%
Toluene	ppb	20.0	19.2	4	15%
Ethylbenzene	ppb	20.0	19.2	4	15%
m,p-Xylene	ppb	40.0	37.2	7	15%
o-Xylene	ppb	20.0	19.1	5	15%

Matrix Spike

Parameter	*1- Percent Recovered*	*2 - Percent Recovered*	*Limit*	*RPD*	*Limit*
Benzene	91	90	(39-150)	0	20%
Toluene	94	93	(46-148)	1	20%
Ethylbenzene	95	93	(32-160)	2	20%
m,p-Xylene	92	91	(35-145)	1	20%
o-Xylene	94	94	(35-145)	0	20%

Surrogate Recoveries

Laboratory Identification	*S1 Percent Recovered*	*S2 Percent Recovered*	*Laboratory Identification*	*S1 Percent Recovered*	*S2 Percent Recovered*
Limit Percent Recovered	(70-130)		*Limit Percent Recovered*	(70-130)	
16563-6518	95				
				10/22/97	10/22/97

S1: *Flourobenzene*

CHAIN OF CUSTODY RECORD

5518

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 10-9-97

Page 1 of 1

Purchase Order No.:	Job No. 2-1360		
SEND INVOICE TO: Name	Larry Trujillo	REPORT RESULTS TO: Name	Larry Trujillo / Title
Company	Conoco / Dept.	Company	Conoco
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No. / Telefax No.	
Sampling Location:	28-7-126		
Sampler:	Larry Trujillo		

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX	LAB ID
28-7-126 #1	10-9-97	1200	H2O	HCl	2	✓	16563-515

ANALYSIS REQUESTED

Relinquished by: Larry Trujillo	Date/Time 10-9-97/1512	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

CHAIN OF CUSTODY RECORD

6518

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 10-9-97

Purchase Order No.:	Job No. 2-1260		
SEND INVOICE TO Name: Larry Trujillo		**REPORT RESULTS TO** Name: Larry Trujillo	Title
Company: Conoco	Dept.	Company: Conoco	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.
Sampling Location: 28-7-126			
Sampler: Larry Trujillo			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX	LAB ID
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	X	[illegible]

ANALYSIS REQUESTED

Relinquished by: [illegible]	Date/Time [illegible]	Received by: [illegible]	Date/Time [illegible]
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

API WATER ANALYSIS

Attn:	*Larry Trujillo*	Date:	10-Oct-97
Company:	*On Site Technologies, Ltd. c/o Conoco, Inc.*	*COC No.:*	*6492*
Address:	*612 E. Murray Drive*	*Sample ID:*	*16279*
City, State:	*Farmington, NM 87401*	*Job No.:*	*4-1360*

Project Name:	***Conoco Inc. - 28-7-126***				
Project Location:	***4-1360***				
Sampled by:	LT	Date:	15-Sep-97	Time:	14:10
Analyzed by:	HR	Date:	25-Sep-97		

API RP-45 Laboratory Analysis

Parameter		*Result*	*Unit of Measure*		*Result*	*Unit of Measure*	
Cations							
Sodium	*Na*	112	mg/L		4.87	me/L	
Calcium	*Ca*	270	mg/L		13.47	me/L	
Magnesium	*Mg*	44	mg/L		3.62	me/L	
Potassium	*K*	3.69	mg/L		0.09	me/L	
Anions							
Chloride	*Cl*	8	mg/L		0.21	me/L	
Sulfate	*SO4*	771	mg/L		16.05	me/L	
Carbonate	*CO3*	<1	mg/L		<0.01	me/L	
Bicarbonate	*HCO3*	230	mg/L		3.77	me/L	
Hydroxide	*OH*	<1	mg/L		<0.01	me/L	
Sulfide	*S2*	NA	mg/L		NA	me/L	
Iron	*Fe*	<0.05	mg/L		<0.01	me/L	
Total Dissolved Solids							
Calculated, Sum of Cation/Anion		1438	mg/L				
pH		7.03					
Resistivity		5.1948	ohm-m				
Specific Gravity		1.0017					
Total Hardness as CaCO3		855	mg/L				

Cation-Anion Balance

2.03 *Difference Cation-Anion, me/L*

42.09 *Total Cation-Anion, me/L*

4.8 *% Difference Cation-Anion*

Comments

NA: *Not Analyzed*

Approved by:

Date: 10/15/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

API RP-45 Water Analysis

Date: 25-Sep-97

Quality Control Sample

Parameter	*Laboratory Identification*	*True Value*	*Analyzed Value*	*Unit of Measure*	*% Diff*	*Limit % Diff*
Sodium, Na	0541-QC	2.32	2.22	mg/L	-4	10
Calcium, Ca	0465-QC	2.18	2.03	mg/L	-7	10
Magnesium, Mg	0465-QC	1.14	1.22	mg/L	7	10
Potassium, K	0541-QC	1.33	1.30	mg/L	-2	10
Chloride, Cl	0538-QC	66	70	mg/L	6	10
Sulfate, SO4	0538-QC	78	74	mg/L	-4	10
Alkalinity	0538-QC	159	168	mg/L	6	10
Iron, Fe	0495-QC	1.00	0.98	mg/L	-2	10
pH	0538-QC	9.13	9.27		2	10
Conductivity	0541-QC	740	751	uS/cm	1	15

Matrix Spike

Parameter	*Laboratory Identification*	*Analyzed Value*	*Matrix Spike*	*Spike Value*	*Unit of Measure*	*Spike Recovery*
Sodium, Na	16203-6477	0.84	0.50	1.38	mg/L	103%
Calcium, Ca	16208-6478	1.28	0.50	1.75	mg/L	98%
Magnesium, Mg	16208-6478	1.95	0.50	2.45	mg/L	100%
Potassium, K	16203-6477	0.88	0.50	1.36	mg/L	99%
Iron, Fe	16308-6500	0.04	0.50	0.50	mg/L	93%

Method Blank

Parameter	*Laboratory Identification*	*Analyzed Value*	*Unit of Measure*
Sodium, Na	LF-Blank	<0.2	mg/L
Calcium, Ca	LF-Blank	<0.05	mg/L
Magnesium, Mg	LF-Blank	<0.05	mg/L
Potassium, K	LF-Blank	<0.05	mg/L
Iron, Fe	LF-Blank	<0.05	mg/L
Chloride, Cl	LF-Blank	<3 X DL	mg/L
Sulfate, SO4	LF-Blank	<1	mg/L
Sulfide, SO2	LF-Blank	NA	mg/L
Conductivity	LF-Blank	<2	uS/cm

(DC) 10/15/97 DJR 10/17/97

Mountain States Analytical, Inc.

October 9, 1997

Mr. David Cox
On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Reference:
Project: Conoco 28-7-126
MSAI Group: 17962

Dear Mr. Cox:

Enclosed are the analytical results for your project referenced above. The following sample is included in the report.

16279-6492

All holding times were met for the tests performed on these samples.

If the report is acceptable, please approve the enclosed invoice and forward it for payment.

Thank you for selecting Mountain States Analytical, Inc. to serve as your analytical laboratory on this project. If you have any questions concerning these results, please feel free to contact me at any time.

We look forward to working with you on future projects.

With Regards,

Rolf E. Larsen
Project Manager

Analytical Report

Mountain States Analytical, Inc.
The Quality Solution

RECEIVED OCT 16 1997

On Site Technologies, Ltd.
612 E Murray Drive
Farmington, NM 87401

Attn: Mr. David Cox
Project: Conoco 28-7-126

MSAI Sample: 68596
MSAI Group: 17962
Date Reported: 10/09/97
Discard Date: 11/08/97
Date Submitted: 09/23/97
Date Sampled: 09/15/97
Collected by: DC
Purchase Order:
Project No.:

Sample ID: 16279-6492
Matrix: Waste Water

Test	Analysis	Results as Received	Units	Limit of Quantitation
0259B	Mercury by CVAA, w/ww, 7470 Method: SW-846 7470	ND	mg/l	0.0005
0392I	Flame/ICP Prep, w/ww, 3005A Method: SW-846 3005A	Complete		
0392M	Mercury Prep CVAA, w/ww, 7470 Method: SW-846 7470	W 0		
7245	Arsenic by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.15
7246	Barium by ICP, w/ww, 6010A Method: SW-846 6010A	0.29	mg/l	0.02
7249	Cadmium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.020
7251	Chromium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.050
7255	Lead by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.20
7264	Selenium by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.35
7266	Silver by ICP, w/ww, 6010A Method: SW-846 6010A	ND	mg/l	0.030

Mountain States Analytical, Inc.
The Quality Solution

On Site Technologies, Ltd.

MSAI Sample: 68596
MSAI Group: 17962

Sample ID: 16279-6492

ND - Not detected at the limit of quantitation

This report consists of the following items: A cover letter, a signed analytical report for each sample specified on the cover letter, and if applicable, an inorganic quality control summary. Organic sample reports contain footnotes which describe any quality control anomalies which may have occurred.

