

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  
7 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

HOBBS OCD

Form C-141  
Revised October 10, 2003

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

RECEIVED

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	Apache Corporation	Contact	Natalie Gladden
Address	P.O. Box 1849	Telephone No.	575-390-4186
Facility Name	NEDU #247	Facility Type	Injection line

Surface Owner	State of NM	Mineral Owner	State of NM	Lease No.	30-025-38508
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	2	21S	37E	3465	FSL	1775	FWL	Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	150	Volume Recovered	55
Source of Release	Injection line leak	Date	2/25/09	Date	2/25/09 3pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Natalie Gladden	Date and Hour	2/25/09 352pm		
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.\*


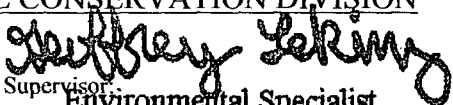
Drw = 30'

Describe Cause of Problem and Remedial Action Taken.\* Due to corrosion of 4" injection line which was buried 15' bgs blew out. This injection line ran under hwy 207 north of Eunice. The fluid was both inside and outside state fence line. No fluid was released into conduit. Line was shut in and repaired. Vac trucks recovered approx 55bbls of pw. NM State Hwy Department was notified.

Describe Area Affected and Cleanup Action Taken.\*

Due to safety hazards, the area of excavation will be dug out and backfilled at the end of each day. Proper barricades, fencing, lights and other safety measures will be taken once work begins. Contamination was hauled to Sundance Disposal and NMOCD rules and guidelines was followed to closure.

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: Natalie Gladden	Approved by District Supervisor:  Environmental Specialist	
Title: EH&S Environmental Tech	Approval Date: 08/09/12	Expiration Date: -
E-mail Address: natalie.gladden@apachecorp.com	Conditions of Approval: -	Attached <input type="checkbox"/>
Date: 07/27/12 Phone: 575-390-4186	IRP-09-03-2130	

\* Attach Additional Sheets If Necessary

NSAD1411754792





HOBBS OCD

AUG 09 2012

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NEDU #247

Lea County

Unit F, 2, 21S, 37E

3465' FSL and 1775' FWL

API # 30-025-38508

Prepared by: Natalie Gladden

Apache Corporation

AUG 09 2012

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Dear Geoffrey,

Attached you will find a copy of the original C141, final C141, project summary report, a diagram of the contamination area along with sample points with sample results and final analyticals taken from this site.

With this information that is provided, Apache Corporation respectfully requests your review and approval of the Risked Based Closure Document for the produced water release that occurred at the Apache NEDU #247 site.

If you have any questions or concerns, please feel free to contact me at any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Gladden". The signature is fluid and cursive, with the first name "Natalie" and last name "Gladden" clearly distinguishable.

Natalie Gladden

EH&S Environmental Tech

Permian New Mexico District

The purpose of this report is to document the remediation activities and present supporting analytical data to the NMOCD, requesting closure of the referenced produced water release incident in accordance with the Guidelines for Remediation of Leaks, Spills and Releases.

Based on the analytical results of the confirmation soil samples collected from the excavation; which confirmed that the soil samples were slightly higher than the 250-ppm chloride standard. This is due to public safety concerns, this release was on Highway 8, where the injection line was buried and goes underneath the highway. Consequently, no further action is recommended or planned for this site at this time and on behalf of Apache Corporation we respectfully request that the NMOCD grant this risk based closure for the Apache NEDU #247 release.

## **NEDU #247 Project Summary**

### **Release History:**

On the morning of February 25, 2009, the injection line for NEDU #247 ruptured. Due to corrosion the 4" injection line blew out, line is buried 15' below ground surface. This line runs under Hwy 207 north of Eunice. When the line blew out it released approximately 150bbls of produced water and recovered 55bbls of fluid. The release occurred inside the fence line, but fluid was both inside the fence line and down the bar ditch of Hwy 207.

### **Emergency Response:**

Vacuum trucks were called to recover standing fluid. Gangs were also dispatched and injection line was repaired. A local backhoe company picked up the saturated soil immediately and hauled to Sundance Services.

### **Bidding Process:**

Due to the seriousness of the release CW Backhoe Service was dispatched out to start remediation. Once the site was assessed, it was found that due to driving hazards being so close to the highway, B&H Construction was used as well due to having their trackhoe on location to dig out and repair the line.

### **Remediation Process:**

On February 27<sup>th</sup>, excavation began. Due to the amount of saturated soil close to the highway, it was determined to excavate one side of the line at a time, then backfill before the end of the day. We placed concrete barricades in front of the deep excavation to block traffic from entering, especially during the night. We also placed lighted barrels, fencing and signs along highway to protect the public. Also the state fence was taken down each morning and put back in place at the end of the day. At the point of release, the contamination was from the surface to the injection line (at 15'), then 15' below the injection line. Due to this excavation being a safety issue the NMOCD allowed Apache to dig up the saturated soil and haul off to Sundance Services, with leaving some contaminated soil in place. A total of 3,788 yards of contamination was hauled to Sundance Services. We backhauled the backfill after each truck hauled contamination so that we were prepared to backfill at the end of each day. A total of 2973 yards of caliche and 744 yards of topsoil was hauled for backfill. Chloride concentrations in the saturated soil was above 3000-ppm. On the north side of the injection line chloride concentrations of 867-ppm to 1254-ppm was left on the sidewalls and bottom of excavation. On the south side of the injection line chloride concentrations of 528-ppm to 1080-ppm were left on the sidewalls and bottom of excavation. On the bar ditch chloride concentrations were left at under 500-ppm due to the natural slope of the bar ditch and to protect contractors and drivers from the excavated area, the excavated area in the bar ditch was at a depth of

4'. The location was contoured back to natural land and fencing was put back up after final steps of clean up.

Note: NMOCD allowed Apache Corporation to take out only the saturated soil; no blending was needed due to safety issues. The State of NM's Highway Department allowed us to stay 5' from the edge of the paved road, there for the NMOCD agreed to allow Apache to take out the saturated soil, with leaving some contamination in place.

**Savings due to risk based closure:**

The following is the breakdown of the actual cost to Apache through the completion portion of the NEDU #247 remediation:

Disposal Fees	\$ 57,197.30
Labs	\$ 700.00
Transportation Cost	\$ 25,075.00
Env. Contractor	\$ 45,961.11
Line Repair	\$ 9,075.58
Trucking-Solids	\$ 1,243.76
Backfill	<u>\$ 17,333.00</u>
<b>Total</b>	<b>\$156,585.75</b>

**Conclusion:**

This project consisted of excavating 3,788 yards of contaminated soil above regulatory levels. Blending was not an option due to safety hazards along public highways.



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
APACHE CORPORATION  
ATTN: NATALIE GLADDEN  
P.O. BOX 1849  
EUNICE, NM 88231

Receiving Date: 05/15/09  
Reporting Date: 05/18/09  
Project Number: NOT GIVEN  
Project Name: NOT GIVEN  
Project Location: NEDU #247

Analysis Date: 05/18/09  
Sampling Date: 04/20/09  
Sample Type: SOIL  
Sample Condition: INTACT  
Sample Received By: CK  
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H17440-1	BD-SP1-BTM	448
H17440-2	BD-SP2-BTM	224
H17440-3	BD-SP3-BTM	400
H17440-4	BD-SP4-BTM	272
H17440-5	SP1 S-EXC	832
H17440-6	SP2 S-EXC	560
H17440-7	SP3 S-EXC	320
H17440-8	SP4 S-EXC	768
H17440-9	SP5 S-EXC BTM	448
H17440-10	SP1 N-EXC	496
	Quality Control	500
	True Value QC	500
	% Recovery	100
	Relative Percent Difference	< 0.1

METHOD: Standard Methods

4500-ClB

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

  
Chemist

05/18/09  
Date

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ANALYTICAL RESULTS FOR  
APACHE CORPORATION  
ATTN: NATALIE GLADDEN  
P.O. BOX 1849  
EUNICE, NM 88231

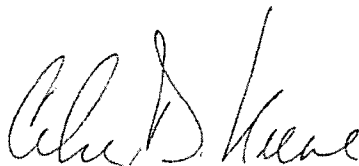
Receiving Date: 05/15/09  
Reporting Date: 05/18/09  
Project Number: NOT GIVEN  
Project Name: NOT GIVEN  
Project Location: NEDU #247

Analysis Date: 05/18/09  
Sampling Date: 04/20/09  
Sample Type: SOIL  
Sample Condition: INTACT  
Sample Received By: CK  
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H17440-11	SP2 N-EXC	512
H17440-12	SP3 N-EXC	384
H17440-13	SP4 N-EXC	352
H17440-14	SP5 N-EXC	192
H17440-15	SP1 BD SW	128
H17440-16	SP2 BD SW	352
H17440-17	SP3 BD SW	112
H17440-18	SP4 BD SW	752
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

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

  
Cheryl D. Keane  
Chemist

05/18/09  
Date

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# CARDINAL LABORATORIES

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(575) 393-2326 Fax (575) 393-2476

Page 1 of 2

<b>Company Name:</b> <u>Apache</u> <b>Project Manager:</b> <u>Natalie Gladden</u> <b>Address:</b> <u>P.O. Box 1849</u> <b>City:</b> <u>Durice</u> <b>State:</b> <u>NM</u> <b>Zip:</b> <u>88231</u> <b>Phone #:</b> <u>390-4180</u> <b>Fax #:</b> _____ <b>Project #:</b> _____ <b>Project Owner:</b> _____ <b>Project Name:</b> _____ <b>Project Location:</b> <u>Nadu #247</u> <b>Sampler Name:</b> <u>Natalie Gladden</u>				<b>BILL TO</b> <b>P.O. #:</b> _____ <b>Company:</b> _____ <b>Attn:</b> _____ <b>Address:</b> _____ <b>City:</b> _____ <b>State:</b> _____ <b>Zip:</b> _____ <b>Phone #:</b> _____ <b>Fax #:</b> _____		<b>ANALYSIS REQUEST</b>																				
FOR LAB USE ONLY																										
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	chlorides											
1	BO-SPI-BTM		1			✓							4/20													
2	2-		1																							
3	3-		1																							
4	4-		1																							
5	SPI 5-Exc		1																							
6	2 " "		1																							
7	3 " "		1																							
8	4 " "		1																							
9	5 " " Btm		1																							
10	SP 21 N Exc		1																							

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<b>Sampler Relinquished:</b> <u>Natalie Gladden</u> <b>Relinquished By:</b>	<b>Date:</b> <u>5-15-09</u> <b>Time:</b> _____	<b>Received By:</b> <u>Alu. Kene</u> <b>Received By:</b>	<b>Date:</b> <u>5-15-09</u> <b>Time:</b> <u>1:25</u>	<b>Temp.</b> <u>38°C</u> <b>Sample Condition</b> Cool / Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>CHECKED BY:</b> (Initials) <u>CPH</u>	<b>Phone Result:</b> <input type="checkbox"/> No <b>Add'l Phone #:</b> _____ <b>Fax Result:</b> <input type="checkbox"/> No <b>Add'l Fax #:</b> _____ <b>REMARKS:</b> <u>Email</u>
---	---	--	---	---	--	---

Delivered By: (Circle One)  
 Sampler - UPS - Bus - Other: \_\_\_\_\_

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

\* Only Cl- analysis, doesn't require refrigeration. OK



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[illegible]

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<b>Sampler Relinquished:</b> <i>Patricia Gladden</i>		<b>Date:</b> 5-15-09		<b>Received By:</b>		<b>Phone Result:</b> <input type="checkbox"/> No		<b>Add'l Phone #:</b>	
<b>Relinquished By:</b>		<b>Date:</b> 5/15/09		<b>Received By:</b> <i>Chad Keene</i>		<b>Fax Result:</b> <input type="checkbox"/> No		<b>Add'l Fax #:</b>	
<b>Delivered By: (Circle One)</b> Sampler - UPS - Bus - Other:		<b>Temp.</b> 38°C		<b>Sample Condition</b> Cool Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>CHECKED BY:</b> (Initials) <i>CPK</i>			
<b>REMARKS:</b> <i>email</i>									

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

NEDU #247

Release Date: 02/25/09

