



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

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September 12, 2003

Paul Sheeley  
NM Oil Conservation Division  
1625 N. French Drive  
Hobbs, NM 88240

**RE: ConocoPhillips – EVGSAU 6" Injection Line Leak**

Dear Mr. Sheeley:

BBC International, Inc. respectfully submits this site investigation report for the EVGSAU 6" Injection Line Leak on behalf of ConocoPhillips.

This site is an area that was investigated due to an injection line leak that occurred on August 27, 2003. Approximately 520 barrels of produced water was released with 500 barrels recovered.

The investigation and sampling was conducted on September 9, 2003. The data reflects higher chloride concentrations at the near surface and drops significantly at the maximum depth of 5 feet for one sample point. Since the depth to groundwater is more than 55 feet below the deepest sample and the chloride concentrations have declined dramatically, our recommendation is to halt any further investigations and conduct surface remediation activities to accelerate vegetation growth.

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:jd

encl.

*ConocoPhillips-217817  
incident - NPAC0605553226  
application - PPA0605553404*



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**  
Cabinet Secretary

**Lori Wrotenbery**

Director

**Oil Conservation Division**

September 17, 2003

BBC International, Inc., (BBC)  
Attn: Ken Swinney  
1324 Marland  
Hobbs, NM 88240

Re: Work Plan Approval  
EVGSAU #6 Inj. Line - Dated: September 11, 2003  
UL-?, Sec 5-T18S-R35E

Dear Mr. Swinney,

The remediation work plan referenced above and submitted to the New Mexico Oil Conservation Division (OCD) for ConocoPhillips by BBC is hereby approved with the following conditions:

1. ConocoPhillips shall perform quarterly monitoring of chloride levels to document progress of remedial activities and to include in the final closure proposal.
2. ConocoPhillips shall reseed location with native grasses.
3. ConocoPhillips shall notify OCD at least 48-hr. prior to sampling.

Please be advised that OCD approval of this plan does not relieve ConocoPhillips of liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve ConocoPhillips of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please write or call: (505) 393-6161, ext. 113, or e-mail: [psheeley@state.nm.us](mailto:psheeley@state.nm.us)

Sincerely,

Paul Sheeley-Environmental Engineer

Cc: Roger Anderson - Environmental Bureau Chief  
Chris Williams - District I Supervisor  
William Olson - OCD Hydrologist  
Larry Johnson - Environmental Engineer

# **ConocoPhillips EVGSAU**

## **6" Injection Line Leak**

### **8-27-03**

#### **1.0 INTRODUCTION**

The subject site is located east of Buckeye, New Mexico in Section 5, Township 18 South, Range 35 East. The site consists of undeveloped rangeland and petroleum production facilities. On August 27, 2003 an injection line leaked approximately 520 barrels of produced water with approximately 500 barrels being recovered.

#### **2.0 SITE CHARACTERIZATION**

The leak area runs East-West for approximately 281 feet on either side of the injection line and runs to the south across the east side of well 0546-033 location for approximately 275 feet. The east west portion of the leak area is approximately 215 feet wide and the south portion is approximately 30 feet wide. A sketch of the leak area including the sample points can be reviewed in Appendix II of this report. The surface soil is brown topsoil. 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 New Mexico Office of the State Engineer, there are seven water wells located in Section 5, Township 18 South, Range 35 East. The groundwater depth in these wells ranges from 60 feet to 75 feet.

#### **3.0 SITE INVESTIGATION ACTIVITIES**

On September 9, 2003 BBC personnel conducted an inspection of the site. Four sample points were dug at the site to varying depths, using a backhoe. Sample Point 1 was dug on the west side of the site in a depression where the fluid appeared to have collected. Sample Points 2 and 3 were dug at the approximate center of the north and south portions of the affected area. Sample Point 4 was dug on the south end of the leak site in a low spot where the fluid appeared to have collected. Sample Points 2, 3, and 4 were shallower than Sample Point 1 due to a very hard rock layer from 1 to 3 feet below surface. Field screening techniques were used to determine samples to be sent for laboratory analysis. Field screening consisted of field chloride titrations. Laboratory results are located in Appendix I. Pictures of the leak site and the investigation activities are located in Appendix III.

