



CONOCO INC.

MCA #2A TRUNKLINE LEAK

ENVIRONMENTAL SITE INVESTIGATION

PERFORMED BY:

BBC INTERNATIONAL, INC.
WORLD-WIDE ENVIRONMENTAL SPECIALISTS
1324 W. MARLAND BLVD.
P. O. BOX 805
HOBBS, NEW MEXICO 88240
(505)397-6388 • FAX (505)397-0397
EMAIL: bbc@bbcinternational.com
WEBSITE: www.bbcinternational.com

NOVEMBER 19, 2001

PREPARED FOR:

MR. JOHN COY
CONOCO INC.
PO BOX 180
MALJAMAR, NEW MEXICO 88264

Conoco 217817
facility # PAC0608132578
incident # PAC0608133658 application # PAC0608132797



PHONE (505) 397-6388 • FAX (505) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805
E-MAIL: bbc@bbcinternational.com

April 12, 2002

Chris Williams
NM Oil Conservation Division

Hobbs, NM 88240

RE: Conoco, Inc. – MCA #2A Trunkline Leak

Dear Mr. Williams:

BBC International, Inc. respectfully submits this site investigation report for the ~~MCA #2A~~
~~Trunkline~~ on behalf of Conoco, Inc.

This site is an area that was investigated due to an injection line leak that occurred on
~~December 16, 1999~~ Approximately 230 barrels of produced water was released with 205
~~barrels recovered.~~

The initial investigation and sampling was conducted on October 16, 2000. In Novemeber
2000, the results were discussed with you and you requested additional sampling at a greater
depth to track the downward migration of the chlorides. Additional samples were taken at
greater depths on October 11, 2001. This report details the results.

As can be found in the report, the chlorides are reduced greatly at depth. The
recommendation is to halt any further investigations activities and conduct surface
remediation measures only.

I look forward to your review of this report and the agreement to our recommendation. If you
have any questions, please do not hesitate to contact me at (505)397-6388 or at the address
above.

Sincerely,

BBC International, Inc.



Ken Swinney, CEI, CRS
Director of Operations

KS:js

encl.

Conoco MCA # 2A Trunkline Leak 12-16-99

1.0 INTRODUCTION

The subject site is located south of Maljamar, New Mexico in Unit Letter D of Section 28, Township 17 South, Range 32 East. The site consists of undeveloped rangeland. On December 16, 1999, an injection line leaked approximately 230 barrels of produced water with 205 barrels being recovered.

2.0 SITE CHARACTERIZATION

The leak area runs East-West for approximately 180 feet on either side of the trunkline. The leak area is approximately 24 feet wide. The surface soil is red sand. There is no water source within 1,000 feet of the site. There is no surface water within 1,000 feet of the site. Based on data from the ground water monitoring well located at the Conoco Maljamar Plant, depth to ground water is approximately 90 feet.

3.0 SITE INVESTIGATION ACTIVITIES

On June 22, 2000, Conoco personnel took a three point composite sample at the site for laboratory analysis. This sample was taken at a depth of 6 feet 8 inches. The lab results are located on Figure 1 and in Appendix II. On October 16, 2000 BBC personnel conducted an inspection of the site. One sample point was collected at the site at a depth of 8 feet using a backhoe. On October 11, 2001, BBC personnel returned to the site to take additional soil samples at a greater depth. One sample point was drilled to a depth of 34 feet, using BBC's tractor mount drilling rig. Field screening techniques were used to determine samples to be sent for laboratory analysis. Field screening consisted of field chloride titrations. Lab results are located on Figure 1 and in Appendix I. Pictures of investigation activities are located in Appendix III.

4.0 CONCLUSION AND RECOMMENDATION

The data shows low chloride concentrations of 701 ppm at 6 feet 8 inches, 763 ppm at 8 feet, and 416 ppm at 34 feet. Taking into consideration that the depth to groundwater is greater than fifty-five feet, and the subsurface soil lithology at the site consists of caliche and sandstone layers, it is evident that the migration of chlorides to groundwater is unlikely. Therefore it is recommended that only surface remediation is necessary. This could consist of the addition of gypsum, ammonium nitrate, Salt-Block, or other amendments that will reduce the chloride concentrations in the soil to allow for revegetation.

