

1 RP-2397



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 October 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	Southern Union Gas Services, Ltd.	Contact	Rose Slade
Address	P.O. Box 1226 Jal, N.M. 88252	Telephone No.	432-940-5147
Facility Name	Lea County Field Dept.	Facility Type	Natural Gas Gathering line

Surface Owner: BLM	Mineral Owner:	Lease No.
--------------------	----------------	-----------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	3	26	34					Lea

Latitude N32 03.910 Longitude W103 27.358

NATURE OF RELEASE

Type of Release : Crude Oil, Produced water and Natural Gas	Volume of Release: 15 bbls.	Volume Recovered: 8 bbls.
Source of Release : 16" Natural Gas Pipeline	Date and Hour of Occurrence not known	Date and Hour of Discovery 12/14/09 5:15 p.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Robert	
By Whom? Rose Slade	Date and Hour: 12/14/09 at 10:15 p.m.	
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.\*

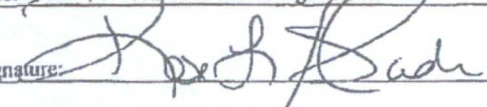
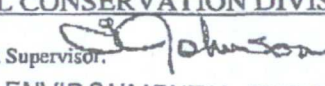
WATER @ 125'

Describe Cause of Problem and Remedial Action Taken.\*

The 16" Natural gas pipeline developed a leak due to external corrosion operating at approximately 30 psi on the pipeline. The line was clamped and will be replaced at a later time.

Describe Area Affected and Cleanup Action Taken: The affected area was approximately 19' wide by 69' in length. The environmental consultant will remediate the area affected and provide OCD with the required documentation for closure on this site.

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: Rose L. Slade	Approved by District Supervisor: 	
Title: EHS Compliance Specialist	ENVIRONMENTAL ENGINEER	
E-mail Address: rose.slade@sug.com	Approval Date: 1.11.10	Expiration Date: 3.11.10
Date: 1/11/2010 Phone: 432-940-5147 (cell)	Conditions of Approval:	Attached <input type="checkbox"/>

Submit Final C-141 w/DOC BY

IRP# 10.1.2397

\* Attach Additional Sheets If Necessary

FGRL1002241504

# ***Basin Environmental Consulting LLC***

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
Office: (575) 396-2378 Fax: (575) 396-1429  
jwlowry@basin-consulting.com



## **REMEDIATION SUMMARY AND SITE CLOSURE REQUEST**

**RECEIVED**

**AUG 12 2010  
HOBBSOCD**

**Southern Union Gas Services  
California "A" Line (2009-067)  
Lea County, New Mexico  
UNIT M (SW/SW), Section 3, Township 26 South, Range 34 East  
Latitude 32° 03.910' North, Longitude 103° 27.358' West  
NMOCD Reference # 1RP-2397**

Prepared For:

**Southern Union Gas Services  
1507 West 15<sup>th</sup> Street  
Monahans, Texas 79756**

Prepared By:

**Basin Environmental Consulting, LLC**

**July 2010**

*Joel W. Lowry*

**Joel W. Lowry  
Project Manager**

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## **1.0 INTRODUCTION**

Basin Environmental Consulting, LLC (Basin), on behalf of Southern Union Gas Services (Southern Union), has prepared this Remediation Summary and Site Closure Request for the release site known as California "A" Line. The site is located in Unit Letter M (SW ¼ SW ¼), Section 3, Township 26 South, Range 34 East, in rural Lea County, New Mexico. The property is owned by the United States Department of the Interior, Bureau of Land Management (BLM). The GPS coordinates of the release site are 32° 03.910' North 103° 27.358' West. Site Location and Site and Sample Location Maps are provided as Figure 1 and Figure 2, respectively.

The Release Notification and Corrective Action (NMOCD Form C-141) indicated fifteen (15) barrels (bbls) of crude oil, produced water and natural gas was released from the Southern Union pipeline. During initial response activities eight (8) bbls were recovered resulting in the net loss of seven (7) bbls of crude oil, produced water and natural gas. The Release Notification and Corrective Action form is provided as Appendix D.

On January 14, 2009, Southern Union discovered a release from a sixteen (16)-inch steel pipeline. During initial response activities, the release site was excavated and a temporary pipeline clamp was installed on the pipeline to mitigate the release. The release resulted in a surface stain measuring approximately nineteen (19) feet in width by sixty-nine (69) feet in length. The release was attributed to external corrosion of the sixteen (16) inch natural gas pipeline.

