



REVIEWED

By Kellie Jones at 8:02 am, Jan 06, 2016

APPROVED

By Kellie Jones at 8:02 am, Jan 06, 2016

October 10, 2015

#5B23978-BG3

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

SUBJECT: FINAL CLOSURE REPORT FOR INCIDENT 1RP-TBD GUNNER 16 STATE SWD #1, LEA COUNTY, NEW MEXICO

Dear Ms. Jones:

On behalf of Maverick Coating Services, LLC. and COG Operating (COG), Souder Miller & Associates (SMA) is pleased to submit the attached Final Closure Report summarizing the initial findings regarding the release site located on the Gunner 16 State SWD #1 in Lea County, New Mexico. The purpose of the Final Report is to obtain approval from the New Mexico Oil Conservation Division (NMOCD) for remediation and closure of the release that occurred on September 25, 2015.

At the request of COG, SMA responded to assess and delineate the production fluids release associated with the Gunner 16 State SWD #1 well location. The release was initially reported to NMOCD by COG on September 25, 2015 and is a result of an illegal dumping incident. 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	Gunner 16 State SWD #1				
Location	Incident Number	API Number	Section, Township, Range		
	TBD, not assigned	30-025-40890	SW/NE (Unit D)	Section 16	T 26S, R 34E NMPM
Estimated Date of Release	September 25, 2015				
Date Reported to NMOCD	October 9, 2015				
Reported by	Amanda Trujillo , COG Operating LLC				
Land Owner	New Mexico State Land Office				
Reported To	NM Oil Conservation Division (NMOCD)				
Source of Release	Illegal dumping				
Released Material	Oil and Rainwater				
Released Volume	0.25 bbls oil and 35 bbls rainwater				
Recovered Volume	0 bbls oil and 0 bbls rainwater				
Net Release	0.25 bbls oil and 35 bbls rainwater				
Nearest Waterway	Bobcat Draw is 0.28 miles to the south of the location.				

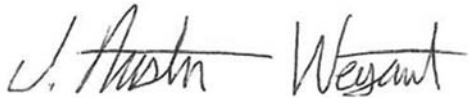


Depth to Groundwater	Estimated to be 110 feet
Nearest Domestic Water Source	Greater than 1,000 feet
NMOCD Ranking	0
SMA Response Dates	Initial: October, 1st 2015
Estimated Yd ³ Contaminated Soil Excavated and Disposed	None

A copy of the C-141 Initial / Final is located in Appendix B. For questions or comments pertaining to the release or the attached Final 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

FINAL CLOSURE REPORT FOR INCIDENT TBD NOT ASSIGNED

COG OPERATING LLC

GUNNER 16 STATE SWD #1

API# 30-025-40890

SECTION 16, T16S R34E, NMPM

LEA COUNTY, NM



Prepared for:
Maverick Coating Services, LLC.
1507 W Fairgrounds Rd.
Artesia, NM 88210

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

October 10, 2015
SMA Reference
5B23978 BG3

Table of Contents

1.0	Introduction	4
2.0	Site Ranking and Land Jurisdiction	4
3.0	Assessment and Initial Results	4
4.0	Conclusions and Recommendations	4
5.0	Closure and Limitations.....	5

Figures:

Figure 1: Vicinity Map

Figure 2: Site Details and Sample Location Map

Tables:

Table 1: Release Information and Site Ranking

Table 2: Summary of Field Screening Results for Chlorides

Table 3: Summary of Field Screening Results for Hydrocarbons

Table 4: Summary of Laboratory Analyses

Appendices:

Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 INITIAL/FINAL

1.0 Introduction

On behalf of Maverick Coating Services, LLC. and COG Operating LLC (COG), SMA has prepared this report that describes the assessment and initial delineation of a release associated with the Gunner 16 State SWD #1 location. The site is located in Section 16, T 16S, R 34E NMPM, Lea County, New Mexico, on land owned by the State of New Mexico. Figure 1 illustrates the vicinity and location of the site.

2.0 Site Ranking and Land Jurisdiction

The release site is located approximately 30 mile east of the Pecos River, in an area owned by the State of New Mexico with an elevation of approximately 3,700 feet above sea level. After evaluation of the site using aerial photography and topographic maps, depth to groundwater is estimated to be greater than 100 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. No domestic or agricultural wells are located within a 1000 foot radius of the release site. Figure 1 depicts the site vicinity and Figure 2 depicts the site location.