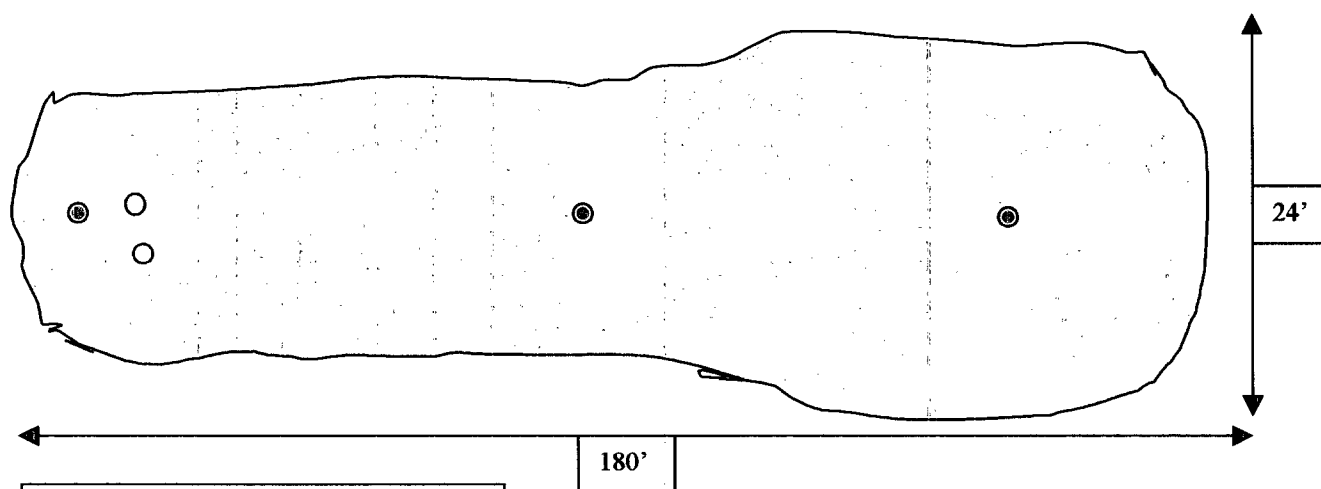
Figure 1



CONOCO

MCA #2A TRUNKLINE LEAK

12-16-99



LEGEND
● CONOCO sample point 6-22-00
composite sample
○ BBC sample point 10-16-00, 10-11-01
grab sample

SAMPLE	DATE	DEPTH	CHLORIDE
CONOCO	6-22-00	6'8"	701 PPM
BBC	10-16-00	8'	763 PPM
BBC	10-11-01	25'	416 PPM

BBC INTERNATIONAL, INC.

CONOCO MCA #2A

Date: 11-19-01	Drawn By: Ken
Disk:	Sheet of Sheets
Scale: Not to Scale	File Name

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Conoco, Inc.	Contact Steve Wilson	
Address 10 Desta Drive, Ste 100W, Midland, Texas 79705	Telephone No. (915) 686-5747	
Facility Name 100' WNW of MCA #252 (MCA 2A TRUNK LINE)	Facility Type Injection Well	
Surface Owner Caswell	Mineral Owner	Lease No. LC057210 / 6987018

LOCATION OF RELEASE

Unit Letter D	Section 28	Township 17S	Range 32E	Feet from the 1250'	North/South Line North	Feet from the 200'	East/West Line West	County Lea
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NATURE OF RELEASE

Type of Release Salt Water	Volume of Release 230 bbls of salt water	Volume Recovered 205 bbls of salt water
Source of Release Pipe (2.5 Steel, Buried)	Date and Hour of Occurrence 12/16/99 at 10:00 AM +	Date and Hour of Discovery 12/16/99 at 2:15 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? NMOCD - Sylvia (via fax)	
By Whom? Larry Minnick	Date and Hour 12/16/99 at 8:00 PM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

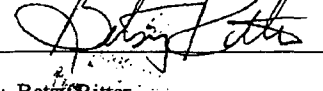
Cause of Problem: Internal corrosion to pipe
Remedial Action Taken: Replaced section of pipe with new I.P.C.

