Souder, Miller & Associates ♦ 201 S. Halagueno ♦ Carlsbad, NM 88221
(575) 689-7040

RECEIVED
By JKeyes at 7:13 am, Apr 06, 2016

APPROVED

March 18, 2016

#5B24094-BG5

NMOCD District I
Jamie Keyes
1625 N. French Dr.
Hobbs, NM 88240

SUBJECT: : FINAL CLOSURE REPORT FOR INCIDENT 1RP-4004, SUPERIOR FEDERAL # 3, API# 30-025-21098, LEA COUNTY, NEW MEXICO

Dear Mr. Keyes:

On behalf of Armstrong Energy Corporation (Armstrong), Souder Miller & Associates is pleased to submit a Final Closure Report for the remediation of the release site located at the Superior Federal # 3 line in Lea County, New Mexico. The purpose of the Final Report is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for the closure of the release that occurred on Bureau of Land Management property on December 3, 2015.

Souder, Miller & Associates (SMA) responded at the request of Armstrong Energy Corporation to assess and delineate the release of production fluids associated with the Superior Federal # 3 Fed well location. The release was initially reported to NMOCD by Armstrong Energy Corporation on December 3, 2015 and was a result of a flow line failure. The table below summarizes information regarding the release. Results of the assessment, delineation, and remedial activities follow in the attached Work Plan.

Table 1: Release information and Site Ranking

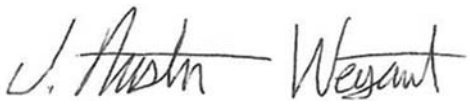
Name	Superior Federal # 3				
Location	Incident Number	API Number	Section, Township, Range		
	1RP 4004	30-025-21098	(Unit E)	Section 25	T 19S, R 34E NMPM
Estimated Date of Release	December 1, 2015				
Date Reported to NMOCD	December 3, 2015				
Reported by	Kyle Alpers, Armstrong Energy Corp				
Land Owner	Bureau Of Land Management				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Flow line failure				
Released Material	Produced Water and Crude Oil				
Released Volume	21 bbls Produced Water				

Recovered Volume	10 bbls Produced Water
Net Release	11 bbls Produced Water
Nearest Waterway	The Pecos River is over forty miles to the west of the location.
Depth to Groundwater	Estimated to be 110 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	0
SMA Response Dates	11/23/15, 12/4/15
Estimated Yd^3 Contaminated Soil Excavated and Disposed	430

Attached is a copy of the C-141 final located in Appendix B. For questions or comments pertaining to the release or the attached Closure Report please feel free to contact either of us.

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist

Reviewed by:

Cynthia Gray, CHMM
Senior Scientist

SOIL REMEDIATION FINAL CLOSURE FOR INCIDENT 1RP-4004

ARMSTRONG ENERGY CORP

SUPERIOR FEDERAL #3
UL E, SECTION 25, T19S R34E, NMPM
LEA COUNTY, NM

Prepared for:
Armstrong Energy Corp
P.O. Box 1973
Roswell, NM 88202

Prepared by:
Souder, Miller & Associates
201 S. Halagueno
Carlsbad, NM 88221
575-689-7040

March 18, 2015
SMA Reference
5B24094 BG5

Table of Contents

Figures:

Tables:

Appendices:

1.0 Introduction

On behalf of Armstrong Energy Corporation, Souder, Miller & Associates (SMA) has prepared this report that describes the assessment, initial delineation by Armstrong Energy Corp, and subsequent mitigation of a release associated with the Superior Federal # 3 location. The site is located in Section 25, T 19S, R 34E NMPM, Lea County, New Mexico, on land owned by the Bureau Land Management. Figure 1 illustrates the vicinity and location of the site. Armstrong Energy Corporation tasked SMA to resample and assess the release location.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 40 miles east of the Pecos River, in an area owned by the State with an elevation of approximately 3,750 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 110 feet below ground surface (bgs).

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. One well is located within a one mile radius of the site. Figure 1 depicts the site vicinity and Figure 2 shows the site itself. The physical location of this release is within the jurisdiction of NMOCD.

