



November 17, 2017

#5E26084-BG6

NMOCD District I  
Ms. Olivia Yu  
1625 N. French Drive  
Hobbs, New Mexico 88240

SUBJECT: SOIL REMEDIATION WORK PLAN FOR THE PRESIDENTE PIPELINE RELEASE (1RP-XXXX), LEA COUNTY, NEW MEXICO

Dear Ms. Yu:

On behalf of Lucid Energy Group (Lucid), Souder, Miller & Associates (SMA) has prepared this WORK PLAN that describes the assessment, initial delineation and proposed remediation for a release associated with the Presidente Pipeline. The site is in UNIT C, SECTION 32, TOWNSHIP 25S, RANGE 32E, NMPM, Lea County, New Mexico, on State land. Figure 1 illustrates the vicinity and location of the site.

Table 1, below, summarizes information regarding the release.

Table 1: Release information and Site Ranking	
Name	Presidente Pipeline Release
Company	Lucid Energy Group
Incident Number	1RP- (not assigned yet)
API Number	
Location	32.09401, -103.69991
Estimated Date of Release	October 31, 2017
Date Reported to NMOCD	11/14/2017
Land Owner	State
Reported To	NM Oil Conservation Division (NMOCD)
Source of Release	Pipeline release
Released Material	Pipeline liquids
Released Volume	unknown
Recovered Volume	0
Net Release	unknown
Nearest Waterway	An unnamed drainage feature is 2000 feet East
Depth to Groundwater	Estimated to be greater than 100 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	0
SMA Response Dates	Initial: November 1, 2017

## **1.0 Background**

A pipeline leak occurred along the right-of-way (ROW) of the buried Presidente pipeline. The pipeline segment was isolated, blown down, and repaired. During excavation and repair of the pipeline, it was discovered that pipeline liquids were also released. The excavation area surrounding the pipeline is approximately 45 feet long by 15 feet wide. Figure 1 illustrates the vicinity and well head protection while Figure 2 illustrates the site and sample locations. The initial C-141 form is included in Appendix A.

## **2.0 Site Ranking and Land Jurisdiction**

Malaga is approximately 23 miles southeast of the release location. The elevation of the release site is approximately 3,330 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be greater than 200 feet below ground surface (bgs). NMOSE data in the area indicates four water wells within the 3 mile radius of the release location, all of which have groundwater 300 feet bgs or deeper.

Recommended Remediation Action Levels (RRALs) are determined by the site ranking according to the NMOCD *Guidelines for Remediation of Leaks, Spills, and Releases* (1993). Below in Table 2 are the remediation standards and the site ranking for this location. Justification for this site ranking is found in Figure 1 and Appendix B.

Table 2.

Soil Remediation Standards	0 to 9	10 to 19	>19
Benzene	10 PPM	10 PPM	10 PPM
BTEX	50 PPM	50 PPM	50 PPM
TPH	5000 PPM	1000 PPM	100 PPM

Depth to Groundwater	NMOCD Numeric Rank
< 50 BGS = 20	
50' to 99' = 10	
>100' = 0	0
Distance to Nearest Surface Water	NMOCD Numeric Rank
< 200' = 20	
200' - 1000' = 10	
>1000' = 0	0
Well Head Protection	NMOCD Numeric Rank
<1000' (or <200' domestic) = 20	
> 1000' = 0	0
<b>Total Site Ranking</b>	<b>0</b>

## **3.0 Release Characterization**

On November 1, 2017, after receiving 811 clearance, SMA field personnel assessed the release area. Soil samples were field-screened using an EC meter. Five samples were collected to a maximum depth

of 8 feet bgs within the open pipeline excavation. Samples were collected to characterize and delineate the release. One discreet sample was collected from beneath the release point of the pipeline, at 8 feet bgs; four composite samples were collected from each of the sidewalls of the excavation. All samples were collected and processed according to NMOCD soil sampling procedures. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for BTEX by EPA Method 8021, TPH EPA Method 8015 and chlorides EPA Method 300.0. Sample locations are depicted on Figure 2. All laboratory results are summarized in Table 3. Laboratory reports are included in Appendix C.