Describe Area Affected and Cleanup Action Taken.*

All drift sand - 25'x250'. Upon drying, will backdrag, cover and remediate in place

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases, which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature: 	Approved by District Supervisor:	
Printed Name: Betsy Ritter	Approval Date:	Expiration Date:
Title: Agent for Conoco, Inc.	Conditions of Approval:	Attached <input type="checkbox"/>
Date: March 20, 2000	Phone: (915) 570-6007	

* Attach Additional Sheets If Necessary

SP

Appendix I



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
BBC INTERNATIONAL, INC.
ATTN: CLIFF BRUNSON
P.O. BOX 805
HOBBS, NM 88241
FAX TO: (505) 397-0397

Receiving Date: 10/15/01
Reporting Date: 10/16/01
Project Owner: CONOCO
Project Name: MCA CONOCO
Project Location: MALJAMAR

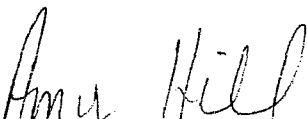
Analysis Date: 10/16/01
Sampling Date: 10/11/01
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H6214-1	MCA 2A-34'	416
Quality Control		1010
True Value QC		1000
% Recovery		101
Relative Percent Difference		1.0

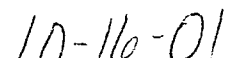
METHOD: Standard Methods

4500-Cl⁻B

Analysis performed on a 1:4 w:v aqueous extract.



Chemist



Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

H6214

ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Page 1 of 1

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
BBC INTERNATIONAL INC.
ATTN: CLIFF BRUNSON
1324 W. MARLAND
HOBBS, NM 88240
FAX TO: (505) 397-0397

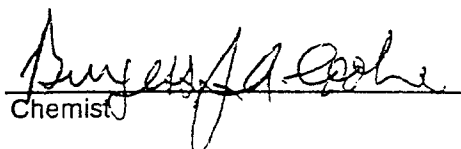
Receiving Date: 10/17/00
Reporting Date: 10/18/00
Project Number: NOT GIVEN
Project Name: MCA CONOCO
Project Location: MALJAMAR, NM

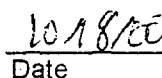
Sampling Date: 10/16/00
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	TPH (mg/Kg)	Cl* (mg/Kg)
ANALYSIS DATE:		10/17/00	10/18/00
H5264-1	MCA#21FL 5'6"	2290	267
H5264-2	MCA#21FL 11'	38100	168
H5264-3	MCA#21FL 18'1"C	-	229
H5264-4	MCA#21FL 18'1"T	1500	-
H5264-5	MCA#169-1	-	610
H5264-6	MCA#169-2	-	2000
H5264-7	MCA 2A INJ. LINE	-	763
H5264-8	FILL DIRT	<10	61
Quality Control		218	1039
True Value QC		240	1000
% Recovery		90.9	104
Relative Percent Difference		7.0	1.3

METHODS: TPH-EPA 600/4-79-020 418.1; Cl-Std. Methods 4500-Cl'B

*Analyses performed on 1:4 w:v aqueous extracts.


Chemist


Date

H5264.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
BBC INTERNATIONAL INC.
ATTN: CLIFF BRUNSON
1324 W. MARLAND
HOBBS, NM 88240
FAX TO: (505) 397-0397

Receiving Date: 10/17/00
Reporting Date: 10/19/00
Project Number: NOT GIVEN
Project Name: MCA CONOCO
Project Location: MALJAMAR, NM

Sampling Date: 10/16/00
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

LAB NO.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE		10/19/00	10/19/00	10/19/00	10/19/00
H5264-1	MCA#21FL 5'6"	0.020	0.008	0.902	1.02
H5264-2	MCA#21FL 11'	1.30	8.71	42.3	79.6
H5264-4	MCA#21FL 18'1"T	<0.005	0.009	0.006	0.016
H5264-8	FILL DIRT	<0.005	<0.005	<0.005	<0.015
Quality Control		0.089	0.092	0.090	0.273
True Value QC		0.100	0.100	0.100	0.300
% Recovery		89.0	92.4	90.4	91.1
Relative Percent Difference		1.9	2.1	1.9	1.8

METHOD: EPA SW-846 8260

Burgess A. Cooke
Chemist

10/19/00
Date

H5264B.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

**ARDINAL
LABORATORIES**

[illegible]

CASE NOTE Liability and Damages Cardinal's suit against the insurance company was dismissed because the policy contained a "no action" clause which required the insured to sue the insurer within one year of the date of the loss. The court held that the clause was enforceable and that the insurer was not liable for damages.

Sample Relinquished: <i>Edward Paul Woolley</i>	Date: <i>10-16-00</i> Time: <i>5:00 PM</i>	Received By: 	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Results: <input type="checkbox"/> Yes <input type="checkbox"/> No REMARKS:
Relinquished By: <i>Edward Paul Woolley</i>	Date: <i>10-17-00</i> Time: <i>9:40 AM</i>	Received By: (Lab Stamp) <i>[Signature]</i>	CHECKED BY: (Initials)
Delivered By: (Circle One)	Sample Condition Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

UPS - Fed Ex - Bus - Other: *(Sample)*

Appendix II

MR. JOHN COY
CONOCO, INC.
P.O. BOX 180
MALJAMAR, NEW MEXICO 88264

JUNE 28, 2000

DEAR MR. COY:

THE FOLLOWING ARE THE RESULTS OF THE FOUR SOIL SAMPLES,
RECEIVED 06/26/00, LAB NOS. 791-794:

CHLORIDES
mg/Kg

LAB NO. 791: MCA #169 4,746
SITE #1 10:00 AM Comp @ 74"
SAMPLED 06/22/00

LAB NO. 792: MCA #169 7,886
SITE #2 COMP. @ 59"
SAMPLED 06/22/00 2:40 PM

LAB NO. 793: MCA #2A 701
TRUNK LINE COMP. @ 80"
SAMPLED 06/22/00 2:10 PM

LAB NO. 794: MCA #21 564
3 PT COMP @ 14'
SAMPLED 06/23/00 9:30 AM

METHOD:

CHLORIDES - AGRICULTURE HANDBOOK NO. 60 3C(1:10) SMWW 407-C

WE APPRECIATE THE OPPORTUNITY TO WORK WITH YOU ON THESE TESTS.
IF YOU HAVE ANY QUESTIONS OR REQUIRE ANY FURTHER INFORMATION,
PLEASE FEEL FREE TO CONTACT ME AT ANY TIME.

SINCERELY,

STEPHEN REID
SR/md

MR. JOHN COY
CONOCO, INC.
P.O. BOX 180
MALJAMAR, NEW MEXICO 88264

JUNE 29, 2000

DEAR MR. COY:

THE FOLLOWING ARE THE RESULTS OF THE FOUR SOIL SAMPLES FOR
BTEX, RECEIVED 06/26/00, LAB NOS. 791-794:

	BENZENE mg/Kg	TOLUENE mg/Kg	ETHYL BENZENE mg/Kg	XYLENES mg/Kg
LAB NO. 791: MCA #169 SITE #1 10:00 AM 7'4" SAMPLED 06/22/00	< 0.100	< 0.100	< 0.100	< 0.100
LAB NO. 792: MCA #169 SITE #2 COMP. @ 59" SAMPLED 06/22/00 2:40 PM	< 0.100	< 0.100	< 0.100	< 0.100
LAB NO. 793: MCA #2A TRUNK LINE COMP. @ 80" SAMPLED 06/22/00 2:10 PM	< 0.100	< 0.100	< 0.100	< 0.100
LAB NO. 794: MCA #21 3 PT COMP @ 14' SAMPLED 06/23/00 9:30 AM	0.259	0.670	1.040	6.680

NOTE: BTEX RESULTS ARE FROM ANOTHER LABORATORY.

< = LESS THAN

SAMPLE MATRIX: SOIL

METHODS: SW 846-8021B, 5030A

WE APPRECIATE THE OPPORTUNITY TO WORK WITH YOU ON THESE TESTS.
IF YOU HAVE ANY QUESTIONS OR REQUIRE ANY FURTHER INFORMATION,
PLEASE FEEL FREE TO CONTACT ME AT ANY TIME.

SINCERELY,

STEPHEN REID
SR/dt

MR. JOHN COY
CONOCO, INC.
P.O. BOX 180
MALJAMAR, NEW MEXICO 88264

JUNE 28, 2000

DEAR MR. COY:

THE FOLLOWING IS THE RESULT OF THE SOIL SAMPLE FOR TOTAL
PETROLEUM HYDROCARBONS, RECEIVED 06/26/00, LAB NO. 794:

LAB NO. 794; MCA #21
3 PT COMP @ 14'
SAMPLED 06/23/00 9:30 AM

TOTAL PETROLEUM
HYDROCARBONS

mg/Kg

wt%

3,905

0.3905

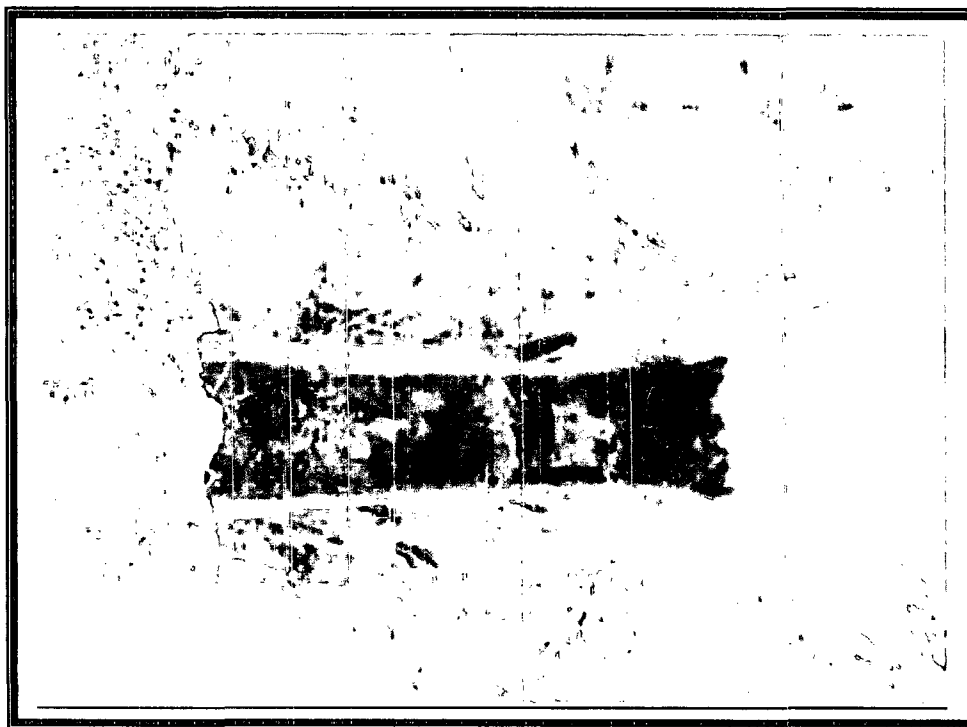
METHOD: EPA 418.1

WE APPRECIATE THE OPPORTUNITY TO WORK WITH YOU ON THESE TESTS.
IF YOU HAVE ANY QUESTIONS OR REQUIRE ANY FURTHER INFORMATION,
PLEASE FEEL FREE TO CONTACT ME AT ANY TIME.