#### **4.0 CONCLUSION AND RECOMMENDATION**

The data shows a significant reduction in chloride concentrations at Sample Point 1 from 5758 mg/Kg at 1 foot to 176 mg/Kg at 5 feet. Chloride concentrations at Sample Point 2 drop from 3919 mg/Kg at 1 foot to 480 mg/Kg at 3 feet. Sample Point 3 has a chloride concentration of 768 mg/Kg at 1 foot. The chloride concentration at Sample Point 4 declines from 5358 mg/Kg at 1 foot to 2239 mg/Kg at 2 feet. Taking into consideration that the depth to groundwater is greater than fifty 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.

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

Form C-141  
Revised June 10, 2003

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	ConocoPhillips	Contact	Stephen R. Wilson
Address	HC60 Box 66 Lovington, NM 88260	Telephone No.	505-396-7962
Facility Name	East Vacuum Grayburg San Andres Unit	Facility Type	Oil, Water and Gas
Surface Owner	Mineral Owner	State Of New Mexico	Lease No. 30-025-03057-00-00

LOCATION OF RELEASE

Unit Letter	Section 5	Township 18S	Range 35E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	520	Volume Recovered	500
Source of Release	Injection Line	Date and Hour of Occurrence	08-27-03 @ 11:00pm	Date and Hour of Discovery	08-27-03 @ 11:30pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Silvia Dickey		
By Whom?	Malcolm Cox MSO	Date and Hour	08-28-03 @ 12:30pm		
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.\*

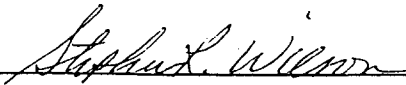
Describe Cause of Problem and Remedial Action Taken.\*

Internal Corrosion caused discharge of 520 bbl produced water. Welder out to weld patch on 6" trunk line and returned to service. The line that caused the leak will be replaced with a new fiberglass line and will be in service in +/- 45 days

Describe Area Affected and Cleanup Action Taken.\*

Vacuum truck out to pick up free standing water. Will test soil chlorides and submit remediation plan to NMOCD.

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.

Signature: 	OIL CONSERVATION DIVISION		
Printed Name: Stephen R. Wilson	Approved by District Supervisor:		
Title: Sr. SHEAR Specialist	Approval Date:	Expiration Date:	
E-mail Address: Steve.R.Wilson@ConocoPhillips.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date:	Phone: 505-396-7962		

\* Attach Additional Sheets If Necessary

# **Appendix I**

**CARDINAL  
LABORATORIES**

PHONE (325) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79803

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

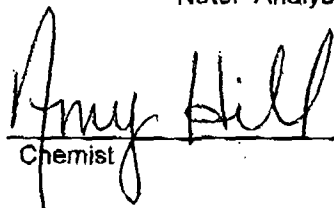
Receiving Date: 09/09/03  
Reporting Date: 09/10/03  
Project Owner: CONOCO PHILLIPS  
Project Name: EVGSAU 6" INJECTION LINE  
Project Location: BUCKEYE, NM

Analysis Date: 09/10/03  
Sampling Date: 09/09/03  
Sample Type: SOIL  
Sample Condition: COOL & INTACT  
Sample Received By: AH  
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/Kg)
H7988-1	SP1-1'	5758
H7988-2	SP1-3'	2959
H7988-3	SP1-5'	176
H7988-4	SP2-1'	3919
H7988-5	SP2-3'	480
H7988-6	SP3-1'	768
H7988-7	SP4-1'	5358
H7988-8	SP4-2'	2239
Quality Control		960
True Value QC		1000
% Recovery		96.0
Relative Percent Difference		4.1

METHOD: Standard Methods	4500-Cl <sup>-</sup> B
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Note: Analyses performed on 1:4 w:v aqueous extracts.

  
Chemist

9/10/03  
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.