Respectfully Submitted,
Reviewed and Approved by:

Rolf E. Larsen
Project Manager

5494

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.
657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 9/22/97

Purchase Order No.: 6492 | Job No.:

SEND INVOICE TO
Name: ACCOUNTS REC.
Company: ON SITE | Dept.:
Address:
City, State, Zip:

REPORT RESULTS TO
Name: DAVID COX | Title:
Company: ON SITE TECH
Mailing Address:
City, State, Zip:
Telephone No.: | Telefax No.:

Sampling Location: CONOCO 28-7-126

Sampler:

ANALYSIS REQUESTED: RCRA METALS, TOTAL

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	RCRA METALS, TOTAL								LAB ID
4-1360-MET	9/15/97	1410	WW	HNO_3	1	✓								16279-6492 (COC) 6492 pH=4 added 1ml HNO_3 pH≤2

Relinquished by: [signature]	Date/Time 9/22/97 1600	Received by: Nichole Diles [signature]	Date/Time 09/23/97 1030
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: [signature] Date 9/22/97
(Client Signature Must Accompany Request)

Rush | 24-48 Hours | 10 Working Days | Special Instructions:

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

CHAIN OF CUSTODY RECORD

5492

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: _____ Page _____ of _____

Purchase Order No.:	Job No.		
SEND INVOICE TO: Name		REPORT RESULTS TO: Name	Title
Company	Dept.	Company	
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No.	Telefax No.
Sampling Location:		Number of Containers	ANALYSIS REQUESTED
Sampler:			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	LAB ID
1- [illegible]					

Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

6492

CHAIN OF CUSTODY RECORD

ON SITE
TECHNOLOGIES, LTD.
657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: ____________

Page ______ of ______

Purchase Order No.:	Job No.	**REPORT RESULTS TO** Name	Title
SEND INVOICE TO Name		Company	
Company	Dept.	Mailing Address	
Address		City, State, Zip	
City, State, Zip		Telephone No.	Telefax No.

Sampling Location:

Sampler:

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers										LAB ID

Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: ____________ Date ______
(Client Signature <u>Must</u> Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

CHAIN OF CUSTODY RECORD

6492

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: _____ Page _____ of _____

Purchase Order No.:	Job No. 4-1360		
SEND INVOICE TO: Name	LARRY TRUJILLO	REPORT RESULTS TO: Name	LARRY TRUJILLO / Title
Company	CONOCO / Dept.	Company	CONOCO
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No. / Telefax No.	
Sampling Location:	28-7-126		
Sampler:			

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	APL	TOTAL METALS	LAB ID
28-7-126 4-1360-MET	9/15/97	1410				1	1	16279-6492

Relinquished by:	Date/Time 9/15/97/1636	Received by: Heidi Reese	Date/Time 9/15/97 1630
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Larry Trujillo*	Date:	17-Jun-97
Company:	*On Site Technologies, Ltd. c/o Conoco*	COC No.:	*6418*
Address:	*612 E. Murray Drive*	Sample No.:	*14896*
City, State:	*Farmington, NM 87401*	Job No.:	*4-1360*

Project Name:	***Conoco - San Juan 28-7-126***				
Project Location:	***San Juan 28-7-126***				
Sampled by:	LT	Date:	10-Jun-97	Time:	14:35
Analyzed by:	DC	Date:	12-Jun-97		
Sample Matrix:	*Liquid*				

Parameter	Results as Received	Unit of Measure	Limit of Quantitation	Unit of Measure
Benzene	ND	ug/L	0.2	ug/L
Toluene	1.0	ug/L	0.2	ug/L
Ethylbenzene	0.7	ug/L	0.2	ug/L
m,p-Xylene	1.7	ug/L	0.2	ug/L
o-Xylene	0.5	ug/L	0.2	ug/L
TOTAL	3.8	ug/L		

ND - Not Detected at Limit of Quantitation

Method - *SW-846 EPA Method 8020A Aromatic Volatile Organics by Gas Chromatography*

Approved By:

Date: 6/17/97

OFF: (505) 325-5667

ON SITE
TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 12-Jun-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	20.0	0	15%
Toluene	ppb	20.0	20.6	3	15%
Ethylbenzene	ppb	20.0	21.2	6	15%
m,p-Xylene	ppb	40.0	39.5	1	15%
o-Xylene	ppb	20.0	20.6	3	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	89	86	(39-150)	2	20%
Toluene	94	88	(46-148)	2	20%
Ethylbenzene	97	94	(32-160)	2	20%
m,p-Xylene	90	86	(35-145)	2	20%
o-Xylene	95	91	(35-145)	2	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
14896-6418	95				
				SAR 6/17/97	(RE) 6/17/97

S1: Flourobenzene

CHAIN OF CUSTODY RECORD

0418

ON SITE TECHNOLOGIES, LTD.