On May 12, 2010, a Cultural Resource Survey was conducted by Boone Archaeological Services of Carlsbad, New Mexico. The results of the survey indicated no cultural resources were affected by the release or the subsequent remediation activities. The results of the Cultural Resources Survey are provided as Appendix A.

## **2.0 NMOCD SITE CLASSIFICATION**

A search of the New Mexico Office of the State Engineer (NMOSE) database indicated depth to groundwater information was unavailable for Section 3, Township 26 South, Range 34 East. A depth to groundwater reference map utilized by the New Mexico Oil Conservation Division (NMOCD) indicates groundwater should be encountered at approximately one hundred twenty-five (125) feet bgs. The depth to groundwater in this area results in a score of zero (0) points being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the site, resulting in zero (0) points being assigned to the site as a result of this criteria.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the California "A" line release site has a ranking score of zero (0). Based on this score, the soil remediation levels for a site with a ranking score of zero (0) points are as follows:



- Benzene – 10 mg/kg (ppm)
- BTEX – 50 mg/kg (ppm)
- TPH – 5,000 mg/kg (ppm)

The NMOCD chloride clean-up level concentrations are site specific and are set by the NMOCD.

### 3.0 SUMMARY OF FIELD ACTIVITIES

On April 28 and April 29, 2010, Basin conducted delineation activities at the release site. A delineation trench was installed adjacent to the release point to determine the vertical extent of soil impact. Soil samples were collected at three (3) foot intervals and field screened using a Photo Ionization Detector (PID) and chloride test strips. The delineation trench was advanced until field tests indicated TPH and chloride concentrations were below NMOCD regulatory standards, which was approximately seventeen (17) feet below ground surface (bgs). Upon completion of the vertical delineation the trench was backfilled as a safety precaution. Photographs are provided in Appendix B.

On May 20 and May 21, 2010, remedial activities commenced at the location. The sixteen (16) inch natural gas pipeline was excavated by hand and an excavator was utilized to advance the excavation to a depth of seventeen (17) feet bgs. The excavation sidewalls were advanced to the north, east and west until field test indicated TPH and chloride concentrations were below NMOCD regulatory standards. Advancement of the excavation to the south was restricted by the presence of two active sixteen (16) inch natural gas pipelines and a widely used oilfield access road. The final dimensions of the excavation were approximately twenty-five (25) feet in width by thirty-two (32) feet length and seventeen (17) feet in depth. Approximately 475 cubic yards of excavated material was stockpiled on-site.

On May 20 and May 21, 2010, five (5) confirmation soil samples (NORTH SW @ 12', EAST SW @ 12', SOUTH SW @ 12', WEST SW @ 12' and FLOOR @ 17') were collected from the excavation and submitted to Cardinal Laboratories for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method SW-846 8021b, total petroleum hydrocarbons (TPH) by EPA Method SW-846 8015M and chloride concentrations by EPA Method 4500 Cl. Benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for each of the soil samples submitted. BTEX concentrations were less than the laboratory MDL for each of the soil samples submitted, with the exception of soil sample SOUTH SW @ 12' which exhibited a concentration of 11.84 mg/kg. TPH concentrations were less than the laboratory MDL for each of the soil samples submitted, with the exception of soil sample SOUTH SW @ 12' which exhibited a concentration of 7,920.8 mg/kg. Chloride concentrations ranged from 32 mg/kg for soil sample EAST SW @ 12' to 224 mg/kg for soil sample SOUTH SW @ 12'. A summary of analytical results are provided in Table 1.

On May 21, 2010, one (1) five-point composite stockpile soil sample (STOCKPILE-1) was collected from the stockpile and submitted to Cardinal Laboratories for analysis of benzene, BTEX, TPH and chloride concentrations. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL. Laboratory analytical



results indicated the TPH concentration was 337 mg/kg. Laboratory analytical results indicated the concentration of chloride was 96 mg/kg.

Due to safety concerns associated with the presence of two (2) large diameter natural gas pipelines and widely used oilfield access road, Southern Union requested and was granted approval to backfill the excavation. On May 21, 2010, the excavation was backfilled with the blended stockpile material. Backfill was compacted and contoured to fit the surrounding topography and will be reseeded with seed acceptable to the landowner at a time more conducive to germination.

#### **4.0 QA/QC PROCEDURES**

##### **4.1 Soil Sampling**

Soil samples were delivered to Cardinal Laboratories, Inc. in Hobbs, New Mexico for BTEX and/or TPH and/or chloride analyses using the methods described below. Soil samples were analyzed for BTEX and/or TPH and/or chloride within fourteen days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH-GRO/DRO/ORO concentrations in accordance with modified EPA Method SW-846 8015M extended.
- Chloride concentrations in accordance with EPA Method 4500 ClB

##### **4.2 Decontamination of Equipment**

Cleaning of the sampling equipment was the responsibility of the environmental technician. Prior to use, and between each sample, the sampling equipment was cleaned with Liqui-Nox<sup>®</sup> detergent and rinsed with distilled water.

##### **4.3 Laboratory Protocol**

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

#### **5.0 SITE CLOSURE REQUEST**

Based on the analytical results of the confirmation soil samples, Basin recommends Southern Union provide the NMOCD Hobbs District Office and the BLM Carlsbad District office, a copy of this Remediation Summary and Site Closure Request and request the NMOCD grant site closure to the California "A" Line release site.

## **6.0 LIMITATIONS**

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Southern Union Gas Services. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the expressed or written consent of Basin Environmental Consulting, LLC and/or Southern Union Gas Services.



## **7.0 DISTRIBUTION:**

- Copy 1: Geoffrey Leking  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division (District 1)  
1625 French Drive  
Hobbs, New Mexico 88240
- Copy 2: James Amos  
U.S. Department of the Interior  
Bureau of Land Management  
620 East Greene Street  
P.O. Box 1778  
Carlsbad, New Mexico 88220
- Copy 3: Rose Slade  
Southern Union Gas Services  
1507 West 15<sup>th</sup>  
Monahans, Texas 79756
- Copy 4: Joel Lowry  
Basin Environmental Consulting, LLC  
2800 Plains Highway  
P.O. Box 381  
Lovington, New Mexico 88260

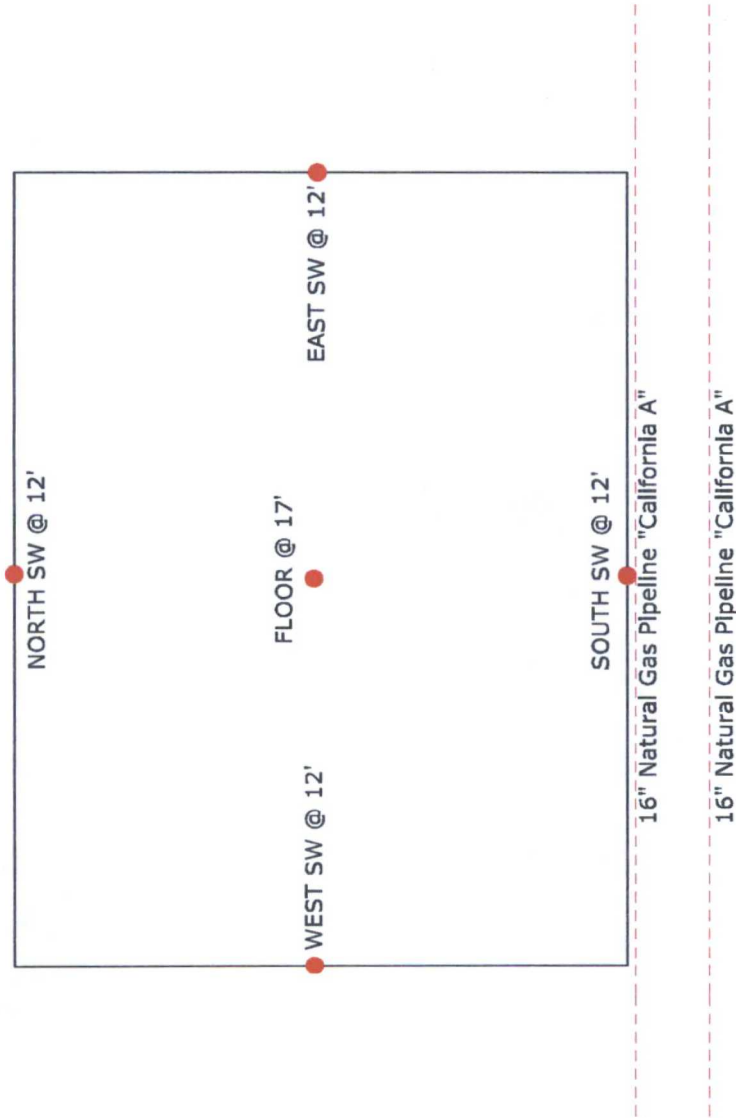


Figure 1  
Site Location Map  
Southern Union Gas Services  
California "A"  
Lea County, New Mexico

# Basin Environmental Consulting

Prep By: JWL  
June 11, 2010  
Checked By: CJB  
Scale 1"=3000'





ROAD



**Legend:**

- Excavation
- - - Pipeline
- Sample Location

**Figure 2**  
**Site and Sample Location Map**  
Southern Union Gas Services  
California "A" Line  
Lea County, New Mexico

**Basin Environmental Services**

Prep By: JWL	Checked By: CJB
June 08, 2010	Scale 1"=10'

TABLE 1

## CONCENTRATIONS OF BTEX, TPH AND CHLORIDES IN SOIL

SOUTHERN UNION GAS SERVICES  
CALIFORNIA "A"  
LEA COUNTY, NEW MEXICO  
NMOC REFERENCE # 1RP-2397

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030					SW 848-8015M				4500 Cl
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/Kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/Kg)	DRO Ext. C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TOTAL TPH (mg/Kg)	
NORTH SW @ 12'	05/20/10	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	176
EAST SW @ 12'	05/21/10	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	32
SOUTH SW @ 12'	05/21/10	In-Situ	<0.050	0.348	0.789	10.7	11.84	1,030	6,880.0	10.8	7,920.8	224
WEST SW @ 12'	05/21/10	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	160
FLOOR @ 17'	05/21/10	In-Situ	<0.050	<0.050	<0.050	<0.300	<0.300	<10.0	<10.0	<10.0	<10.0	80
STOCKPILE-1	05/21/10	N/A	<0.050	<0.050	<0.050	<0.300	<0.300	15	322	<10.0	337	96



# **NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)**

1. NMCRIS Activity No.: 117402	2a. Lead (Sponsoring) Agency: BLM, CFO	2b. Other Permitting Agency(ies):	3. Lead Agency Report No.:																								
4. Title of Report: California leak site.			5. Type of Report <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive																								
Author(s) Ann and Danny Boone																											
6. Investigation Type <input type="checkbox"/> Research Design <input checked="" type="checkbox"/> Survey/Inventory <input type="checkbox"/> Test Excavation <input type="checkbox"/> Excavation <input type="checkbox"/> Collections/Non-Field Study <input type="checkbox"/> Overview/Lit Review <input type="checkbox"/> Monitoring <input type="checkbox"/> Ethnographic study <input type="checkbox"/> Site specific visit <input type="checkbox"/> Other																											
7. Description of Undertaking (what does the project entail?): Eb Taylor of Basin Environmental Service Technologies requested that Boone Archaeological Services conduct an archaeological inventory of an area where petroleum fluid leaked from a Southern Union Gas Services buried pipeline. Danny Boone conducted a survey of the affected area with a 100 feet buffer all around on 12 May 2010. Said survey resulted in a rectangular block area estimated to be 380 feet E/W by 308 feet N/S. The corners of the survey area were marked with a combination of orange and pink tape tied to vegetation. Location and survey acres are estimates based on a hand held GPS Unit. Impact acres are unknown but were estimated on a 180 by 108 feet block.																											
8. Dates of Investigation: (from: 12 May 10 to:        )		9. Report Date: 13 May 10																									
10. Performing Agency/Consultant: Boone Archaeological Services, LLC 2030 North Canal, Carlsbad, NM 88220 575-885-1352 Principal Investigator: Danny Boone    Field Supervisor: Danny Boone Field Personnel Names: Danny Boone		11. Performing Agency/Consultant Report No.: BAS 05-10-06  12. Applicable Cultural Resource Permit No(s): BLM: 190-2920-09-L																									
13. Client/Customer (project proponent): Southern Union Gas Services Contact: Eb Taylor (Agent for Basin Enviromental) Address: 1507 West 15 <sup>th</sup> Street Monahan, Texas 79756 Phone: (575) 408-3130		14. Client/Customer Project No.:																									
15. Land Ownership Status ( <u>Must</u> be indicated on project map): <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Land Owner</th> <th style="width:25%;">Acres Surveyed</th> <th style="width:25%;">Acres in APE</th> </tr> </thead> <tbody> <tr> <td>BLM</td> <td>2.69 (+/-)</td> <td>1.5 (-/+)</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr> <td align="right">TOTALS</td> <td>2.69 (-/+)</td> <td>1.5 (+/-)</td> </tr> </tbody> </table>				Land Owner	Acres Surveyed	Acres in APE	BLM	2.69 (+/-)	1.5 (-/+)																TOTALS	2.69 (-/+)	1.5 (+/-)
Land Owner	Acres Surveyed	Acres in APE																									
BLM	2.69 (+/-)	1.5 (-/+)																									
TOTALS	2.69 (-/+)	1.5 (+/-)																									
16. Records Search(es): <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:40%;">Date(s) of ARMS File Review: 12 May 10</td> <td style="width:30%;">Name of Reviewer(s): Ann Boone</td> <td style="width:30%;"></td> </tr> <tr> <td>Date(s) of NR/SR File Review:</td> <td>Name of Reviewer(s):</td> <td></td> </tr> <tr> <td>Date(s) of Other Agency File Review: 12 May 10</td> <td>Name of Reviewer(s): Danny Boone</td> <td>Agency: BLM, CFO</td> </tr> </table> Findings: No previously recordes sites were located within 1.0 mile.				Date(s) of ARMS File Review: 12 May 10	Name of Reviewer(s): Ann Boone		Date(s) of NR/SR File Review:	Name of Reviewer(s):		Date(s) of Other Agency File Review: 12 May 10	Name of Reviewer(s): Danny Boone	Agency: BLM, CFO															
Date(s) of ARMS File Review: 12 May 10	Name of Reviewer(s): Ann Boone																										
Date(s) of NR/SR File Review:	Name of Reviewer(s):																										
Date(s) of Other Agency File Review: 12 May 10	Name of Reviewer(s): Danny Boone	Agency: BLM, CFO																									
17. Survey Data:        a. Source Graphics <input checked="" type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input checked="" type="checkbox"/> USGS 7.5' (1:24,000) topo map <input type="checkbox"/> Other topo map, Scale: <input checked="" type="checkbox"/> GPS Unit    Accuracy <input type="checkbox"/> <1.0m <input checked="" type="checkbox"/> 1-10m <input type="checkbox"/> 10-100m <input type="checkbox"/> >100m b. USGS 7.5' Topographic Map Name        USGS Quad Code <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">ANDREWS PLACE, N.MEX.-TEX (1973)</td> <td style="width:40%;">32103-A4</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table> c. County(ies): Lea				ANDREWS PLACE, N.MEX.-TEX (1973)	32103-A4																						
ANDREWS PLACE, N.MEX.-TEX (1973)	32103-A4																										

## 17. Survey Data (continued):

d. Nearest City or Town: Jal, NM

e. Legal Description:

Township (N/S)	Range (E/W)	Section	1/4	1/4	1/4
26S	34E	3	SW SE,	,	.
			.	.	.
			.	.	.
			.	.	.
			.	.	.
			.	.	.
			.	.	.
			.	.	.

Projected legal description? Yes [ ] , No [X] Unplatted [ ]

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.):

## 18. Survey Field Methods:

Intensity: ☒ 100% coverage ☐ <100% coverageConfiguration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):Scope: ☒ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)

Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: 12 May 10

Survey Person Hours: 1 Recording Person Hours: 0 Total Hours: 1

Additional Narrative: Location and survey acres are estimates based on a hand held GPS Unit. The project is an area where petroleum fluid leaked from a buried pipeline with a 100 feet buffer all around. The survey resulted in a rectangular area estimated to be 380 (+/-) feet E/W by 308 (+/-) feet N/S. The corners of the survey area was marked with a combination of orange and pink tape tied to vegetation. Impact acres are unknown but were estimated on a 180 by 108 feet block.

## 19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

Topography: Mildly undulating dunal plain.

Vegetative community: Mesquite, yucca cactus, sage brush, assorted grasses and other flora.

NRCS: Peyote-Maljamar-Kermit association: Gently undulating and rolling, deep, sandy soils.

Elevation: 3,310 feet

20.a. Percent Ground Visibility: 70 overall b. Condition of Survey Area (grazed, bladed, undisturbed, etc.): There are four buried pipelines and one caliche capped road in the survey area.

21. CULTURAL RESOURCE FINDINGS ☐ Yes, See Page 3 ☒ No, Discuss Why: Unknown

## 22. Required Attachments (check all appropriate boxes):

- ☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn  
☒ Copy of NMCRIS Mapserver Map Check  
☐ LA Site Forms - new sites (*with sketch map & topographic map*)  
☐ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*)  
☐ Historic Cultural Property Inventory Forms  
☐ List and Description of isolates, if applicable  
☐ List and Description of Collections, if applicable

## 23. Other Attachments:

- ☐ Photographs and Log  
☐ Other Attachments  
 (Describe):

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Danny Boone

Signature Danny Boone

Date: 13 May 2010 Title (if not PI):

25. Reviewing Agency:  
Reviewer's Name/Date

Accepted ( ) Rejected ( )

Tribal Consultation (if applicable): ☐ Yes ☐ No26. SHPO  
Reviewer's Name/Date:

HPD Log #:

SHPO File Location:

Date sent to ARMS:



# CULTURAL RESOURCE FINDINGS

[fill in appropriate section(s)]

1. NMCRIS Activity No.: 117402	2. Lead (Sponsoring) Agency: BLM, CFO	3. Lead Agency Report No.:
-----------------------------------	--	----------------------------

## SURVEY RESULTS:

Sites discovered and registered: 0

Sites discovered and NOT registered: 0

Previously recorded sites revisited (site update form required): 0

Previously recorded sites not relocated (site update form required): 0

TOTAL SITES VISITED: 0

Total isolates recorded: 0 Non-selective isolate recording? ☒

Total structures recorded (new and previously recorded, including acequias): 0

MANAGEMENT SUMMARY: No cultural resources were encountered therefore archaeological clearance of the California leak site for Southern Union Gas Services is recommended. If Cultural Resources are encountered at any time all activity should cease and the BLM Archaeologist notified Immediately.

IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.

## SURVEY LA NUMBER LOG

Sites Discovered:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

Previously recorded revisited sites:

LA No.	Field/Agency No.	Eligible? (Y/N, applicable criteria)

## MONITORING LA NUMBER LOG (site form required)

Sites Discovered (site form required):

Previously recorded sites (Site update form required):

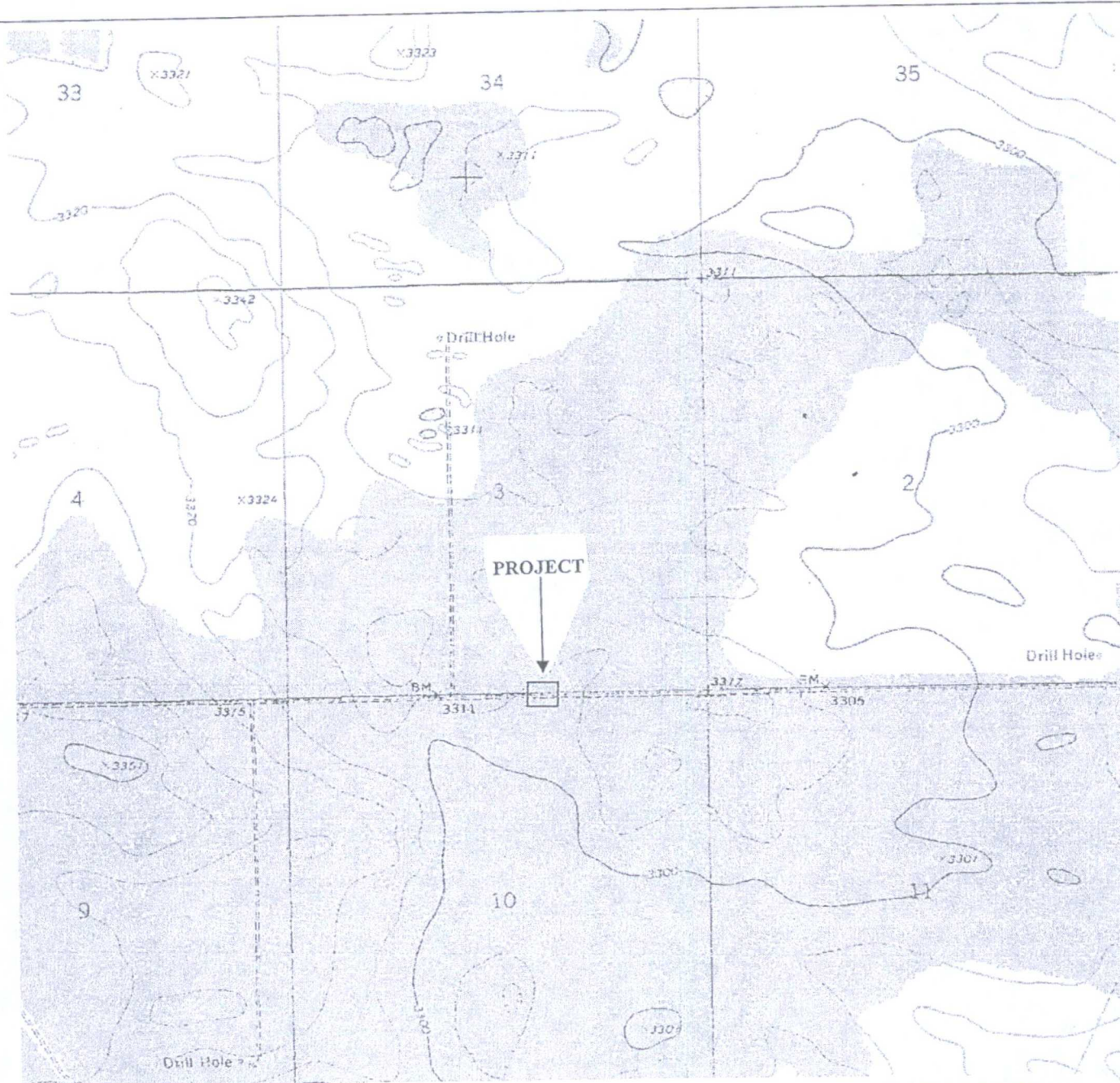
LA No.	Field/Agency No.	LA No.	Field/Agency No.

Areas outside known nearby site boundaries monitored? Yes ☐, No ☐ If no explain why:

## TESTING & EXCAVATION LA NUMBER LOG (site form required)

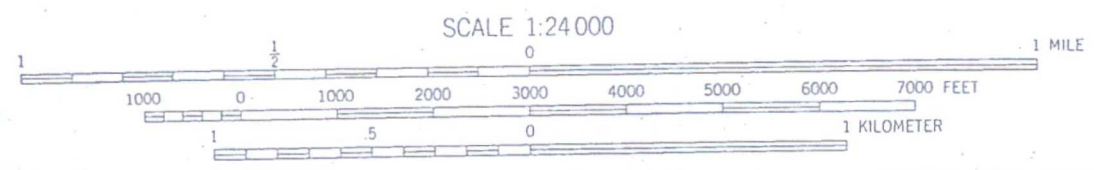
Tested LA number(s)

Excavated LA number(s)

Location Map  
 California leak site for Southern Union Gas Services in Section 3, T 26S, R 34E, N.M.P.M., Lea County, NM.  
 Map Reference: USGS 7.5' Series; ANDREWS PLACE, N.MEX.-TEX (1973) 32103-A4

BAS 05-10-06







# ARDINAL LABORATORIES

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

June 2, 2010

Joel Lowry  
Basin Environmental Consulting, LLC.  
P.O. Box 381  
Lovington, NM 88260

Re: California A (SUG 2009-067)

Enclosed are the results of analyses for sample number H19984, received by the laboratory on 05/27/10 at 8:25 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 5 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

---

This report conforms with NELAP requirements.



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ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL CONSULTING  
ATTN: JOEL LOWRY  
P.O. BOX 381  
LOVINGTON, NM 88260  
FAX TO: (575) 396-1429

Receiving Date: 05/27/10  
Reporting Date: 05/28/10  
Project Number: SUG (2009-067)  
Project Name: CALIFORNIA A  
Project Location: LEA CO., NM

Sampling Date: 05/20/10 - 05/21/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 2 °C  
Sample Received By: JH  
Analyzed By: ZL

LAB NUMBE SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	05/27/10	05/27/10	05/27/10	05/27/10
H19984-1 NORTH SW @ 12'	<0.050	<0.050	<0.050	<0.300
H19984-2 EAST SW @ 12'	<0.050	<0.050	<0.050	<0.300
H19984-3 SOUTH SW @ 12'	<0.050	0.348	0.789	10.7
H19984-4 WEST SW @ 12'	<0.050	<0.050	<0.050	<0.300
H19984-5 FLOOR @ 17'	<0.050	<0.050	<0.050	<0.300
H19984-6 STOCKPILE-1	<0.050	<0.050	<0.050	<0.300
Quality Control	0.017	0.016	0.018	0.055
True Value QC	0.020	0.020	0.020	0.060
% Recovery	85.0	80.0	90.0	91.7
Relative Percent Difference	1.1	1.9	5.4	1.5

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES, Reported on wet weight.