The sample from the floor of the open pipeline excavation (L1) resulted in laboratory results above RRALs for TPH, BTEX, and chlorides. All four sidewall samples (SW1 to SW4) returned laboratory results below RRAL's.

#### **4.0 Proposed Soil Remediation Work Plan**

SMA proposes to further delineate the area surrounding sample point L1. The proposed area to delineate is within the open excavation and is shown in Figure 2. SMA will continuously guide the delineation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500). During delineation activities, all clearly impacted soils will also be excavated and added to spill pile #2 (SP2). These impacted soils will be disposed of at an NMOCD approved facility.

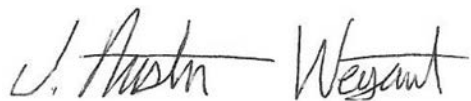
#### **5.0 Scope and Limitations**

The scope of our services consisted of the performance of assessment sampling, verification of release stabilization, regulatory liaison, and preparation of this work plan. All work has been performed in accordance with generally accepted professional environmental consulting practices for oil and gas releases in the Permian Basin in New Mexico.

If there are any questions regarding this report, please contact either Austin Weyant at 575-689-8801 or Shawna Chubbuck at 505-325-7535.

Submitted by:  
SOUDER, MILLER & ASSOCIATES

Reviewed by:



Austin Weyant  
Project Scientist



Shawna Chubbuck  
Senior Scientist

**ATTACHMENTS:**

**Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Site and Sample Location Map

**Tables:**

Table 3: Summary of Sample Results

**Appendices:**

Appendix A: Form C141 Initial

Appendix B: NMOSE Wells Report

Appendix C: Laboratory Analytical Reports

FIGURE 1  
VICINITY AND NMOSE  
DATA MAP

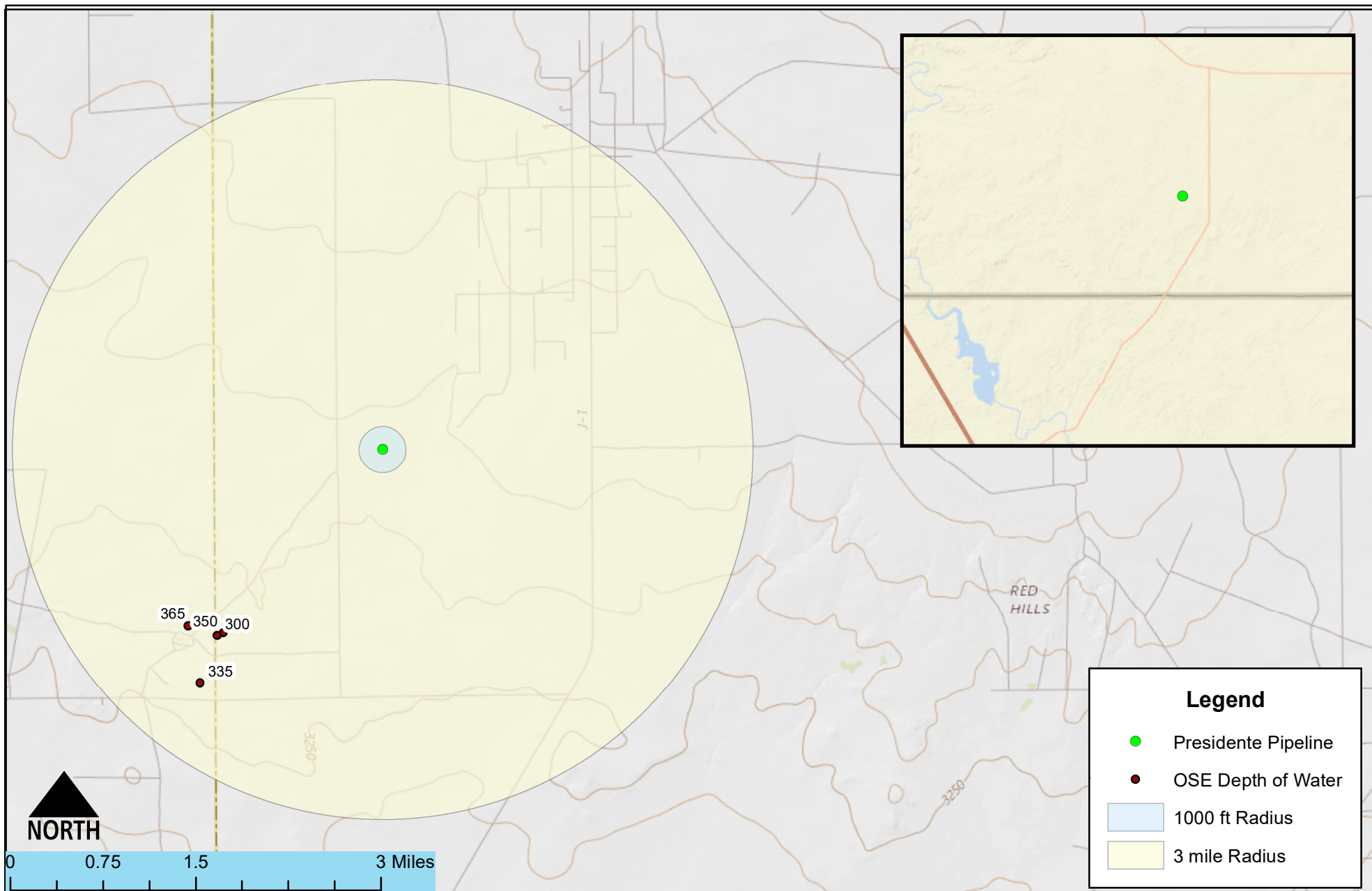


Figure 1

Date Saved:  
11/2/2017

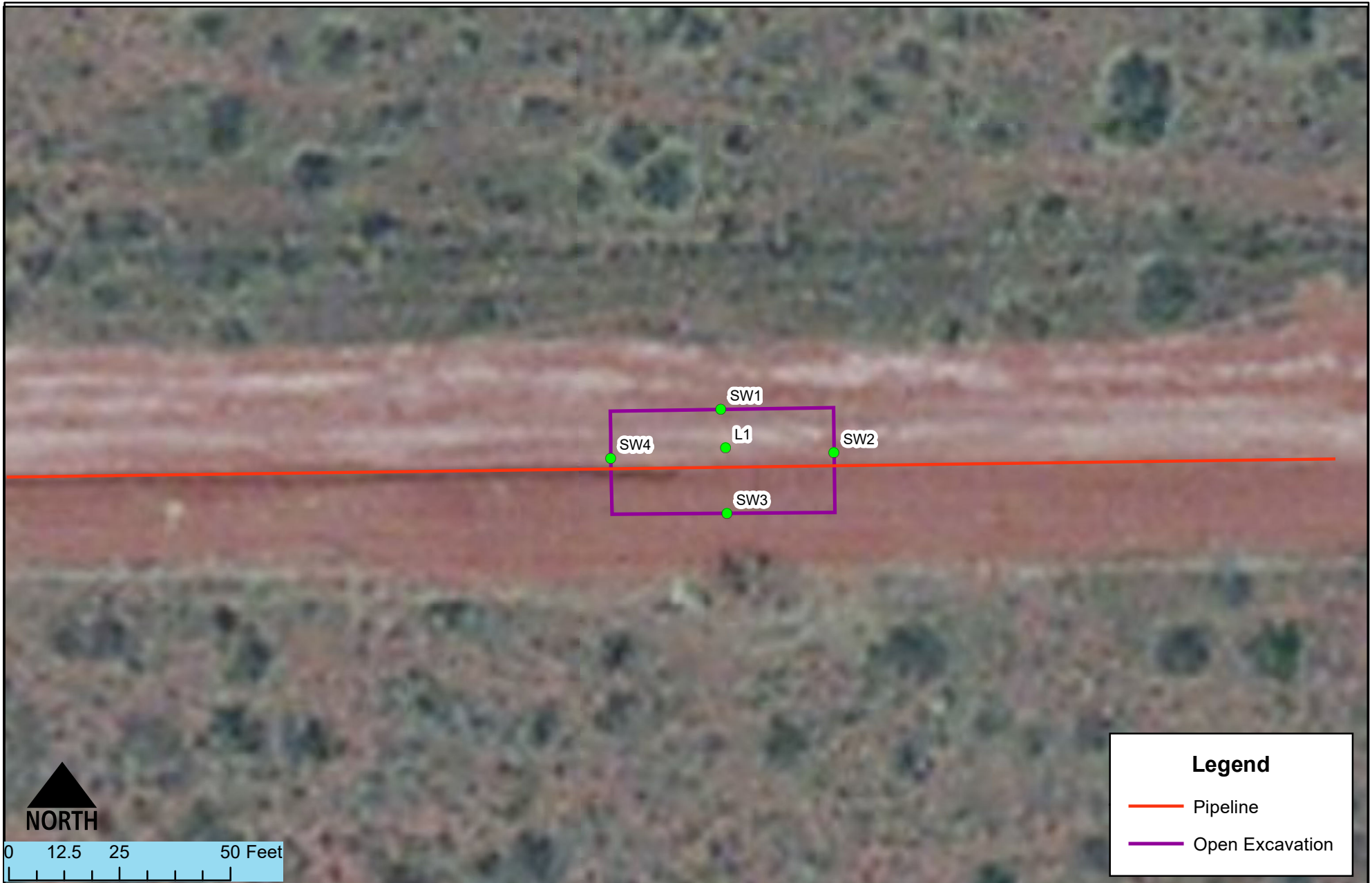
Revisions  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 By: \_\_\_\_\_ Date: \_\_\_\_\_ Descr: \_\_\_\_\_  
 Copyright 2015 Souder, Miller & Associates - All Rights Reserved

Drawn **Heather Patterson**  
 Checked \_\_\_\_\_  
 Approved \_\_\_\_\_



201 South Halaguena Street  
 Carlsbad, New Mexico 88221  
 (575) 689-7040  
 www.soudermiller.com  
 Serving the Southwest & Rocky Mountains

**FIGURE 2**  
**SITE AND SAMPLE**  
**LOCATION MAP**



Site and Sample Location Map  
 Presidente Pipeline - Lucid  
 S 32-T25S-R32E, New Mexico

Figure 2



**TABLE 3**  
**SUMMARY SAMPLE RESULTS**

## Presidente Pipeline ROW

Table 3.

Sample Number on Figure 2	Sample Date	Depth (feet bgs)	Proposed Action	BTEX mg/Kg	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	CI- Field Screens (ppm)	CI- Laboratory mg/Kg
NMOCD RRAL's for Site Ranking 0				50 mg/Kg	10 mg/Kg				5000 mg/Kg		
L1	11/1/2017	8	excavate	67.5	2	620	26000	13000	39620	6135	9300
SW1	11/1/2017	comp	in-situ	<0.22	<0.024	<4.8	120	56	176	<132	--
SW2	11/1/2017	comp	in-situ	<0.22	<0.024	<4.9	43	<50	43	<132	--
SW3	11/1/2017	comp	in-situ	<0.22	<0.024	<4.8	<9.2	<46	<61	<132	--
SW4	11/1/2017	comp	in-situ	1.76	<0.048	27	1,900	680	2,607	<132	--
SP1	11/1/2017	comp	in-situ	1.73	<0.046	28	770	560	1358	541	560
SP2	11/1/2017	comp	disposal	1.34	<0.025	27	1100	390	1517	1214	1300

"--" = Not Analyzed

APPENDIX A  
FORM C141 INITIAL

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

## Release Notification and Corrective Action

### OPERATOR

X Initial Report

Final Report

Name of Company: Lucid Energy Delaware	Contact Kerry Egan	
Address 326 West Quay Artesia, NM 88210	Telephone No. 575 513-8988	
Facility Name: Presidente 10" Line	Facility Type: Pipeline ROW	
Surface Owner: State of NM	Mineral Owner	API No.


### LOCATION OF RELEASE

Unit Letter	Section 29	Township 25S	Range 32E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
-------------	---------------	-----------------	--------------	---------------	------------------	---------------	----------------	---------------

Latitude 32.094010 Longitude -103.69991

### NATURE OF RELEASE

Type of Release: Natural Gas	Volume of Release: < 500MCF of gas, minimal (<5 bbl) liquids	Volume Recovered: None
Source of Release: External corrosion leak in 10" steel line	Date and Hour of Occurrence: 10/31/2017	Date and Hour of Discovery: 10/31/2017
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.* The leak was apparently caused by external corrosion of the pipeline, due to a defect in the pipe wrap. Upon discovery of the leak the line was shut-in and depressurized. The corroded section was then cut out and replaced with a new section of pipe. The release was primarily of natural gas, and potentially a minor amount of liquids. When operations arrived at the location and began exposing the line, there were no free-standing liquids and the soil was not saturated. Soil staining, and odor is very minimal, if present at all.		
Describe Area Affected and Cleanup Action Taken.*		
During the response and repair of the line, an area approximately 45' L x 15' W was excavated along the ROW. The sidewalls, floor, and spoil pile were all sampled to determine the extent of contamination. Pending the results of the sampling a work plan will be developed for the 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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Kerry Egan	Approved by Environmental Specialist:	
Title: Environmental Compliance Coordinator	Approval Date:	Expiration Date:
E-mail Address: KEgan@lucid-energy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11/14/2017	Phone: 575 810-6021	

\* Attach Additional Sheets If Necessary

# APPENDIX B

## NMOSE WELLS REPORT



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">C 03829 POD1</a>	CUB	LE		3	3	1	06	26S	32E	620628	3549186	3077	646	350	296
<a href="#">C 03554 POD1</a>	CUB	ED		2	1	4	01	26S	31E	620547	3549148	3158	630	300	330
<a href="#">C 03639 POD1</a>	CUB	ED		3	4	2	01	26S	31E	620168	3549279	3318	700	365	335
<a href="#">C 02090</a>		ED			4	4	01	26S	31E	620329	3548533*	3779	350	335	15

Average Depth to Water: **337 feet**

Minimum Depth: **300 feet**

Maximum Depth: **365 feet**

Record Count: 4

UTM NAD83 Radius Search (in meters):

**Easting (X):** 622546.43

**Northing (Y):** 3551593.66

**Radius:** 5000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

APPENDIX C  
LABORATORY ANALYTICAL  
REPORTS



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 14, 2017

Austin Weyant  
Souder, Miller & Associates  
201 S Halagueno  
Carlsbad, NM 88221  
TEL: (575) 689-7040  
FAX

RE: Presidente

OrderNo.: 1711231

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 7 sample(s) on 11/4/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** Spill Pile 1

**Project:** Presidente

**Collection Date:** 11/1/2017 9:45:00 AM

**Lab ID:** 1711231-001

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	560	30		mg/Kg	20	11/10/2017 1:33:22 PM	34942
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	770	9.8		mg/Kg	1	11/7/2017 4:55:31 PM	34843
Motor Oil Range Organics (MRO)	280	49		mg/Kg	1	11/7/2017 4:55:31 PM	34843
Surr: DNOP	105	70-130		%Rec	1	11/7/2017 4:55:31 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	28	9.2		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Surr: BFB	180	15-316		%Rec	2	11/7/2017 2:45:41 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.18		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Benzene	ND	0.046		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Toluene	ND	0.092		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Ethylbenzene	ND	0.092		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Xylenes, Total	1.5	0.18		mg/Kg	2	11/7/2017 2:45:41 PM	34834
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	2	11/7/2017 2:45:41 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** Spill Pile 2

**Project:** Presidente

**Collection Date:** 11/1/2017 9:50:00 AM

**Lab ID:** 1711231-002

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	1300	75		mg/Kg	50	11/13/2017 1:55:16 PM	34942
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	1100	36		mg/Kg	4	11/9/2017 4:13:38 PM	34843
Motor Oil Range Organics (MRO)	390	180		mg/Kg	4	11/9/2017 4:13:38 PM	34843
Surr: DNOP	117	70-130		%Rec	4	11/9/2017 4:13:38 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	27	5.0		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Surr: BFB	268	15-316		%Rec	1	11/7/2017 5:05:40 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Benzene	ND	0.025		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Toluene	0.086	0.050		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Ethylbenzene	0.13	0.050		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Xylenes, Total	1.1	0.10		mg/Kg	1	11/7/2017 5:05:40 PM	34834
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	11/7/2017 5:05:40 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1

**Project:** Presidente

**Collection Date:** 11/1/2017 10:05:00 AM

**Lab ID:** 1711231-003

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>MRA</b>
Chloride	9300	300		mg/Kg	200	11/13/2017 2:07:40 PM	34942
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	26000	970		mg/Kg	100	11/7/2017 5:39:56 PM	34843
Motor Oil Range Organics (MRO)	13000	4800		mg/Kg	100	11/7/2017 5:39:56 PM	34843
Surr: DNOP	0	70-130	S	%Rec	100	11/7/2017 5:39:56 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	620	24		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Surr: BFB	476	15-316	S	%Rec	5	11/7/2017 11:14:27 AM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.49		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Benzene	2.0	0.12		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Toluene	20	0.24		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Ethylbenzene	6.5	0.24		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Xylenes, Total	39	0.49		mg/Kg	5	11/7/2017 11:14:27 AM	34834
Surr: 4-Bromofluorobenzene	131	80-120	S	%Rec	5	11/7/2017 11:14:27 AM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW1

**Project:** Presidente

**Collection Date:** 11/1/2017 10:08:00 AM

**Lab ID:** 1711231-004

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	120	9.8		mg/Kg	1	11/7/2017 6:46:03 PM	34843
Motor Oil Range Organics (MRO)	56	49		mg/Kg	1	11/7/2017 6:46:03 PM	34843
Surr: DNOP	92.3	70-130		%Rec	1	11/7/2017 6:46:03 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Surr: BFB	114	15-316		%Rec	1	11/8/2017 12:25:14 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Benzene	ND	0.024		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Toluene	ND	0.048		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Ethylbenzene	ND	0.048		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Xylenes, Total	ND	0.097		mg/Kg	1	11/8/2017 12:25:14 PM	34834
Surr: 4-Bromofluorobenzene	111	80-120		%Rec	1	11/8/2017 12:25:14 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW2

**Project:** Presidente

**Collection Date:** 11/1/2017 10:10:00 AM

**Lab ID:** 1711231-005

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	43	9.9		mg/Kg	1	11/7/2017 7:08:12 PM	34843
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	11/7/2017 7:08:12 PM	34843
Surr: DNOP	94.5	70-130		%Rec	1	11/7/2017 7:08:12 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Surr: BFB	81.4	15-316		%Rec	1	11/7/2017 5:52:29 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Benzene	ND	0.024		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Toluene	ND	0.049		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Ethylbenzene	ND	0.049		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Xylenes, Total	ND	0.097		mg/Kg	1	11/7/2017 5:52:29 PM	34834
Surr: 4-Bromofluorobenzene	84.8	80-120		%Rec	1	11/7/2017 5:52:29 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW3

**Project:** Presidente

**Collection Date:** 11/1/2017 10:15:00 AM

**Lab ID:** 1711231-006

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	11/7/2017 7:30:15 PM	34843
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	11/7/2017 7:30:15 PM	34843
Surr: DNOP	87.3	70-130		%Rec	1	11/7/2017 7:30:15 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Surr: BFB	84.3	15-316		%Rec	1	11/7/2017 6:16:02 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Benzene	ND	0.024		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Toluene	ND	0.048		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Ethylbenzene	ND	0.048		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Xylenes, Total	ND	0.097		mg/Kg	1	11/7/2017 6:16:02 PM	34834
Surr: 4-Bromofluorobenzene	88.4	80-120		%Rec	1	11/7/2017 6:16:02 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1711231

Date Reported: 11/14/2017

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** SW4

**Project:** Presidente

**Collection Date:** 11/1/2017 10:13:00 AM

**Lab ID:** 1711231-007

**Matrix:** SOIL

**Received Date:** 11/4/2017 12:20:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	1900	97		mg/Kg	10	11/8/2017 2:07:26 PM	34843
Motor Oil Range Organics (MRO)	680	480		mg/Kg	10	11/8/2017 2:07:26 PM	34843
Surr: DNOP	0	70-130	S	%Rec	10	11/8/2017 2:07:26 PM	34843
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	27	9.6		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Surr: BFB	198	15-316		%Rec	2	11/7/2017 6:39:30 PM	34834
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.19		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Benzene	ND	0.048		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Toluene	0.10	0.096		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Ethylbenzene	0.11	0.096		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Xylenes, Total	1.5	0.19		mg/Kg	2	11/7/2017 6:39:30 PM	34834
Surr: 4-Bromofluorobenzene	97.5	80-120		%Rec	2	11/7/2017 6:39:30 PM	34834

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1711231

14-Nov-17

Client: Souder, Miller &amp; Associates

Project: Presidente

Sample ID	MB-34942		SampType:	mblik		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	34942		RunNo:	47043				
Prep Date:	11/10/2017		Analysis Date:	11/10/2017		SeqNo:	1501826		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-34942		SampType: lcs		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 34942		RunNo: 47043					
Prep Date:	11/10/2017		Analysis Date: 11/10/2017		SeqNo: 1501827		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.6	90	110			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1711231

14-Nov-17

Client: Souder, Miller &amp; Associates

Project: Presidente

Sample ID	LCS-34843		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 34843		RunNo: 46928					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497169		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.4	73.2	114			
Surr: DNOP	4.1		5.000		82.5	70	130			

Sample ID	MB-34843		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 34843		RunNo: 46928					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497170		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.1		10.00		80.8	70	130			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1711231

14-Nov-17

Client: Souder, Miller &amp; Associates

Project: Presidente

Sample ID	MB-34834		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 34834		RunNo: 46934					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497692		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	840		1000		83.9	15	316			

Sample ID	LCS-34834		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 34834		RunNo: 46934					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497693		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	101	75.9	131			
Surr: BFB	930		1000		93.4	15	316			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank  
E Value above quantitation range  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Detection Limit  
W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1711231

14-Nov-17

Client: Souder, Miller &amp; Associates

Project: Presidente

Sample ID	MB-34834		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 34834		RunNo: 46934					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497712		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		88.7	80	120			

Sample ID	LCS-34834		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 34834		RunNo: 46934					
Prep Date:	11/6/2017		Analysis Date: 11/7/2017		SeqNo: 1497713		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.85	0.10	1.000	0	85.0	70.1	121			
Benzene	0.91	0.025	1.000	0	90.7	77.3	128			
Toluene	0.91	0.050	1.000	0	91.2	79.2	125			
Ethylbenzene	0.90	0.050	1.000	0	90.3	80.7	127			
Xylenes, Total	2.8	0.10	3.000	0	92.1	81.6	129			
Surr: 4-Bromofluorobenzene	0.89		1.000		89.2	80	120			

### Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
PQL Practical Quantitative Limit	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Sample Log-In Check List

Client Name: SMA-CARLSBAD

Work Order Number: 1711231

RcptNo: 1

Received By: Andy Freeman

11/4/2017 12:20:00 PM

Completed By: Anne Thorne

11/6/2017 8:48:20 AM

Reviewed By: SRE 11/06/17


## Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

## Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0° C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒

# of preserved bottles checked for pH: \_\_\_\_\_  
(<2 or >12 unless noted)  
Adjusted? \_\_\_\_\_
12. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐ Checked by: \_\_\_\_\_

## Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

17. Additional remarks:

## 18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.8 5.9	Good	Yes			