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 October 1st, 2015 after receiving 811 clearance, SMA field personnel assessed the release area onsite with a gas powered auger, Photo Ionization Detector (PID), and a mobile chlorides titration kit. The proposed affected area marked with flags was found to be approximately 250 square yards. Surface samples were taken and, by field testing, indicated results at or below the action levels for constituents of concern. Delineation samples were taken to depths of 3 ft. bgs. The samples were sent under chain-of-custody protocols to Hall Environmental Analysis Laboratory for analysis for Total Chlorides using EPA Method 300.0, Total Petroleum Hydrocarbons (DRO-GRO) by EPA Method SW846 8015M/D, and BTEX using EPA Method SW846 8260B, as required by NMOCD closure requirements. After initial sampling and field screening of the area, SMA has determined that no further action is recommended for this location, subsequently confirmed by laboratory analytical results. Specific sample locations for all samples are depicted on Figure 2 (Sample Location Map) along with sampling details. Laboratory analytical results are noted in Table 2 in the appendices. All samples were collected and processed according to NMOCD soil sampling procedures.

4.0 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 evidence of petroleum impacts found during the assessment and delineation.

Soil sample locations in the initial delineation are illustrated in Figure 2. A summary of laboratory analytical results is included in Table 4. Laboratory analytical reports are included in Appendix A.

The analytical results for this site are at or below the action levels for constituents of concern. No further remedial activities are recommended.

5.0 Closure and Limitations

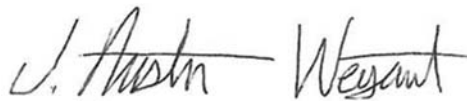
The scope of our services consisted of the performance of a spill assessment and delineation, verification of release stabilization, regulatory liaison, sampling for closure, and preparation of this Final Closure Report. All work has been performed in accordance with generally accepted professional environmental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

If there are any questions regarding this Work Plan, please contact either Austin Weyant at 575-689-7040 or Cindy Gray at 505-325-7535.

Submitted by:

Reviewed by:

SOUDER, MILLER & ASSOCIATES



Austin Weyant
Project Scientist



Cynthia Gray, CHMM
Senior Scientist

Figures:

Figure 1: Vicinity Map

Figure 2: Site Details and Sample Location Map

Tables:

Table 1: Release Information and Site Ranking

Table 2: Summary of Field Screening Results for Chlorides

Table 3: Summary of Field Screening Results for Hydrocarbons

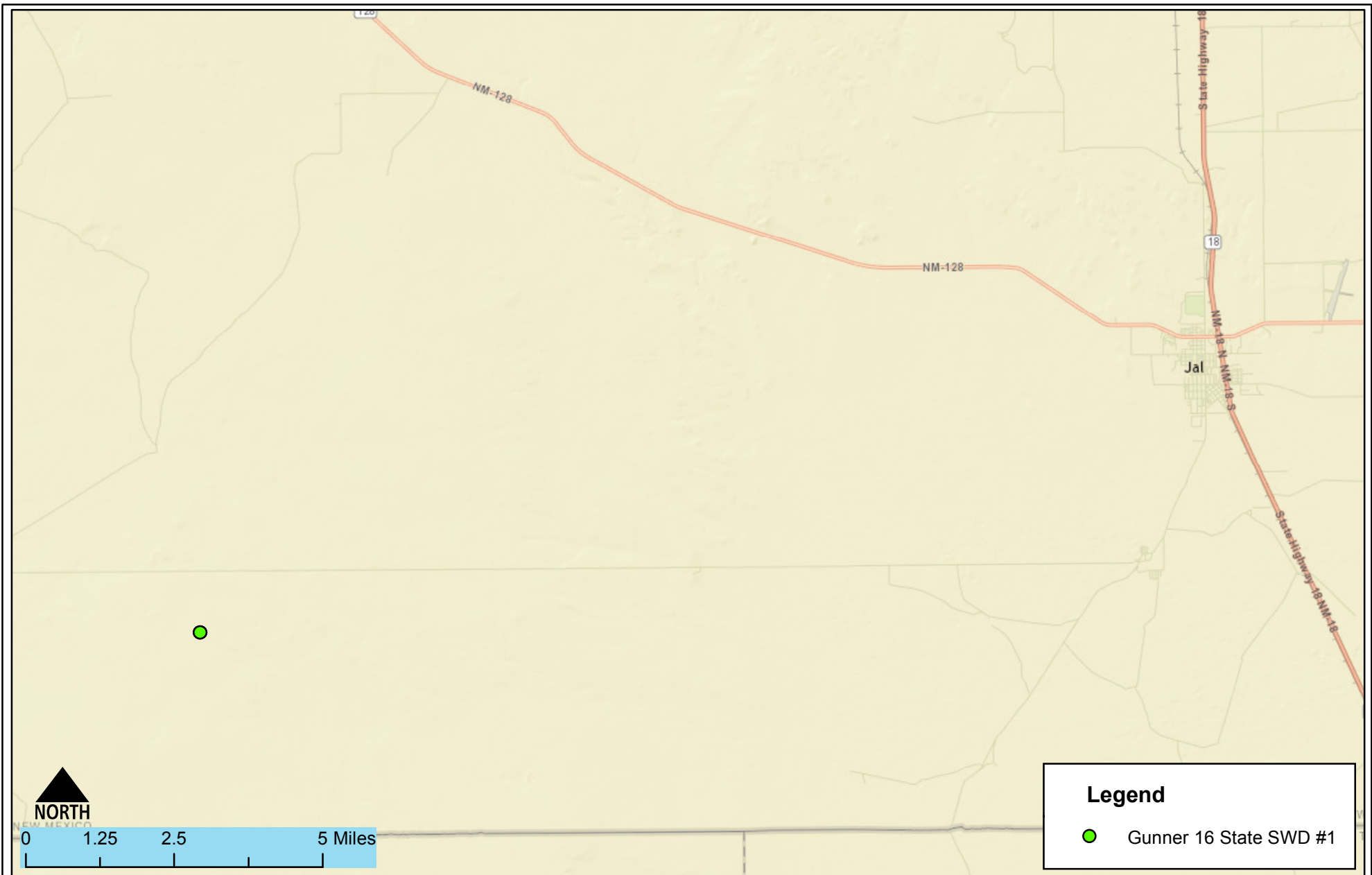
Table 4: Summary of Laboratory Analyses

Appendices:

Appendix A: Laboratory Analytical Reports

Appendix B: Form C141 INITIAL/FINAL

FIGURE 1 VICINITY MAP



Vicinity Map
COG, Gunner 16 State SWD #1
Jal, New Mexico

Figure 1

Date Saved:
10/1/2015

By: _____ Date: _____
By: _____ Date: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved

Revisions

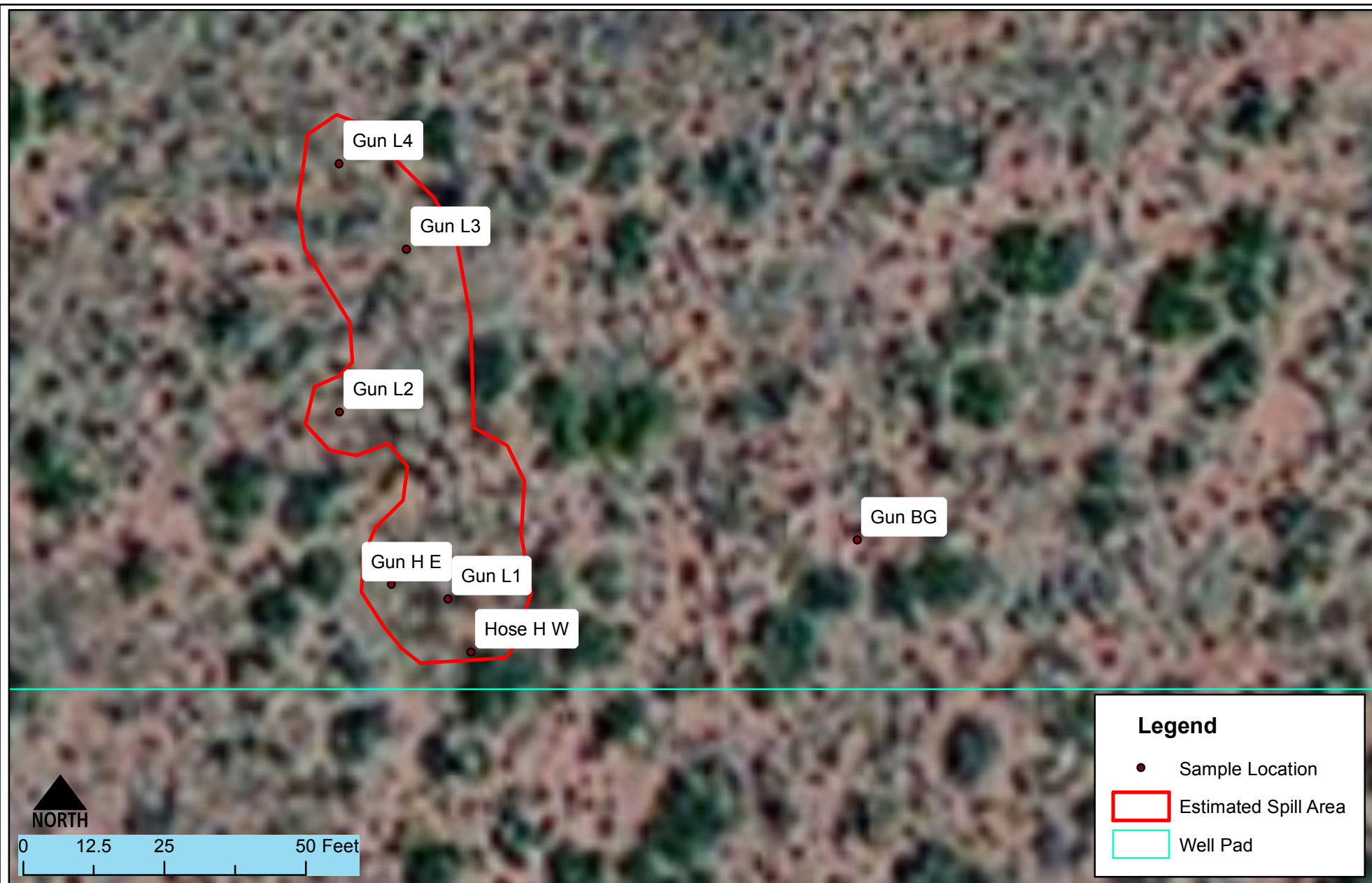
Descr: _____
Descr: _____

Drawn Lucas Middleton
Checked _____
Approved _____



201 South Halaguena Street
Carlsbad, New Mexico 88221
(575) 689-7040
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Figure 2: Site Details and Sample Location Map



Detailed Site and Sample Map
 COG, Gunner 16 State SWD #1
 Jal, New Mexico

Figure 2

Date Saved: 11/16/2015	By: _____	Date: _____	Revisions	Descr: _____
	By: _____	Date: _____		Descr: _____
Copyright 2015 Souder, Miller & Associates - All Rights Reserved				

Drawn	Lucas Middleton
Checked	_____
Approved	_____



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 Carlsbad, New Mexico 88221
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TABLE 1 RELEASE INFORMATION AND SITE RANKING

Table 1: Release information and Site Ranking

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Location	Incident Number	API Number	Section, Township, Range		
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Nearest Waterway	Bobcat Draw is 0.28 miles to the south 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	Initial: October, 1st 2015				
Estimated Yd ³ Contaminated Soil Excavated and Disposed	None				

TABLE 2

SUMMARY OF FIELD SCREENING RESULTS FOR CHLORIDES

Table 2: Summary of Field Screening Results for Chlorides

Gunner 16 State SWD #1

Final Closure

10/1/15

FIELD SCREENING RESULTS SUMMARY

Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	Chlorides Results	Lab Sample Collected Y/N
10/1/2015	11:00	Gun BG	1'-3'	0	Y
10/1/2015	11:00	Gun L1	Surface	0	Y
10/1/2015	11:00	Gun L2	Surface	0	Y
10/1/2015	11:00	Gun L3	Surface	0	Y
10/1/2015	11:00	Gun L4	Surface	0	Y
10/1/2015	11:00	Gun H W	Surface	0	Y
10/1/2015	11:00	Gun H E	1'	143	Y



TABLE 3

SUMMARY OF FIELD SCREENING RESULTS FOR HYDROCARBONS

10/1/15

FIELD SCREENING RESULTS SUMMARY



TABLE 4

SUMMARY OF LABORATORY ANALYSES

Table 4: Summary of Laboratory Analyses

Analytical Report- 1510259	Sample Number on Figure 2 Map	Sample Date	Depth	BTEX ppm	Benzene mg/Kg	GRO mg/Kg	DRO mg/Kg	Cl- mg/Kg
1510259-001	Gun 1	10/1/2015	1'	BDL	BDL	BDL	BDL	BDL
1510259-002	Gun 2	10/1/2015	2'	BDL	BDL	BDL	BDL	BDL
1510259-003	Gun 3	10/1/2015	3'	BDL	BDL	BDL	BDL	BDL
1510259-004	Gun 5	10/1/2015	4'	BDL	BDL	BDL	62	BDL
1510259-005	Gun- H	10/1/2015	1'	BDL	BDL	BDL	5000	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

