



November 18, 2015

NMOCD District II  
Attn. Heather Patterson  
1301 W Grand Ave  
Artesia, NM 88210

SUBJECT: SOIL REMEDIATION WORK PLAN FOR INCIDENT 2RP -3382 ILLUSTRATED MAN FEE COM 1H, EDDY COUNTY, NEW MEXICO

Dear Ms. Patterson:

On behalf of COG Operating (COG), Souder Miller & Associates (SMA) is pleased to submit the attached Work Plan summarizing the planned soil remediation of the release site located on the Illustrated Man Fee Com 1H in Eddy County, New Mexico. The purpose of the work plan is to obtain approval from the New Mexico Oil Conservation Division for remediation of the release that occurred on October 12, 2015.

At the request of COG, SMA assessed and delineated the production fluids release associated with the Illustrated Man Fee Com 1H well location. The release was initially reported to NMOCD by COG Operating on October 26, 2015 and was a result of a hole in the tank. The table below summarizes information regarding the release. Results of the assessment and delineation follow in the attached report.

Table 1: Release information and Site Ranking					
Name	Illustrated Man Fee Com 1				
Location	Incident Number	API Number	Section, Township, Range		
	2RP - 3382	30-015-41025	SW/NE (Unit D)	Section 12	T 25S, R 28E NMPM
Estimated Date of Release	Discovered October 12, 2015				
Date Reported to NMOCD	October 26, 2015				
Reported by	Amanda Trujillo Davis , COG Operating LLC				
Land Owner	Federal				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Hole in the Tank				
Released Material	Produced Oil				
Released Volume	40 bbls Produced Oil				
Recovered Volume	35 bbls Produced Oil				
Net Release	5 bbls Produced Oil				
Nearest Waterway	Pecos River is ~0.90 miles east of the location.				

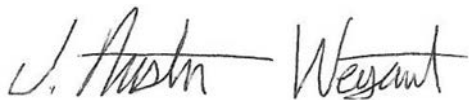


Depth to Groundwater	Estimated to be 43ft
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	20
SMA Response Dates	Initial: November 3, 2015 Mitigation Activities: Unknown
Subcontractors	Hungry Horse
Disposal Facility	Lea Land, LLC
Estimated Yd <sup>3</sup> Contaminated Soil Excavated and Disposed	480

A copy of the C-141 Initial is located in Appendix B. For questions or comments pertaining to the release or the attached Work Plan, 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 WORK PLAN FOR INCIDENT 2RP-3382

## COG OPERATING LLC

ILLUSTRATED MAN FEE COM 1H

API# 30-015-41025

UNIT D SECTION 12, T25S R28E, NMPM

EDDY COUNTY, NM



Prepared for:  
COG Operating LLC  
2407 Pecos Ave  
Artesia, NM 88210

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

November 18, 2015  
SMA Reference  
5B23978 BG9



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Table 1: Release Information and Site Ranking

Table 2: Summary of Laboratory Analyses

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## **1.0 Introduction**

On behalf of COG Operating LLC (COG), SMA has prepared this report that describes the assessment and initial delineation of a release associated with the Illustrated Man Fee COM 1H release site. The site is located in Unit D Section 12, T 25S, R 28 E NMPM, Eddy County, New Mexico, on land owned by the Bureau of Land Management (BLM). Figure 1 illustrates the vicinity and location of the site.

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

The release site is located approximately 0.9 miles (> 1,000 feet) west of Pecos River, in an area owned by BLM with an elevation of approximately 2,940 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be less than 50 feet below ground surface (bgs). Figure 1 depicts the site vicinity and Figure 2 depicts the site details and sample locations.

SMA searched the New Mexico State Engineer's Office online water well database for water wells in the vicinity of the release. No well is located within a 1000 foot 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.

This release location has been assigned a NMOCD ranking of 20 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 100 ppm total petroleum hydrocarbons (TPH). Table 1 illustrates site ranking rationale.

## **3.0 Assessment and Initial Results**

On November 2nd, 2015, after receiving 811 clearance, SMA field personnel assessed the release site utilizing a gas powered auger, a Photo Ionization Detector (PID), and a mobile chlorides titration kit. The affected area was found to be 150 feet long and 20 feet wide. Delineation samples were taken to depths of three feet bgs. Using field screening, samples at two locations were found to have higher than background levels of chloride. Sample locations are noted on Figure 2 "Site Details and Sample Location Map". 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 Benzene and Total BTEX using EPA Method 8021B, DRO and GRO by EPA Method 8015D, and total Chlorides using EPA Method 300.0.

## **4.0 Soil Remediation Work Plan**

SMA will begin the excavation of affected soils, with approval from area utilities owners via 811 and NMOCD. SMA will continuously guide the excavation activities by collecting composite soil samples for field screening with a mobile titration unit (EPA 4500) and a calibrated PID. Excavation will occur to depths to sufficient to delineate the plume by NMOCD Division 1 standards. Closure samples will be collected at the final depth of excavation. Approximately 480 cubic yards of contaminated soil are projected to be removed and replaced with clean backfill material sufficient to return the contours to surface gradient. The contaminated soil will be transported for proper disposal at Lea Land, near Carlsbad, NM an NMOCD permitted facility.

## **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 20: 10 ppm (mg/kg) Benzene, 50 ppm total BTEX, and 100 ppm TPH. The release consisted of produced and associated petroleum found during the initial assessment and delineation.

After the soil remediation work plan is approved by NMOCD, SMA will begin soil remediation activities on site.

Soil contaminant concentrations found during the initial delineation are illustrated in Figure 2. A summary of the laboratory analyses is included in Table 2. Laboratory reports are included in Appendix A.

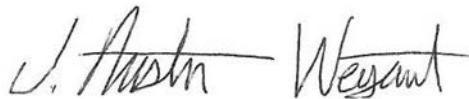
## **6.0 Closure and Limitations**

The scope of our services consisted of the performance of a preliminary spill assessment, verification of release stabilization, regulatory liaison, and preparation of this Remediation 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 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant  
Project Scientist

Reviewed by:



Cynthia Gray, CHMM  
Senior Scientist

**Figures:**

Figure 1: Vicinity Map

Figure 2: Site Details and Sample Locations Map

**Tables:**

Table 1: Release Information and Site Ranking

Table 2: Summary of Laboratory Analyses

**Appendices:**

Appendix A: Laboratory Analytical Reports

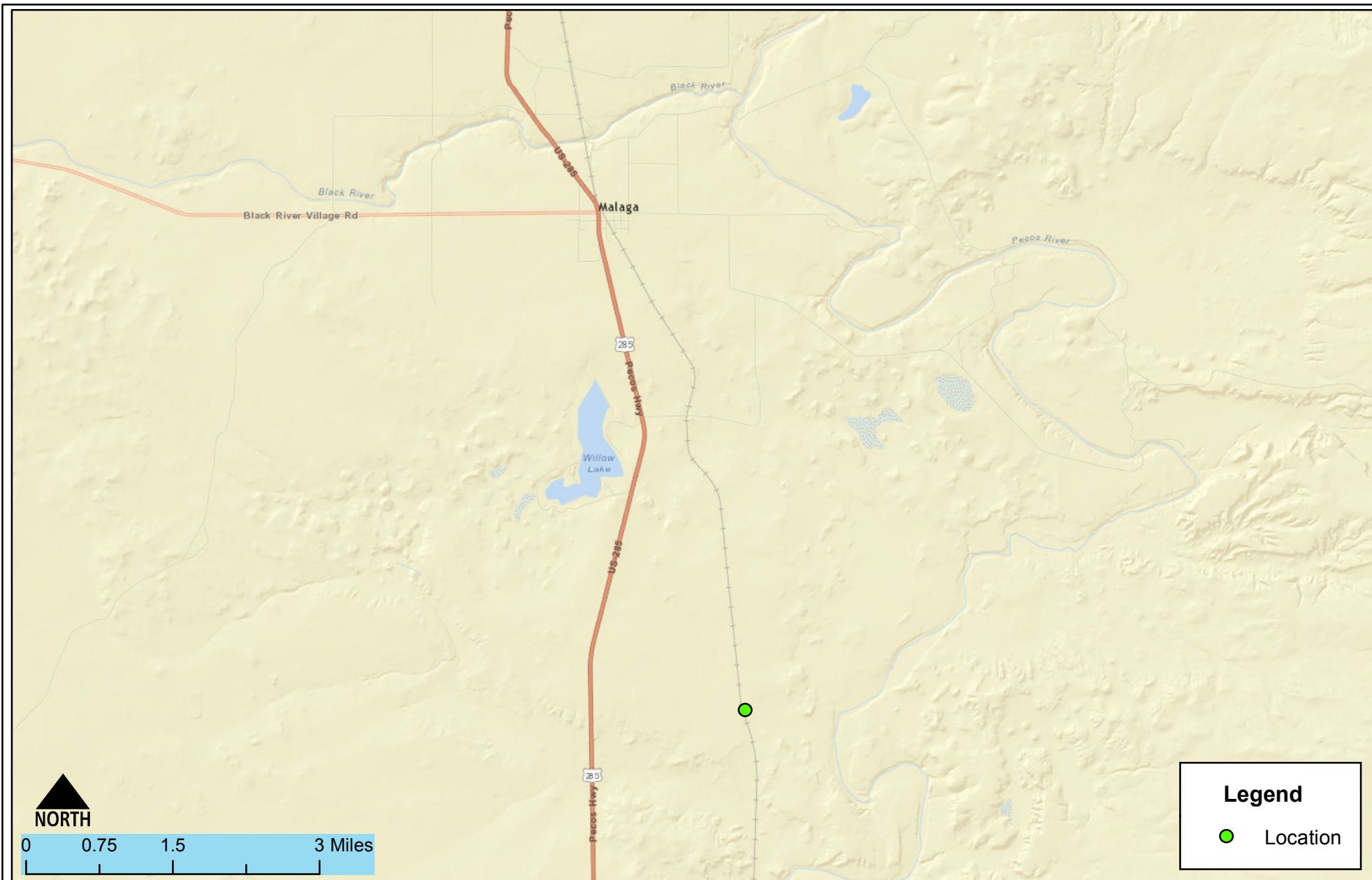
Appendix B: Form C141 Initial

Appendix C: Field Notes

# FIGURE 1

## VICINITY MAP





Vicinity Map  
COG- Illustrated Man Fee Com #1H  
Malaga, New Mexico

Figure 1

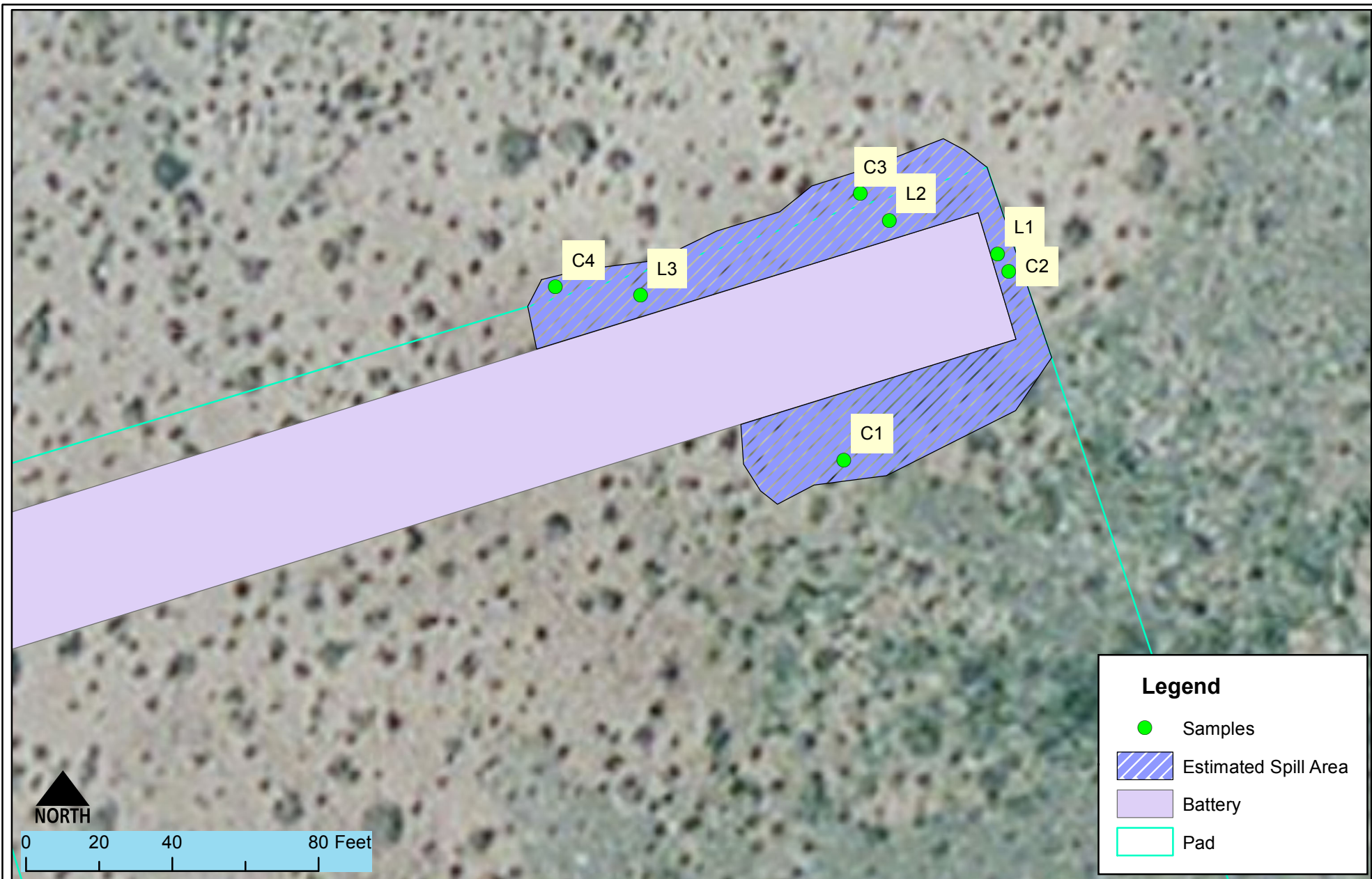
Date Saved: 11/17/2015	Revisions			Lucas Middleton	
	By: _____	Date: _____	Descr: _____	Drawn	_____
	By: _____	Date: _____	Descr: _____	Checked	_____
	Copyright 2015 Souder, Miller & Associates - All Rights Reserved			Approved	_____



201 South Halaguena Street  
Carlsbad, New Mexico 88221  
(575) 689-7040  
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# FIGURE 2

## SITE DETAILS AND SAMPLE LOCATIONS MAP



Site Detail and Sample Locations  
COG-Illustrated Man Fee Com #1H  
Malaga, New Mexico

Figure 2

Date Saved:  
11/18/2015

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

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Drawn	Lucas Middleton
Checked	
Approved	



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# TABLE 1

## RELEASE INFORMATION AND SITE RANKING

Table 2: Site Ranking

Depth to Groundwater	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 50 BGS = 20	20	USGS Topo Maps; Google Earth Elevation Difference from the site and the bobcat draw wash to the west	Bobcat Draw is 0.28 miles to the north of the location. ; Site elevation is approximately 7 feet below Bobcat Draw
50' to 99' = 10			
>100' = 0			
Ranking Criteria for Horizontal Distance to Nearest Surface Water	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
< 200' = 20		USGS Topo Maps; Google Earth ; PRCC Mapping Tool	Pecos River is located approximately 1.4 miles to the east release
200' - 1000' = 10			
>1000' = 0	0		
Ranking Criteria for Horizontal Distance to a Water Well or Water Source	NMOCD Numeric Rank for this Site	Source for Ranking	Notes
<1000' from a water source? <200' from a private domestic water source? YES OR NO to BOTH. YES = 20, NO = 0		NM State Engineer Water Well Database	nearest well 2,000ft north of - Easting 627552.22, Northing 3549364.79
	0		
Total Site Ranking	20		
Soil Remedation 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





# 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 01880</a>	C	ED		3	3	2	06	25S	29E	592161	3558605*	2434	85	40	45
<a href="#">C 01411</a>	C	ED		4	4	2	04	25S	28E	586289	3558522*	3715	69	35	34
<a href="#">C 02668</a>	C	ED		2	1	2	09	25S	28E	585890	3557525*	4021	150		
<a href="#">C 02518</a>	C	ED			3	4	08	25S	29E	593895	3556300*	4218	462		
<a href="#">C 03358 POD1</a>	C	ED		1	4	1	26	24S	28E	588416	3562116	4678	135		
<a href="#">C 01522</a>	C	ED				1	22	25S	28E	586843	3554004*	4788	150		
<a href="#">C 03833 POD1</a>	C	ED		2	1	2	26	24S	28E	589014	3562545	4944	96	55	41

Average Depth to Water: **43 feet**

Minimum Depth: **35 feet**

Maximum Depth: **55 feet**

Record Count: 7

### Basin/County Search:

Basin: Carlsbad

County: Eddy

Subbasin: Carlsbad

### UTMNAD83 Radius Search (in meters):

Easting (X): 589908.78

Northing (Y): 3557681.95

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.



# TABLE 2

## SUMMARY OF LABORATORY ANALYSES

**Table 2: Summary of Laboratory Analyses**

Analytical Report-1511281	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1511281-001	BG1	11/3/2015	6"	BDL	BDL	BDL	BDL	BDL
1511281-002	C1	11/3/2015	Surface	32.2	0.61	320	22,000	N/A
1511281-003	C2	11/3/2015	Surface	BDL	BDL	BDL	BDL	N/A
1511281-004	C3	11/3/2015	Surface	BDL	BDL	BDL	BDL	1,200
1511281-005	C4	11/3/2015	Surface	BDL	BDL	BDL	BDL	3,800
1511281-006	L1-3	11/3/2015	3'	9.5	BDL	290	3,200	N/A
1511281-007	L2-3	11/3/2015	3'	BDL	BDL	12	320	N/A
1511281-008	L3-2	11/3/2015	2'	BDL	BDL	BDL	BDL	N/A
1511281-009	L4-1	11/3/2015	1'	BDL	BDL	BDL	BDL	N/A



# 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](http://www.hallenvironmental.com)

November 12, 2015

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

RE: Illustrated Man

OrderNo.: 1511281

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/4/2015 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 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** BG1 6"

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 11:06:00 AM

**Lab ID:** 1511281-001

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	ND	30		mg/Kg	20	11/10/2015 1:24:56 PM	22269
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/10/2015 4:05:02 PM	22220
Surr: DNOP	127	70-130		%REC	1	11/10/2015 4:05:02 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Surr: BFB	86.0	75.4-113		%REC	1	11/10/2015 11:01:59 PM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Benzene	ND	0.050		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Toluene	ND	0.050		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Ethylbenzene	ND	0.050		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Xylenes, Total	ND	0.099		mg/Kg	1	11/10/2015 11:01:59 PM	22241
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	11/10/2015 11:01:59 PM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** C1

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 9:54:00 AM

**Lab ID:** 1511281-002

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>					Analyst: <b>KJH</b>		
Diesel Range Organics (DRO)	22000	990		mg/Kg	100	11/10/2015 4:26:19 PM	22220
Surr: DNOP	0	70-130	S	%REC	100	11/10/2015 4:26:19 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>					Analyst: <b>NSB</b>		
Gasoline Range Organics (GRO)	320	47		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Surr: BFB	161	75.4-113	S	%REC	10	11/10/2015 11:25:06 PM	22241
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst: <b>NSB</b>		
Methyl tert-butyl ether (MTBE)	ND	0.95		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Benzene	0.61	0.47		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Toluene	8.8	0.47		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Ethylbenzene	2.8	0.47		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Xylenes, Total	20	0.95		mg/Kg	10	11/10/2015 11:25:06 PM	22241
Surr: 4-Bromofluorobenzene	128	80-120	S	%REC	10	11/10/2015 11:25:06 PM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** C2

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:15:00 AM

**Lab ID:** 1511281-003

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>					Analyst: <b>KJH</b>		
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/11/2015 12:00:34 PM	22220
Surr: DNOP	95.3	70-130		%REC	1	11/11/2015 12:00:34 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>					Analyst: <b>NSB</b>		
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Surr: BFB	86.4	75.4-113		%REC	1	11/11/2015 12:58:02 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>					Analyst: <b>NSB</b>		
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Benzene	ND	0.048		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Toluene	ND	0.048		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Ethylbenzene	ND	0.048		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Xylenes, Total	ND	0.097		mg/Kg	1	11/11/2015 12:58:02 AM	22241
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	11/11/2015 12:58:02 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

CLIENT: Souder, Miller &amp; Associates

Client Sample ID: C3

Project: Illustrated Man

Collection Date: 11/3/2015 10:18:00 AM

Lab ID: 1511281-004

Matrix: SOIL

Received Date: 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	1200	75		mg/Kg	50	11/11/2015 3:23:48 PM	22269
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	11/11/2015 12:42:11 PM	22220
Surr: DNOP	92.2	70-130		%REC	1	11/11/2015 12:42:11 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Surr: BFB	86.1	75.4-113		%REC	1	11/11/2015 1:21:17 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Benzene	ND	0.049		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Toluene	ND	0.049		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Ethylbenzene	ND	0.049		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Xylenes, Total	ND	0.097		mg/Kg	1	11/11/2015 1:21:17 AM	22241
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	11/11/2015 1:21:17 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** C4

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:48:00 AM

**Lab ID:** 1511281-005

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 300.0: ANIONS</b>							Analyst: <b>LGT</b>
Chloride	3800	150		mg/Kg	100	11/11/2015 3:36:13 PM	22269
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/10/2015 5:30:21 PM	22220
Surr: DNOP	95.9	70-130		%REC	1	11/10/2015 5:30:21 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Surr: BFB	86.5	75.4-113		%REC	1	11/11/2015 1:44:32 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Benzene	ND	0.048		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Toluene	ND	0.048		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Ethylbenzene	ND	0.048		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Xylenes, Total	ND	0.096		mg/Kg	1	11/11/2015 1:44:32 AM	22241
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	11/11/2015 1:44:32 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L1-3'

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:00:00 AM

**Lab ID:** 1511281-006

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	3200	99		mg/Kg	10	11/10/2015 5:51:35 PM	22220
Surr: DNOP	0	70-130	S	%REC	10	11/10/2015 5:51:35 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	290	24		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Surr: BFB	287	75.4-113	S	%REC	5	11/11/2015 2:07:45 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.48		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Benzene	ND	0.12		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Toluene	1.6	0.24		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Ethylbenzene	1.0	0.24		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Xylenes, Total	6.9	0.48		mg/Kg	5	11/11/2015 2:07:45 AM	22241
Surr: 4-Bromofluorobenzene	140	80-120	S	%REC	5	11/11/2015 2:07:45 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		



# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L2-3'

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:31:00 AM

**Lab ID:** 1511281-007

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	320	9.4		mg/Kg	1	11/10/2015 6:12:57 PM	22220
Surr: DNOP	98.4	70-130		%REC	1	11/10/2015 6:12:57 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	12	5.0		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Surr: BFB	149	75.4-113	S	%REC	1	11/11/2015 2:31:00 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Benzene	ND	0.050		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Toluene	ND	0.050		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Ethylbenzene	ND	0.050		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Xylenes, Total	ND	0.10		mg/Kg	1	11/11/2015 2:31:00 AM	22241
Surr: 4-Bromofluorobenzene	121	80-120	S	%REC	1	11/11/2015 2:31:00 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L3-2'

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:38:00 AM

**Lab ID:** 1511281-008

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	11/10/2015 6:34:14 PM	22220
Surr: DNOP	96.9	70-130		%REC	1	11/10/2015 6:34:14 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Surr: BFB	86.4	75.4-113		%REC	1	11/11/2015 2:54:18 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.093		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Benzene	ND	0.046		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Toluene	ND	0.046		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Ethylbenzene	ND	0.046		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Xylenes, Total	ND	0.093		mg/Kg	1	11/11/2015 2:54:18 AM	22241
Surr: 4-Bromofluorobenzene	111	80-120		%REC	1	11/11/2015 2:54:18 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# Hall Environmental Analysis Laboratory, Inc.

## Analytical Report

Lab Order 1511281

Date Reported: 11/12/2015

**CLIENT:** Souder, Miller & Associates

**Client Sample ID:** L4-1'

**Project:** Illustrated Man

**Collection Date:** 11/3/2015 10:48:00 AM

**Lab ID:** 1511281-009

**Matrix:** SOIL

**Received Date:** 11/4/2015 12:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>KJH</b>
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/10/2015 6:55:38 PM	22220
Surr: DNOP	95.4	70-130		%REC	1	11/10/2015 6:55:38 PM	22220
<b>EPA METHOD 8015D: GASOLINE RANGE</b>							Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Surr: BFB	86.6	75.4-113		%REC	1	11/11/2015 3:17:27 AM	22241
<b>EPA METHOD 8021B: VOLATILES</b>							Analyst: <b>NSB</b>
Methyl tert-butyl ether (MTBE)	ND	0.094		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Benzene	ND	0.047		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Toluene	ND	0.047		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Ethylbenzene	ND	0.047		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Xylenes, Total	ND	0.094		mg/Kg	1	11/11/2015 3:17:27 AM	22241
Surr: 4-Bromofluorobenzene	109	80-120		%REC	1	11/11/2015 3:17:27 AM	22241

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
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix		

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1511281

12-Nov-15

Client: Souder, Miller &amp; Associates

Project: Illustrated Man

Sample ID	MB-22269		SampType: MBLK		TestCode: EPA Method 300.0: Anions					
Client ID:	PBS		Batch ID: 22269		RunNo: 30148					
Prep Date:	11/10/2015		Analysis Date: 11/10/2015		SeqNo: 918734		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-22269		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 22269		RunNo: 30148					
Prep Date:	11/10/2015		Analysis Date: 11/10/2015		SeqNo: 918735		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.7	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  
R RPD outside accepted recovery limits  
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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1511281

12-Nov-15

Client: Souder, Miller &amp; Associates

Project: Illustrated Man

Sample ID	MB-22220		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 22220		RunNo: 30124					
Prep Date:	11/6/2015		Analysis Date: 11/10/2015		SeqNo: 917919		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	12		10.00		117	70	130			

Sample ID	LCS-22220		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 22220		RunNo: 30124					
Prep Date:	11/6/2015		Analysis Date: 11/10/2015		SeqNo: 917920		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	63	10	50.00	0	126	57.4	139			
Surr: DNOP	7.4		5.000		147	70	130			S

### 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  
R RPD outside accepted recovery limits  
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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1511281

12-Nov-15

Client: Souder, Miller &amp; Associates

Project: Illustrated Man

Sample ID	MB-22241		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 22241		RunNo: 30136					
Prep Date:	11/9/2015		Analysis Date: 11/10/2015		SeqNo: 918420		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	860		1000		85.6	75.4	113			

Sample ID	LCS-22241		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 22241		RunNo: 30136					
Prep Date:	11/9/2015		Analysis Date: 11/10/2015		SeqNo: 918421		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	79.6	122			
Surr: BFB	930		1000		92.7	75.4	113			

### 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  
R RPD outside accepted recovery limits  
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

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1511281

12-Nov-15

Client: Souder, Miller &amp; Associates

Project: Illustrated Man

Sample ID	MB-22241		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 22241		RunNo: 30136					
Prep Date:	11/9/2015		Analysis Date: 11/10/2015		SeqNo: 918501		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	0.050								
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-22241		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 22241		RunNo: 30136					
Prep Date:	11/9/2015		Analysis Date: 11/10/2015		SeqNo: 918502		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.93	0.10	1.000	0	93.2	67.2	121			
Benzene	0.99	0.050	1.000	0	99.0	80	120			
Toluene	0.98	0.050	1.000	0	98.1	80	120			
Ethylbenzene	1.0	0.050	1.000	0	101	80	120			
Xylenes, Total	3.0	0.10	3.000	0	101	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		115	80	120			

### 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  
R RPD outside accepted recovery limits  
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



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: 1511281

RcptNo: 1

Received by/date:

AT

11/04/15

Logged By: Lindsay Mangin

11/4/2015 12:15:00 PM

*Lindsay Mangin*

Completed By: Lindsay Mangin

11/6/2015 1:14:53 PM

*Lindsay Mangin*

Reviewed By:

KS

11/07/15

### 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? Client

### Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? 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 ☐
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 ☐
- # of preserved bottles checked for pH:   
(<2 or >12 unless noted)   
Adjusted?   
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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.4	Good	Not Present			





# APPENDIX B

## 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

**NAB1531626415**

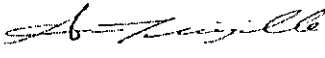

OPERATOR		<input checked="" type="checkbox"/> Initial Report	<input type="checkbox"/> Final Report
Name of Company: COG Operating LLC <b>229137</b>	Contact: Robert McNeill		
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-230-0077		
Facility Name: ILLUSTRATED MAN FEE COM #001H	Facility Type: Battery		
Surface Owner: Fee	Mineral Owner:	API No. 30-015-41025	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	12	25S	28E	170'	North	900'	West	Eddy

Latitude 32.1515999 Longitude -104.0465775

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 40 bbls Oil	Volume Recovered: 35 bbls Oil
Source of Release: Hole in tank	Date and Hour of Occurrence: 10/12/2015 10:00 am	Date and Hour of Discovery: 10/12/2015 10:00 am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher - NMOCD	
By Whom? Amanda Trujillo Davis	Date and Hour: Wed 10/14/2015 4:25 PM	
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.* This release was caused by a hole in the bottom of the production tank. Vacuum trucks were dispatched to recover standing fluid.		
Describe Area Affected and Cleanup Action Taken.* This release occurred within a lined containment; however impacted areas appeared on the outside of the containment. Therefore, Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.		
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: Amanda Trujillo Davis	Approved by Environmental Specialist: 	
Title: Senior Environmental Coordinator	Approval Date: 11/10/15	Expiration Date: NA
E-mail Address: atrujillo@concho.com	Conditions of Approval: Remediation per O.C.D. Rules & Guidelines <input type="checkbox"/> SUBMIT REMEDIATION PROPOSAL NO LATER THAN: 12/12/15	
Date: 10/26/2015 Phone: 575-748-6940		

\* Attach Additional Sheets If Necessary

NM OIL CONSERVATION  
ARTESIA DISTRICT

NOV 04 2015

RECEIVED

2RP-3382

**Patterson, Heather, EMNRD**

---

**From:** Amanda Trujillo Davis <ATrujillo@concho.com>  
**Sent:** Wednesday, November 04, 2015 6:42 PM  
**To:** Patterson, Heather, EMNRD; Bratcher, Mike, EMNRD  
**Cc:** Austin Weyant; Lucas Middleton  
**Subject:** (C-141 Initial) Illustrated Man Fee Com #1 (30-015-41025)  
**Attachments:** 10-12-2015 Illustrated Man Fee Com #1 (TB) Initial.pdf

Mr. Bratcher,

Attached is a C-141 Initial for your consideration. Souder, Miller and Associates will be handling this release on our behalf. Please feel free to contact me if you have any additional questions or concerns.

Thank you,

**Amanda Trujillo Davis**  
Senior Environmental Coordinator  
COG Operating LLC  
Cell: 505.350.1336  
Office: 575.748.6930  
[atrujillo@concho.com](mailto:atrujillo@concho.com)

1401 Commerce Drive  
Carlsbad, NM 88220



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---

**From:** Amanda Trujillo  
**Sent:** Wednesday, October 14, 2015 4:25 PM  
**To:** Heather Patterson; Mike.Bratcher@state.nm.us  
**Subject:** (Notification) Illustrated Man Fee Com #1 (30-015-41025)

Mr. Bratcher,

COG Operating LLC is reporting a release on the Illustrated Man Fee Com #1 (30-015-41025)  
Unit D Section 12, Township 25S Range 28E  
The release occurred at 10:00 am on 10/12/2015  
Released: 40 bbls oil  
Recovered: 39 bbls oil

The release was caused by a hole in the tank. The area is being evaluated and a C-141 will be submitted. If you have any additional questions please feel free to contact me.

Thank you,

**Amanda Trujillo**  
Senior Environmental Coordinator  
COG Operating LLC  
Cell: 505.350.1336  
Office: 575.748.6930  
atrujillo@concho.com

2208 W. Main St.  
Artesia , NM 88210



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**Patterson, Heather, EMNRD**

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**From:** Amanda Trujillo <ATrujillo@concho.com>  
**Sent:** Wednesday, October 14, 2015 4:25 PM  
**To:** Patterson, Heather, EMNRD; Bratcher, Mike, EMNRD  
**Subject:** (Notification) Illustrated Man Fee Com #1 (30-015-41025)

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# APPENDIX C

## FIELD NOTES

### Table 2: Summary of Field Screening Results

11/2/2015

[illegible]