Based on the NMOCD Guidelines Ranking Criteria, this release location has been assigned a NMOCD ranking of 0 which requires a soil remediation standard of 10 parts per million (ppm) benzene, 50 ppm combined benzene, toluene, ethyl-benzene, and total xylenes (BTEX), and 5000 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates site ranking rationale.

3.0 Assessment and Initial Results

On December 5, after receiving 811 clearance, SMA field personnel assessed the remediated release area onsite with a gas powered auger, Photo Ionization Detector (PID), and a mobile chlorides titration kit EPA method 9045D meter. The potentially affected area was found to be approximately 150 feet long and 40 feet wide. The site delineation samples were taken to depths of five (bsg). Specific sample locations for all samples are depicted on Figure 2 (Sample Location Map) along with sampling details. 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 Total Chlorides using EPA Method 300.0.

4.0 Soil Remediation Summary

SMA began the excavation of affected soils on 12/03/15, with approval from area utilities owners via 811 and NMOCD. SMA continuously guided the excavation activities by collecting composite soil samples for field screening with a mobile chlorides titration unit (EPA 4500) and a calibrated PID. Delineation was performed to a depth of 5 feet bgs to define the plume limits by NMOCD standards. Excavation occurred to a depth of four feet bgs in blue area shown in Figure 2, a depth sufficient to remove the contaminated soil. Also in the green area in Figure 2 was excavated two feet bgs to remove contaminated soil. Discrete final closure samples were collected within the excavation. Approximately 430cubic yards of hydrocarbon contaminated soil was removed and replaced with clean backfill material sufficient to bring the contours to surface grade. The contaminated soil was transported for proper disposal, near Carlsbad, NM.

5.0 Conclusions and Recommendations

NMOCD Guidelines for Remediation of Leaks, Spills, and Releases have established the following action levels for contaminants of concern with a site ranking of 0: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 5000 ppm TPH. The release consisted of produced water with little petroleum and evidence of significant petroleum impacts was not found during the initial assessment and delineation by SMA.

Laboratory analytical results for all final closure samples collected were below NMOCD action levels for Benzene, BTEX, and TPH as well as below laboratory detection limits for the methods used. No further remedial activities are recommended. Soil contaminant concentrations are illustrated in Figure 2. A summary of laboratory analytical results is included in Table 3. Laboratory reports are included in Appendix C.
Photo documentation is available by request.

6.0 Closure and Limitations

The scope of our services consisted of the performance of confirmatory spill and spill mitigation assessment sampling, verification of release stabilization, regulatory liaison, and preparation of this Closure Report. 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 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES

Austin Weyant
Project Scientist

Reviewed by:

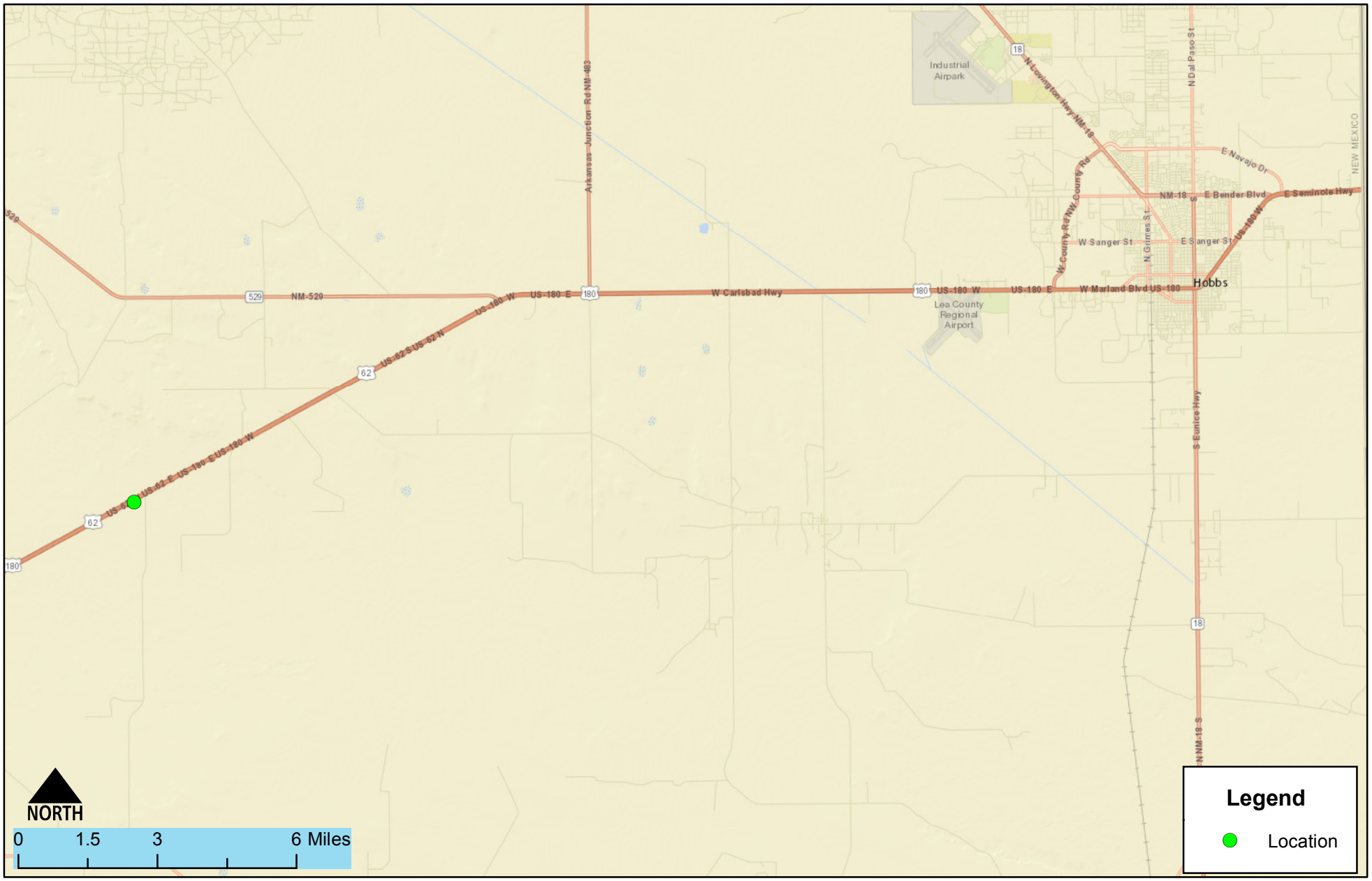
Cynthia Gray, CHMM
Senior Scientist

Figures:

Tables:

Appendices:

FIGURE 1
VICINITY MAP



Vicinity Map
Armstrong- Superior Federal # 3
Hobbs, New Mexico

Figure 1

Document: C:\Users\lcm\Documents\GIS DATA\MAPS\Figure 1 BSuperior Federal # 3.mxd

Date Saved: 2/8/2016

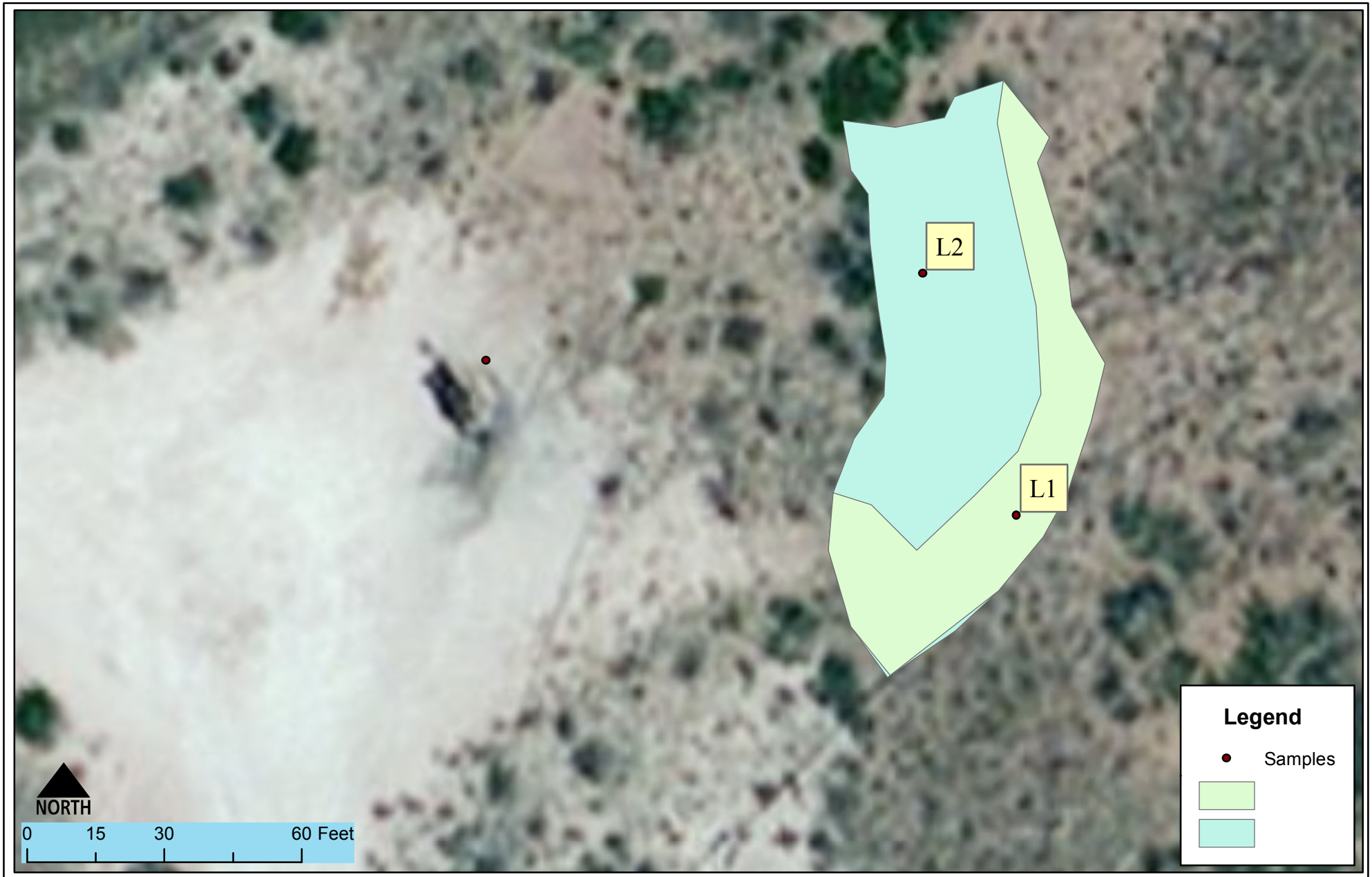
Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lucas Middleton
Checked
Approved

SMA
201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689.7040
www.soudermiller.com
Serving the Southwest & Rocky Mountains

FIGURE 2

DETAILED SITE AND SAMPLE MAP



Detailed Site and Sample Map
Armstrong- Superior Federal #3
Hobbs, New Mexico

Figure 2

Revisions
By: Date: Descr:
By: Date: Descr:

Drawn Lucas Middleton
Checked
Approved

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Date Saved: 3/15/2016

Document: C:\Users\lcm\Documents\GIS DATA\MAPS\Figure 22 Super Fed #3.mxd

TABLE 1

RELEASE INFORMATION AND SITE RANKING

Table 1: Release information and Site Ranking					
Name	Superior Federal # 3				
Location	Incident Number	API Number	Section, Township, Range		
	1RP 4004	30-025-21098	(Unit E)	Section 25	T 19S, R 34E NMPM
Estimated Date of Release	12/1/15				
Date Reported to NMOCD	12/3/15				
Reported by	Kyle Alpers, Armstrong Energy Corp				
Land Owner	Bureau Of Land Management				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Flow line failure				
Released Material	Produced Water and Crude Oil				
Released Volume	21 bbls Produced Water				
Recovered Volume	10 bbls Produced Water				
Net Release	11 bbls Produced Water				
Nearest Waterway	The Pecos River is over forty miles to the west of the				
Depth to Groundwater	Estimated to be 110 feet				
Nearest Domestic Water Source	Greater than 1,000 feet				
NMOCD Ranking	0				
SMA Response Dates	11/23/15, 12/4/15				
Estimated Yd^3 Contaminated Soil Excavated and Disposed	430				

TABLE 2

SUMMARY OF LABORATORY ANALYSES

Table 2: Summary of Laboratory Analyses

Analytical Report- 1601A08	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1601A08-001	L1-3	1/22/2016	3'	BDL	BDL	BDL	BDL	30
1601A08-002	L2-5	1/22/2016	5'	BDL	BDL	36	BDL	900
1601A08-003	L1-5	1/22/2016	5'	BDL	BDL	BDL	BDL	BDL

APPENDIX A

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

February 12, 2016

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

RE: Superior Fed #3 OrderNo.: 1601A08

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/27/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued February 03, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates
Client Sample ID: L1-3
Project: Superior Fed #3
Collection Date: 1/22/2016 2:00:00 PM
Lab ID: 1601A08-001
Matrix: SOIL
Received Date: 1/27/2016 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	30	30		mg/Kg	20	2/1/2016 6:09:36 PM	23515
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	2/2/2016 4:56:49 PM	23498
Surr: DNOP	94.2	70-130		%Rec	1	2/2/2016 4:56:49 PM	23498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/1/2016 1:02:03 PM	23477
Surr: BFB	89.7	66.2-112		%Rec	1	2/1/2016 1:02:03 PM	23477
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.047		mg/Kg	1	2/1/2016 1:02:03 PM	23477
Toluene	ND	0.047		mg/Kg	1	2/1/2016 1:02:03 PM	23477
Ethylbenzene	ND	0.047		mg/Kg	1	2/1/2016 1:02:03 PM	23477
Xylenes, Total	ND	0.093		mg/Kg	1	2/1/2016 1:02:03 PM	23477
Surr: 4-Bromofluorobenzene	104	80-120		%Rec	1	2/1/2016 1:02:03 PM	23477

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

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
R	RPD outside accepted recovery limits	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.

CLIENT: Souder, Miller & Associates
Client Sample ID: L2-5
Project: Superior Fed #3
Collection Date: 1/22/2016 2:00:00 PM
Lab ID: 1601A08-002
Matrix: SOIL
Received Date: 1/27/2016 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	900	30		mg/Kg	20	2/1/2016 6:46:51 PM	23515
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	36	9.5		mg/Kg	1	2/2/2016 6:18:25 PM	23498
Surr: DNOP	97.8	70-130		%Rec	1	2/2/2016 6:18:25 PM	23498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/1/2016 2:12:40 PM	23477
Surr: BFB	92.9	66.2-112		%Rec	1	2/1/2016 2:12:40 PM	23477
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.048		mg/Kg	1	2/1/2016 2:12:40 PM	23477
Toluene	ND	0.048		mg/Kg	1	2/1/2016 2:12:40 PM	23477
Ethylbenzene	ND	0.048		mg/Kg	1	2/1/2016 2:12:40 PM	23477
Xylenes, Total	ND	0.096		mg/Kg	1	2/1/2016 2:12:40 PM	23477
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	2/1/2016 2:12:40 PM	23477

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

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
R	RPD outside accepted recovery limits	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.

CLIENT: Souder, Miller & Associates
Client Sample ID: l1-5
Project: Superior Fed #3
Collection Date: 1/22/2016 2:00:00 PM
Lab ID: 1601A08-003
Matrix: SOIL
Received Date: 1/27/2016 9:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	2/1/2016 6:59:17 PM	23515
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	2/2/2016 6:45:26 PM	23498
Surr: DNOP	96.1	70-130		%Rec	1	2/2/2016 6:45:26 PM	23498
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	2/1/2016 3:23:13 PM	23477
Surr: BFB	94.2	66.2-112		%Rec	1	2/1/2016 3:23:13 PM	23477
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.048		mg/Kg	1	2/1/2016 3:23:13 PM	23477
Toluene	ND	0.048		mg/Kg	1	2/1/2016 3:23:13 PM	23477
Ethylbenzene	ND	0.048		mg/Kg	1	2/1/2016 3:23:13 PM	23477
Xylenes, Total	ND	0.097		mg/Kg	1	2/1/2016 3:23:13 PM	23477
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	2/1/2016 3:23:13 PM	23477

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

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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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#: **1601A08**

12-Feb-16

Client: Souder, Miller & Associates

Project: Superior Fed #3

Sample ID	**MB-23515**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**23515**	RunNo:	**31841**					
Prep Date:	**2/1/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974435**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-23515**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**23515**	RunNo:	**31841**					
Prep Date:	**2/1/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974436**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

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
R	RPD outside accepted recovery limits	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#: **1601A08**

12-Feb-16

Client: Souder, Miller & Associates

Project: Superior Fed #3

Sample ID **MB-23498**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **23498**	RunNo: **31849**
Prep Date: **2/1/2016**	Analysis Date: **2/2/2016**	SeqNo: **974593** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.8		10.00		98.4	70	130			

Sample ID **LCS-23498**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **23498**	RunNo: **31849**
Prep Date: **2/1/2016**	Analysis Date: **2/2/2016**	SeqNo: **974595** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	99.0	65.8	136			
Surr: DNOP	4.7		5.000		93.8	70	130			

Sample ID **1601A08-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **L1-3**	Batch ID: **23498**	RunNo: **31849**
Prep Date: **2/1/2016**	Analysis Date: **2/2/2016**	SeqNo: **975081** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	9.9	49.26	0	127	31.2	162			
Surr: DNOP	5.0		4.926		101	70	130			

Sample ID **1601A08-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **L1-3**	Batch ID: **23498**	RunNo: **31849**
Prep Date: **2/1/2016**	Analysis Date: **2/2/2016**	SeqNo: **975082** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	49.85	0	93.1	31.2	162	29.9	31.7	
Surr: DNOP	4.7		4.985		94.7	70	130	0	0	

Qualifiers:

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D	Sample Diluted Due to Matrix	E	Value above quantitation range
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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1601A08**

12-Feb-16

Client: Souder, Miller & Associates

Project: Superior Fed #3

Sample ID **MB-23477**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **23477**	RunNo: **31822**
Prep Date: **1/29/2016**	Analysis Date: **2/1/2016**	SeqNo: **974200** 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	910		1000		91.1	66.2	112			

Sample ID **LCS-23477**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **23477**	RunNo: **31822**
Prep Date: **1/29/2016**	Analysis Date: **2/1/2016**	SeqNo: **974202** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.9	79.6	122			
Surr: BFB	1000		1000		99.8	66.2	112			

Sample ID **1601A08-002AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L2-5**	Batch ID: **23477**	RunNo: **31822**
Prep Date: **1/29/2016**	Analysis Date: **2/1/2016**	SeqNo: **974207** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	4.7	23.43	0	99.2	59.3	143			
Surr: BFB	950		937.2		101	66.2	112			

Sample ID **1601A08-002AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **L2-5**	Batch ID: **23477**	RunNo: **31822**
Prep Date: **1/29/2016**	Analysis Date: **2/1/2016**	SeqNo: **974208** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	4.7	23.72	0	102	59.3	143	3.50	20	
Surr: BFB	980		948.8		103	66.2	112	0	0	

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
R	RPD outside accepted recovery limits	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#: **1601A08**

12-Feb-16

Client: Souder, Miller & Associates

Project: Superior Fed #3

Sample ID	**MB-23477**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**23477**	RunNo:	**31822**					
Prep Date:	**1/29/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974231**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID	**LCS-23477**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**23477**	RunNo:	**31822**					
Prep Date:	**1/29/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974232**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.050	1.000	0	113	80	120			
Toluene	1.1	0.050	1.000	0	114	80	120			
Ethylbenzene	1.1	0.050	1.000	0	111	80	120			
Xylenes, Total	3.4	0.10	3.000	0	113	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

Sample ID	**1601A08-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**L1-3**	Batch ID:	**23477**	RunNo:	**31822**					
Prep Date:	**1/29/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974235**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.049	0.9737	0	102	71.5	122			
Toluene	0.96	0.049	0.9737	0	98.6	71.2	123			
Ethylbenzene	0.95	0.049	0.9737	0	97.5	75.2	130			
Xylenes, Total	2.8	0.097	2.921	0	96.5	72.4	131			
Surr: 4-Bromofluorobenzene	1.1		0.9737		110	80	120			

Sample ID	**1601A08-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**L1-3**	Batch ID:	**23477**	RunNo:	**31822**					
Prep Date:	**1/29/2016**	Analysis Date:	**2/1/2016**	SeqNo:	**974237**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.050	0.9950	0	97.0	71.5	122	2.69	20	
Toluene	0.98	0.050	0.9950	0	98.3	71.2	123	1.85	20	
Ethylbenzene	1.0	0.050	0.9950	0	101	75.2	130	5.16	20	
Xylenes, Total	3.0	0.10	2.985	0	99.2	72.4	131	4.95	20	
Surr: 4-Bromofluorobenzene	1.1		0.9950		111	80	120	0	0	

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
R	RPD outside accepted recovery limits	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

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

Sample Log-In Check List

Client Name: SMA-CARLSBAD Work Order Number: 1601A08 RcptNo: 1

Received by/date: AA 01/27/16

Logged By: Anne Thorne 1/27/2016 9:10:00 AM Anne Thorne

Completed By: Anne Thorne 1/27/2016 Anne Thorne

Reviewed By: 01/27/16

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 ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? _____
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	2.2	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client:	SMA Carlsbad
Mailing Address:	
Phone #:	
email or Fax#:	
QA/QC Package:	Standard ☐ Level 4 (Full Validation)
Accreditation	NELAP ☐ Other
EDD (Type)	
Turn-Around Time:	☑ Standard ☐ Rush
Project Name:	Superior Fed #5-3
Project #:	ms 02/12/16
Project Manager:	Austin Weyant
Sampler:	LCM
On Ice:	☒ Yes ☐ No
Sample Temperature:	2.2

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1601408	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
2-16	2000	Soil	L1-3	4oz		001	X		X					X								
	2000		L2-5			002	X		X					X								
			L1-5			003	X		X					X								

Date	Time	Relinquished by:	Received by:	Date	Time
			Jose Olivas	01/27/16	0910

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

APPENDIX B
FORM C141 FINAL

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

☒ Initial Report ☑ Final Report

Name of Company Armstrong Energy Corporation	Contact Kyle Alpers
Address PO Box 1973 Roswell, NM 88202	Telephone No. 575-625-2222
Facility Name Superior Federal #3	Facility Type Oil Well

Surface Owner U.S.	Mineral Owner U.S.	API No. 30-025-21098

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	25	19S	34E	2130	North	760	West	Lea

Latitude 32.632683 **Longitude** -103.519784

NATURE OF RELEASE

Type of Release OIL & PRODUCED WATER	Volume of Release ~21 BBLS	Volume Recovered ~10 BBLS
Source of Release HOLE IN BOTTOM OF STEEL FLOWLINE IN PASTURE	Date and Hour of Occurrence UNKNOWN	Date and Hour of Discovery 11/22/15 ~9:30AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Maxey Brown, OCD	
By Whom? Kyle Alpers, Field Engineer	Date and Hour 11/22/15 12:00PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
PUMPER DISCOVERED HOLE IN STEEL FLOWLINE THAT HAD BEEN LEAKING FOR AN UNDETERMINED LENGTH OF TIME. WELL MAKES LESS THAN 3 BPD AND FLOWLINE WAS WALKED ROUGHLY ONE WEEK BEFORE, SO RELEASE VOLUMES IS ESTIMATED AT 3 BBL PER DAY FOR ONE WEEK. WELL GOES TO SHARED BATTERY SO MISSING PRODUCTION WAS NOT IMMEDIATELY NOTICED.

Describe Area Affected and Cleanup Action Taken.*
ONE SPOT BEGINNING AT FLOWLINE HOLE AND EXTENDING ROUGHLY 150' IN A CONTINUOUS LOW SPOT TO THE SOUTHWEST. THE AFFECTED AREA IS 5' – 10' ACROSS AT THE ENDS AND 30'-40' ACROSS IN THE CENTER. SAUDER MILLER VISITED THE SITE AND CAUGHT SAMPLES AND RECOMMENDS REMOVING TOP 2' OF SOIL WITHIN THE RELEASE AREA. THIS OPERATION IS NEARING COMPLETION.

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: KYLE ALPERS	Approved by Environmental Specialist:	
Title: FIELD ENGINEER	Approval Date: 04/06/2016	Expiration Date: ///
E-mail Address: kalpers@armstrongenergycorp.com	Conditions of Approval: ///	Attached ☐ 1RP 4004
Date: 11/30/15 Phone: 575-625-2222 ext 305		

* Attach Additional Sheets If Necessary