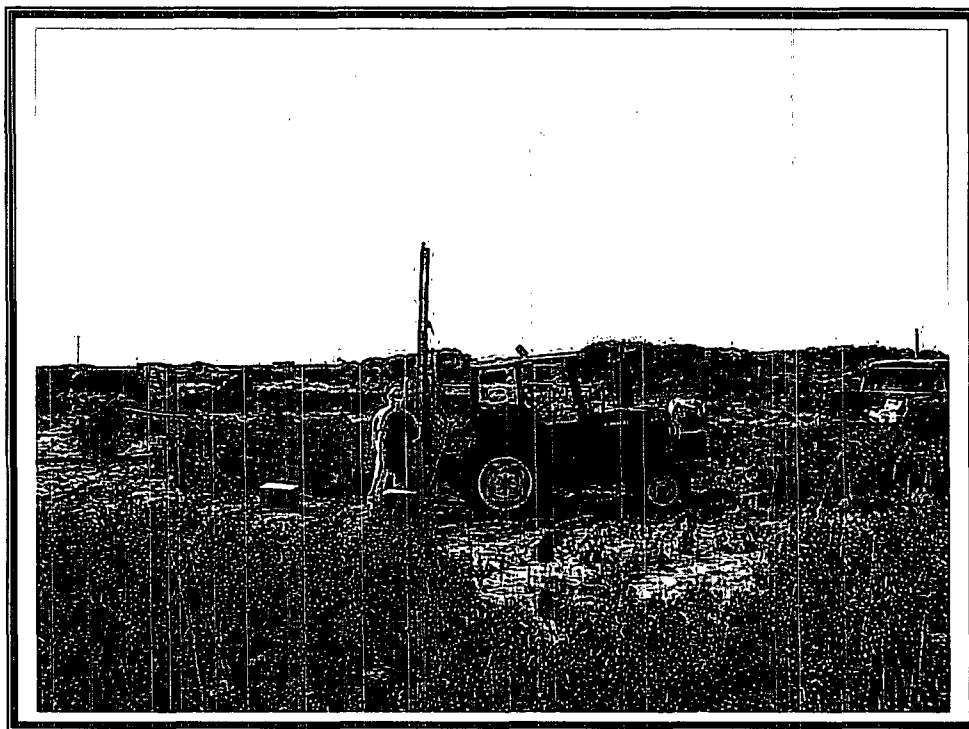
SINCERELY,

STEPHEN REID
SR/dt

Appendix III



MCA #2A Trunkline – Sample taken at 8'.



MCA #2A Trunkline Leak – Sample taken at 34' on 10-11-01



PHONE (505) 397-6388 • FAX (505) 397- 0397 • 1324 W. MARLAND • P.O. BOX 805 • HOBBS, NM 88241-0805
E-MAIL: bbc@bbcinternational.com

April 12, 2002

Chris Williams
NM Oil Conservation Division

Hobbs, NM 88240

RE: Conoco, Inc. – MCA #169 Injection Line Leak #2

Dear Mr. Williams:

BBC International, Inc. respectfully submits this site investigation report for the **MCA #169 Injection Line Leak #2** on behalf of Conoco, Inc.

This site is an area that was investigated due to an injection line leak that occurred on **May 8, 2000**. Approximately **140 barrels of produced water** was released with **90 barrels recovered**.

The initial investigation and sampling was conducted on October 16, 2000. In November 2000, the results were discussed with you and you requested additional sampling at a greater depth to track the downward migration of the chlorides. Additional samples were taken at greater depths on October 12, 2001. This report details the results.

As can be found in the report, the chlorides are reduced greatly at depth. The recommendation is to halt any further investigations activities and conduct surface remediation measures only.

I look forward to your review of this report and the agreement to our recommendation. If you have any questions, please do not hesitate to contact me at (505)397-6388 or at the address above.

Sincerely,

BBC International, Inc.

Ken Swinney, CEI, CRS
Director of Operations

KS:js

encl.