H7988

**ARDINAL LABORATORIES, INC.**

22111 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

Company Name: <b>DOC International Inc.</b>		BILL TO		PO #:	
Project Manager: <b>C. Benson</b>		Company:			
Address: <b>1324 W. Morland</b>		Attn:			
City: <b>Hobbs</b>		Address: <b>SA</b>			
Phone #: <b>(505) 397-6388</b>		City:			
Fax #: <b>(505) 397-0397</b>		State:			
Project #: <b>—</b>		Project Owner: <b>Comiso Phillips</b>		Zip:	
Project Name: <b>EVGSAV 6" Injection Line</b>		Phone #:			
Project Location: <b>Buckeye N.M.</b>		Fax #:			

FOR LAB USE ONLY		MATRIX		PRES.		SAMPLING	
LAB I.D.	Sample I.D.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOL	SLUDGE	OTHER:
H7988-1	SP1-1'	1	✓				DATE: 9-9-03 8:15
-2	SP1-3'	1	✓				DATE: 9-9-03 8:22
-3	SP1-5'	1	✓				DATE: 9-9-03 8:45
-4	SP2-1'	1	✓				DATE: 9-9-03 9:05
-5	SP2-3'	1	✓				DATE: 9-9-03 9:10
-6	SP3-1'	1	✓				DATE: 9-9-03 10:00
-7	SP4-1'	1	✓				DATE: 9-9-03 10:20
-8	SP4-2'	1	✓				DATE: 9-9-03 10:40

RECEIVED BY: <b>Don Hernandez</b> Date: <b>9-9-03</b> Time: <b>14:50</b>		RECEIVED BY: (Lab Staff) Date: <b>9/9/03</b> Time: <b>3:00</b>		CHECKED BY: (Initials) <b>Don Hernandez</b>	
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Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Relinquished By:	Relinquished By:	Relinquished By:
--	------------------	------------------	------------------

Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Additional Fax #:	REMARKS:
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+ Cardinal cannot accept verbal changes. Please fax written changes to 915-673-7020.



## **Appendix II**

# ConocoPhillips EVGSAU 6" Injection Line Leak



281'

215'

Lease Road

Lease Road

Sample Point 2

Depression

Sample Point 1

Leak Point

Lease Road

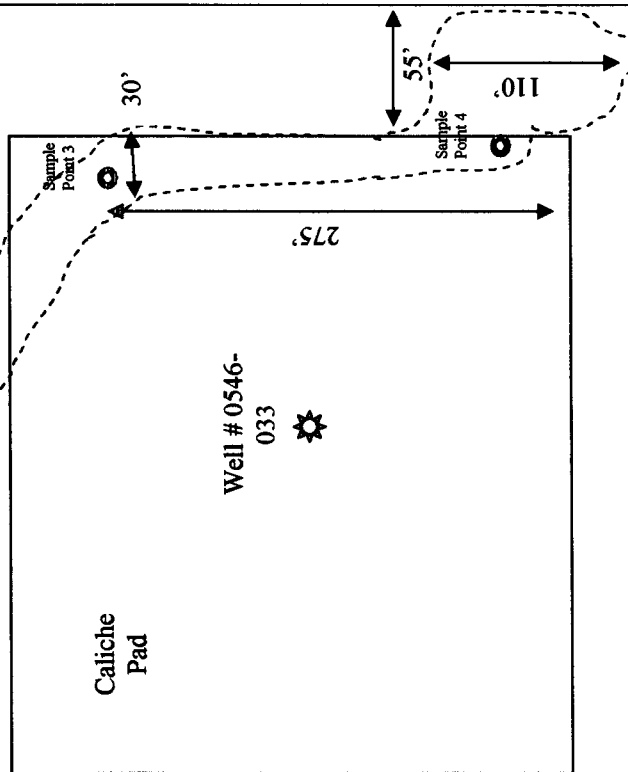
## LEGEND

● Sample Point

BBC INTERNATIONAL, INC.