October 13, 2015

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

RE: Gunner 16

OrderNo.: 1510259

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/6/2015 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 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 1510259

Date Reported: 10/13/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: Gun-1

Project: Gunner 16

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-001

Matrix: SOIL

Received Date: 10/6/2015 9:13:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/9/2015 2:25:24 PM	21767
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/9/2015 6:16:45 AM	21719
Surr: DNOP	105	57.9-140		%REC	1	10/9/2015 6:16:45 AM	21719
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Surr: BFB	87.7	75.4-113		%REC	1	10/8/2015 2:46:41 PM	21716
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Benzene	ND	0.048		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Toluene	ND	0.048		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Ethylbenzene	ND	0.048		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Xylenes, Total	ND	0.096		mg/Kg	1	10/8/2015 2:46:41 PM	21716
Surr: 4-Bromofluorobenzene	105	80-120		%REC	1	10/8/2015 2:46:41 PM	21716

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510259

Date Reported: 10/13/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: Gun-2

Project: Gunner 16

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-002

Matrix: SOIL

Received Date: 10/6/2015 9:13:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/9/2015 2:37:49 PM	21767
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/9/2015 6:43:35 AM	21719
Surr: DNOP	108	57.9-140		%REC	1	10/9/2015 6:43:35 AM	21719
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Surr: BFB	87.3	75.4-113		%REC	1	10/8/2015 3:56:01 PM	21716
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Benzene	ND	0.048		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Toluene	ND	0.048		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Ethylbenzene	ND	0.048		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Xylenes, Total	ND	0.096		mg/Kg	1	10/8/2015 3:56:01 PM	21716
Surr: 4-Bromofluorobenzene	104	80-120		%REC	1	10/8/2015 3:56:01 PM	21716

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510259

Date Reported: 10/13/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: Gun-3

Project: Gunner 16

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-003

Matrix: SOIL

Received Date: 10/6/2015 9:13:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/9/2015 2:50:14 PM	21767
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	10/9/2015 7:10:59 AM	21719
Surr: DNOP	99.4	57.9-140		%REC	1	10/9/2015 7:10:59 AM	21719
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Surr: BFB	86.4	75.4-113		%REC	1	10/8/2015 4:19:07 PM	21716
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Benzene	ND	0.048		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Toluene	ND	0.048		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Ethylbenzene	ND	0.048		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Xylenes, Total	ND	0.096		mg/Kg	1	10/8/2015 4:19:07 PM	21716
Surr: 4-Bromofluorobenzene	102	80-120		%REC	1	10/8/2015 4:19:07 PM	21716

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		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510259

Date Reported: 10/13/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: Gun-5

Project: Gunner 16

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-004

Matrix: SOIL

Received Date: 10/6/2015 9:13:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/9/2015 3:02:38 PM	21767
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	62	9.9		mg/Kg	1	10/9/2015 7:38:06 AM	21719
Surr: DNOP	107	57.9-140		%REC	1	10/9/2015 7:38:06 AM	21719
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Surr: BFB	87.5	75.4-113		%REC	1	10/8/2015 4:42:13 PM	21716
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.096		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Benzene	ND	0.048		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Toluene	ND	0.048		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Ethylbenzene	ND	0.048		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Xylenes, Total	ND	0.096		mg/Kg	1	10/8/2015 4:42:13 PM	21716
Surr: 4-Bromofluorobenzene	103	80-120		%REC	1	10/8/2015 4:42:13 PM	21716

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
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Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1510259

Date Reported: 10/13/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: Gun-H

Project: Gunner 16

Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-005

Matrix: SOIL

Received Date: 10/6/2015 9:13:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	10/9/2015 3:39:51 PM	21767
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: KJH
Diesel Range Organics (DRO)	5000	98		mg/Kg	10	10/9/2015 2:03:46 PM	21719
Surr: DNOP	0	57.9-140	S	%REC	10	10/9/2015 2:03:46 PM	21719
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	48	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Surr: BFB	101	75.4-113	D	%REC	10	10/8/2015 5:05:18 PM	21716
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.97	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Benzene	ND	0.24	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Toluene	ND	0.48	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Ethylbenzene	ND	0.48	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Xylenes, Total	ND	0.97	D	mg/Kg	10	10/8/2015 5:05:18 PM	21716
Surr: 4-Bromofluorobenzene	106	80-120	D	%REC	10	10/8/2015 5:05:18 PM	21716

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1510259

13-Oct-15

Client: Souder, Miller & