

CONOCO INC.

MCA BTRY #1 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

ono co - 217817 facility alety-" aident - NPACOLO852536

application - pACOLOGS52740



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 Btry #1 Trunkline Leak

Dear Mr. Williams:

BBC International, Inc. respectfully submits this site investigation report for the MCA Btry #1 Trunkline Leak on behalf of Conoco, Inc.

This site is an area that was investigated due to an injection line leak that occurred on December 6, 2000 Approximately 250 barrels of produced water was released with 200 barrels recovered:

The initial investigation and sampling was conducted on January 25, 2001. 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.

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Conoco MCA Btry #1 Trunkline Leak 12/6/00

1.0 INTRODUCTION

UNIT LETTER

The subject site is located south of Maljamar, New Mexico in Section 29, Township 17 South, Range 32 East. The site consists of undeveloped range land. On December 6, 2000 a trunkline leaked approximately 250 barrels of produced water, with approximately 200 barrels being recovered from the surface.

2.0 SITE CHARACTERIZATION

The leak area is in a depression surrounded by sand hills. The leak area runs East-West for approximately 76 feet. The leak area is approximately 24 feet wide at the widest point. 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 January 25, 2001, BBC personnel conducted an inspection of the site. Three sample points were dug at the site, using a backhoe, to a depth of approximately 21 feet. Samples were taken at 3 feet and at 20 feet at sample point MC1-1, at 3 feet and at 21 feet at sample point MC1-2, and at 11 feet and 20.5 feet at sample point MC1-3. On October 11, 2001, BBC personnel returned to the site to take additional soil samples at greater depths. One sample point was drilled to a depth of 30 feet using BBC's tractor mount drilling rig. Samples were taken at 25 feet and 30 feet at sample point MCA 1. Field screening for chloride was performed on site. Field screening data is located on Figure 1. Soil samples were then sent to Cardinal Laboratories for analysis. Lab results are located on Figure 1 and in Appendix I. Pictures of investigation activities are located in Appendix II.

4.0 CONCLUSION AND RECOMMENDATION

Laboratory analysis for TPH and BTEX shows TPH at levels well below OCD guidelines and BTEX at non-detect. Therefore, TPH and BTEX are not considered an environmental concern at this site. The lab results for TPH and BTEX are located in Appendix 1. The data shows a reduction in chloride concentrations from 3 feet to approximately 30 feet. At the 25 feet and 30 feet depths the chloride concentrations are 752 ppm and 400 ppm respectively, this reduction is significant. The lab results for chloride is located on Figure 1 and in Appendix I. Taking into consideration that the depth to groundwater is greater than sixty-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.