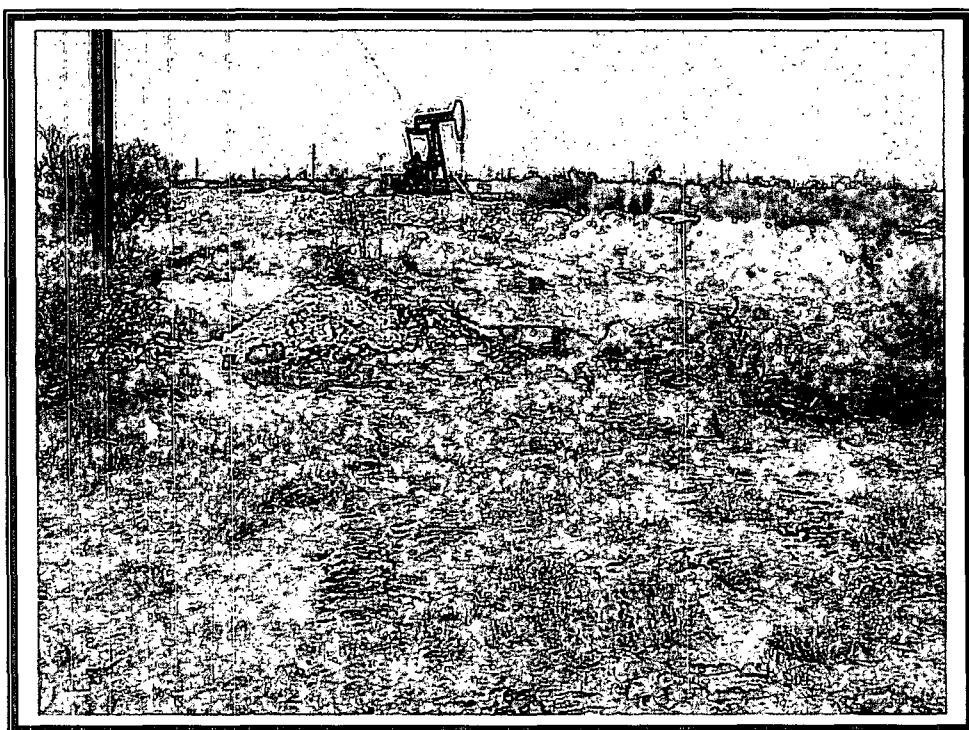
CONOCOPHILLIPS EVGSAU

Date: 9-11-03	Drawn By: JG
Disk:	Sheet of Sheets
Scale: Not to Scale	File Name

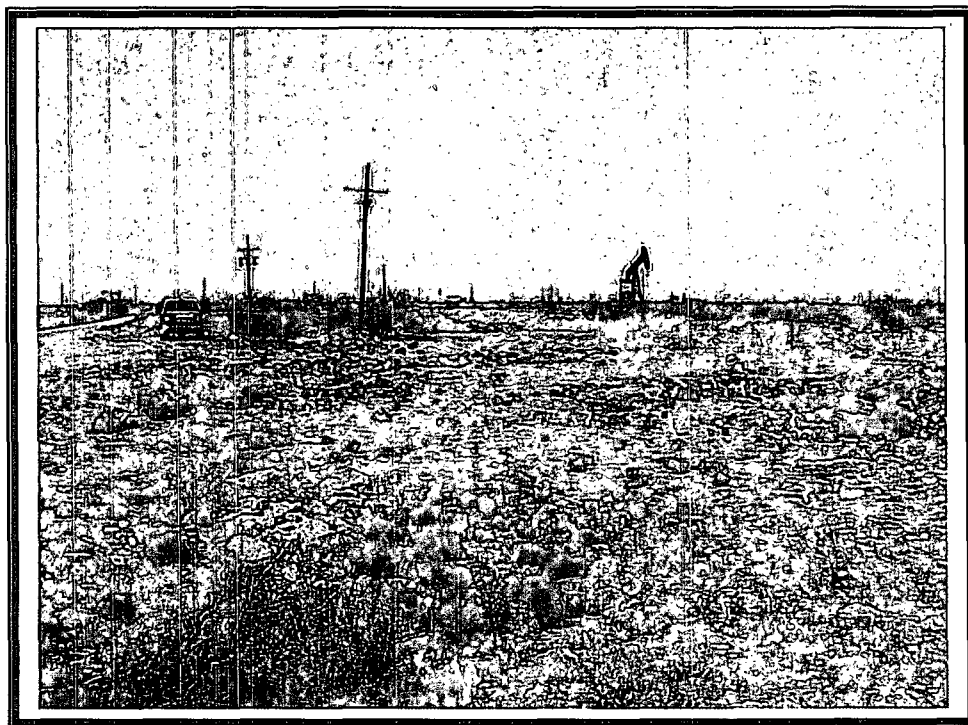


# Appendix III

ConocoPhillips 9-9-03



Sample point 1



Center of leak site looking west

ConocoPhillips 9-9-03



Sample point 2



Sample point 3 foreground  
Sample point 4 background

ConocoPhillips 9-9-03



Sample point 4