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Date: 6/10/97

Page 1 of 1

Purchase Order No.:	Job No. 4-13100		
SEND INVOICE TO: Name	Lavvy Trujillo	REPORT RESULTS TO: Name	Lavvy Trujillo / Title
Company	Conoco / Dept.	Company	Conoco
Address		Mailing Address	
City, State, Zip		City, State, Zip	
		Telephone No. / Telefax No.	

Sampling Location: San Juan 28-7-12L

Sampler: Lavvy Trujillo

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX	LAB ID
San Juan 28-7-12L #1	6/10/97	1435	H2O	HCl	1	✓	1-1016-1-11
San Juan 28-7-12L #2	6/10/97	1455	H2O	HCl	1	✓	

ANALYSIS REQUESTED

Relinquished by:	Date/Time 6/10/97 1615	Received by:	Date/Time 6/10/97 1615
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

Rush	24-48 Hours	10 Working Days	Special Instructions:

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

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Attn:	*Michael Lane*	Date:	1-Apr-97
Company:	*On Site Technologies, Ltd. c/o Conoco*	COC No.:	*5101*
Address:	*612 E. Murray Drive*	Sample No.:	*14048*
City, State:	*Farmington, NM 87401*	Job No.:	*4-1360*

Project Name:	***Conoco - 28-7 #126***				
Project Location:	***MW-1***				
Sampled by:	HR	Date:	26-Mar-97	Time:	12:25
Analyzed by:	DC	Date:	31-Mar-97		
Sample Matrix:	*Liquid*				

Parameter	*Result*	*Unit of Measure*	*Detection Limit*	*Unit of Measure*
Benzene	0.3	ug/L	0.2	ug/L
Toluene	1.0	ug/L	0.2	ug/L
Ethylbenzene	0.8	ug/L	0.2	ug/L
m,p-Xylene	1.7	ug/L	0.2	ug/L
o-Xylene	0.5	ug/L	0.2	ug/L
TOTAL	4.3	ug/L		

Method - *SW-846 EPA Method 8020 Aromatic Volatile Organics by Gas Chromatography*

Approved By: DAG

Date: 4/1/97

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

QUALITY ASSURANCE REPORT

for EPA Method 8020

Date Analyzed: 31-Mar-97

Internal QC No.: 0527-STD
Surrogate QC No.: 0528-STD
Reference Standard QC No.: 0529/30-QC

Method Blank

Parameter	Result	Unit of Measure
Average Amount of All Analytes In Blank	<0.2	ppb

Calibration Check

Parameter	Unit of Measure	True Value	Analyzed Value	% Diff	Limit
Benzene	ppb	20.0	18.0	10	15%
Toluene	ppb	20.0	19.1	5	15%
Ethylbenzene	ppb	20.0	19.5	3	15%
m,p-Xylene	ppb	40.0	37.6	6	15%
o-Xylene	ppb	20.0	19.3	3	15%

Matrix Spike

Parameter	1- Percent Recovered	2 - Percent Recovered	Limit	%RSD	Limit
Benzene	87	80	(39-150)	3	20%
Toluene	90	81	(46-148)	2	20%
Ethylbenzene	96	89	(32-160)	5	20%
m,p-Xylene	93	86	(35-145)	4	20%
o-Xylene	95	88	(35-145)	4	20%

Surrogate Recoveries

Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered	Laboratory Identification	S1 Percent Recovered	S2 Percent Recovered
Limit Percent Recovered	(70-130)		Limit Percent Recovered	(70-130)	
14048-5101	95				

S1: Flourobenzene

DC 4/1/97

ON SITE TECHNOLOGIES, LTD.

CHAIN OF CUSTODY RECORD

5101

Date: [illegible] Page ____ of ____

657 W. Maple • P. O. Box 2606 • Farmington NM 87499
LAB: (505) 325-5667 • FAX: (505) 325-6256

Purchase Order No.:	Job No. [illegible]	REPORT RESULTS TO	Name [illegible] / Title
SEND INVOICE TO: Name			Company [illegible]
Company	Dept.		Mailing Address [illegible]
Address			City, State, Zip [illegible]
City, State, Zip			Telephone No. / Telefax No.

Sampling Location: [illegible]
Well #1 [illegible] 126

Sampler: 112

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	MATRIX	PRES.	Number of Containers	BTEX									LAB ID
[illegible] 126, [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	✓									[illegible]

Relinquished by: [illegible]	Date/Time [illegible]	Received by: [illegible]	Date/Time [illegible] 11:55
Relinquished by:	Date/Time	Received by:	Date/Time
Relinquished by:	Date/Time	Received by:	Date/Time

Method of Shipment:	Rush	24-48 Hours	10 Working Days	Special Instructions:
Authorized by: [illegible] Date [illegible] (Client Signature Must Accompany Request)				

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