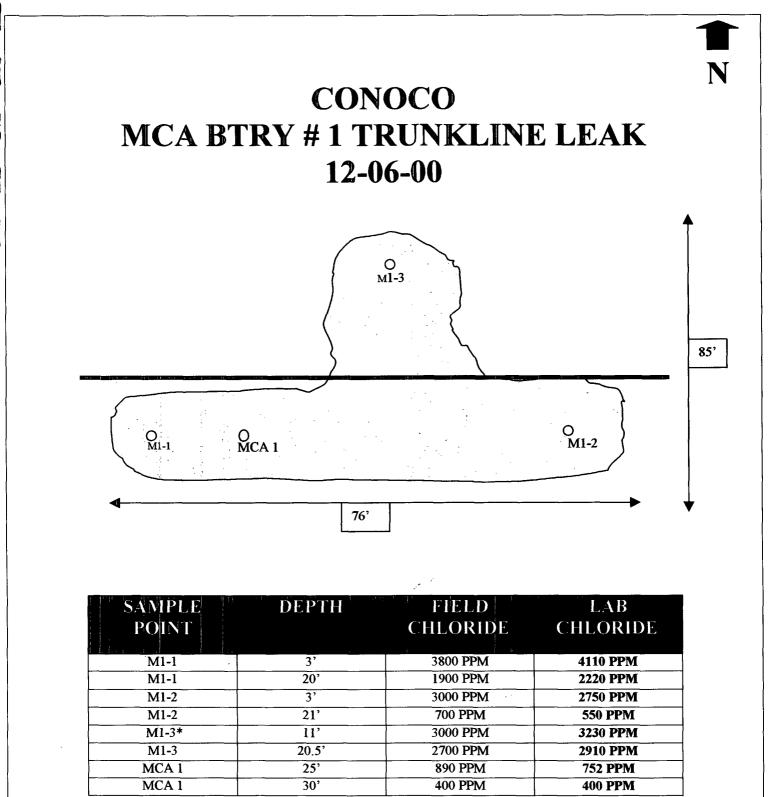
						WHERE	1					
CONO	00	Conoco Inc.				Record of A		ischarge				
						of Crude Oil		scharge				
	SPILL C	ATEGORY:	В			Hazardous S	•					
P - Americas								10/18/199				
1. Lease			2. Field			3. Person In Ch	arge of Site					
	MCA B	TRI	MA	LJAMAR (BI		L	L. MINNICI	<u>K</u>				
4. Person Rep	orting Discharge		INE		Person Receivi	ng Report						
5. Discharge D	Discovered By	L.MINNICK				Date and Time	Discovered					
5. Discharge L	iscovered by	NAVAJO	PIPELINE				2/6/00 - 10/	AM				
Witnesses	· · · · · · · · · · · · · · · · · · ·					<u> </u>						
6. How Did Co	mpany Learn of	•	AUGER FOR				<u> </u>					
7. Date and Ti	me Discharge Be		······	ime Discharge E		8. Date and Tim	e Initial Report	Received				
	12/6/00 - 4AM	?	12	/6/00 - 10:30/	AM		<u></u>					
9. Discharge	Unit Letter	Section	Bik./ TWP	Survey/Range	. F	County	•	State				
Site		29	17S	32	2E	LE	.A	NM				
Highway Map nm7SR529	,N1.5m,E1.5	m										
10. Location o Other	•	1 - SWD LIN	Click Here E		Feet to Wellhea	ad No.						
	Discharge - Pipe		Type Fiberglass	Placement	Coating N/A		Other Source Click Here	of Discharge				
12. Possible R	e (In Inches)	3 INCH	Fiberglass Cause of Discha			Recurrence	CIICK Here					
for Discha						it that rotted	out					
	n(External)		d glued fg fla		• •							
13. Names an	d Volumes of Su	bstances involve			14. Remedial A	Action - Picked Up Other Volume						
Bbls. Oil		Bbis. Water	250	Salt	Bbls. Oil							
Other 15. Describe Nature and Extent of Area Affec			Other Volume	11 To 1 or	Bbls. Water 200 Salt Contained Within a Dike/Pad? No							
	0 yard sandy				emediate in p		na Dike/Pad?	NO				
16. Water Cou	urses Reached		Туре	Condition	Volume Enteri	ng Water						
16. Water Courses Reached			None	N/A	Bbls. Oil							
Name					Bbls. Water		Other					
	Discharge Stopp /es to isolate		rt									
				Injection Well		BWPD @		PSI				
18. Operating Conditions at Time of Discharge Click Here				SWD LINE		4000	Line PSI	110#				
19. General V	Veather Condition				20. Cost of Re	20. Cost of Repair/Cleanup						
21 Endoral S	state, and Local A	cool / clear			\$1000 (EST.)							
Agency	state, and Local P	Person Notifie		Date Notified	Time Notified							
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Figure 1



*Could not get extraction on field analysis above 11' at point M1-3

LEGEND

3 Inch Pipeline

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BBC sample point 01-25-01 and 10-11-01 grab sample

BBC INTERN	ATIONAL, INC.
CONOCO	MCA BTRY #1
Date: 11-19-01	Drawn By: Ken
Disk:	Sheet of Sheets
Scale: Not to Scale	File Name

Appendix I



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 BATTERY #1 Project Location: MALJAMAR

LAB NUMBER

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

CI_

(mg/Kg)

 H6216-1
 MCA 1-25'
 752

 H6216-2
 MCA 1-30'
 400

 Quality Control
 100

 True Value QC
 1000

 % Recovery
 101

 Relative Percent Difference
 1.0

SAMPLE ID

METHOD: Standard Methods 4500-CI'B Analyses performed on 1:4 w:v aqueous extracts.