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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL CONSULTING  
ATTN: JOEL LOWRY  
P.O. BOX 381  
LOVINGTON, NM 88260  
FAX TO: (575) 396-1429

Receiving Date: 05/27/10  
Reporting Date: 05/28/10  
Project Owner: SUG (2009-067)  
Project Name: CALIFORNIA A  
Project Location: LEA CO., NM

Sampling Date: 05/20/10 - 05/21/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 2°C  
Sample Received By: JH  
Analyzed By: AB

		GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/kg)	DRO ext. (>C <sub>28</sub> -C <sub>35</sub> ) (mg/kg)
LAB NUMBER	SAMPLE ID			
ANALYSIS DATE		05/28/10	05/28/10	05/28/10
H19984-1	NORTH SW @ 12'	<10.0	<10.0	<10.0
H19984-2	EAST SW @ 12'	<10.0	<10.0	<10.0
H19984-3	SOUTH SW @ 12'	1,030	6,880	10.8
H19984-4	WEST SW @ 12'	<10.0	<10.0	<10.0
H19984-5	FLOOR @ 17'	<10.0	<10.0	<10.0
H19984-6	STOCKPILE-1	15.0	322	<10.0
Quality Control		499	469	-
True Value QC		500	500	-
% Recovery		99.8	93.8	-
Relative Percent Difference		0.6	0.6	

METHODS: TPH GRO & DRO: EPA SW-846 8015 M extended  
Reported on wet weight. Not accredited for GRO/DRO/DRO Ext.

*Alfred Heene*  
Lab Director

Date 06/02/10

## H19984 TPHEXT BASIN

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ANALYTICAL RESULTS FOR  
BASIN ENVIRONMENTAL CONSULTING, LLC  
ATTN: JOEL LOWRY  
P.O. BOX 381  
LOVINGTON, NM 88260  
FAX TO: (575) 396-1429

Receiving Date: 05/27/10  
Reporting Date: 05/28/10  
Project Number: 2009-067 (SUG)  
Project Name: CALIFORNIA A  
Project Location: LEA CO., NM


Analysis Date: 05/28/10  
Sampling Date: 05/20/10 & 05/21/10  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 2°C  
Sample Received By: JH  
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H19984-1	NORTH SW @ 12'	176
H19984-2	EAST SW @ 12'	32
H19984-3	SOUTH SW @ 12'	224
H19984-4	WEST SW @ 12'	160
H19984-5	FLOOR @ 17'	80
H19984-6	STOCKPILE - 1	96
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

**METHOD:** Standard Methods

4500-CIB

Note: Analyses performed on 1:4 w:v aqueous extracts.  
Not accredited for Chloride.

  
Chemist

Date 06/02/10

## H19984 Basin Environmental

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ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240  
(505) 393-2326 FAX (505) 393-2476

BILL TO										ANALYSIS REQUEST											
Company Name: Basin Environmental Consulting					P.O. #:																
Project Manager: Joel Lowery					Company: Southern Union																
Address: P.O. Box 381					City: Lorington					State: NM					Zip: 88260						
Phone #: 505-707-3476					Fax #: 505-396-1429					Address:											
Project #: 2009-067					Project Owner: SULA					City:											
Project Name: California A					State:					Zip:											
Project Location: Lea Co / NM					Phone #:																
Sampler Name: Joel Lowery					Fax #:																
FOR LAB USE ONLY																					
Lab I.D.		Sample I.D.		# CONTAINERS		MATRIX		PRESERV		SAMPLING		80215		8015M Extended		Culivide 4520					
				(G)RAB OR (C)OMP.		GROUNDWATER		SLUDGE		OTHER:		ACID/BASE:		ICE / COOL		OTHER:					
						WASTEWATER		OIL													
						WASTEWATER		OIL													

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

#26





Photograph of initial release at the California "A" Line release site, looking North West.



Photograph of initial spill at the California "A" Line release site, looking South.





Photograph of excavation and sample locations at the California "A" Line release site, looking South.



Photograph of excavation and sample locations at the California "A" Line release site, looking East.





Photograph of the California "A" Line remediation site after backfilling activities, looking East.



Photograph of the California "A" Line remediation site after backfilling and contouring, looking North.