<u>10-16-01</u>

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. H6216

2111 Beechwood, Ab	.ORIES, INC silene, TX 79603	• '	rland, Hobbs, I 26 Fax (505) 39	VM 88240	S.	Page	Page	1 of 1
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	1/	Phone	*					
nalian	4 :	Faxt						
0		MATRIX						
Sample I.D.	(G)RABOR (C)OM # CONTAINERS GROUNDWATER WASTEWATER	Soil Oil Sludge Other : Acid:	ICE / COOL OTHER : DAT	TIME				
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mc1-1-30'	6	<u>ر</u>	Ja-11-01	Joston J.				
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images. Cardinal's lability and disert's excluse set for negligence and any other caluse wha al be lable for incidental or consequental d	aive remedy for any claim an itsoever shall be deemed wah amagee, including without limit	ising whather based in contra- ived unless made in writing an hation, jusiness interruptions,	th or tort, shall be limited to th d received by Cardinal within lose of use, or loss of profits	e amount paid by the client f 30 days after completion of incurred by client, its subsic	artes, Infes,	Terms and Conditions: 30 days past due at the and all costs of collection	Interest will be charged on a rate of 24% per annum from rat, including attorney's fees.	si accounts more than the original date of involce,
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PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

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

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

Receiving Date: 01/26/01 Reporting Date: 01/30/01 Project Number: NOT GIVEN Project Name: MCA BTR #1 Project Location: MALJAMAR Sampling Date: 01/25/01 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC/AH

LAB NUMBE	R SAMPLE ID	TPH (mg/Kg)	Cl* (mg/Kg)		
ANALYSIS D	DATE:	01/26/01	01/30/01		
H5556-1	MC1-1-3'	<10	4110		
H5556-2	MC1-1-20'	11.2	2220		
H5556-3	MC1-2-3'	<10	2750		
H5556-4	MC1-2-21'	<10	550 3230		
H5556-5	MC1-3-11'	<10			
H5556-6	MC1-3-20.5'	11.3	2910		
Quality Conti	rol	241	1051		
True Value C	2C	240	1000		
% Recovery	······································	100	105		
Relative Per	cent Difference	3.9	3.9		

METHODS: TPH-EPA 600/4-79-020 418.1; CI-Std. Methods 4500-CI⁻B *Analyses performed on 1:4 w:v aqueous extracts.

Jest for Cashi

PLEASENCE: Labitity 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.



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

ANALYTICAL RESULTS FOR BBC INTERNATIONAL ATTN: CLIFF P. BRUNSON 1324 W. MARLAND HOBBS, NM 88240 FAX TO: 505-392-0397

Receiving Date: 01/25/01 Reporting Date: 01/30/01 Project Number: NOT GIVEN Project Name: MCA BTR #1 Project Location: MALJAMAR Sampling Date: 01/25/01 Sample Type: SOIL Sample Condition: COOL, INTACT Sample Received By: BC Analyzed By: JA

LAB NUMBER	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DAT	E	01/30/01	01/30/01	01/30/01	01/30/01
H5556-1	MC1-1-3'	< 0.002	<0.002	< 0.002	< 0.006
H5556-2	MC1-1-20'	< 0.002	<0.002	< 0.002	<0.006
H5556-3	MC1-2-3'	< 0.002	< 0.002	< 0.002	<0.006
H5556-4	MC1-2-21'	< 0.002	< 0.002	< 0.002	< 0.006
H5556-5	MC1-3-11'	< 0.002	< 0.002	< 0.002	< 0.006
H5556-6	MC1-3-20.5'	<0.002	<0.002	<0.002	<0.006
Quality Control	······	0.099	0.114	0.103	0.315
True Value QC	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	0.100	0.100	0.100	0.300
% Accuracy	· · · · · · · · · · · · · · · · · · ·	99	114	103	105
Relative Percen	t Difference	2.9	2.5	0.7	4.4
METHOD EPA	SW 846-8020 5030 G	as Chromatography			······································

METHOD: EPA SW 846-8020, 5030, Gas Chromatography

Chemist

- 30 -01

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. H5556SBBCHOBBSBTEXONLY

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↑ Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.

Appendix II



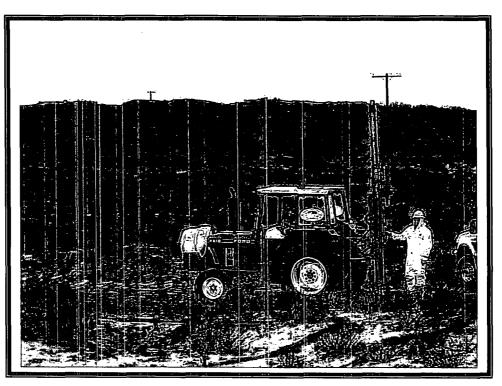


MCA Battery #1 Trunkline – Spill date 12/06/00 – Sample taken at 21'.



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MCA Battery #1 Trunkline Leak – Sample taken at 25' and 30' on 10-11-01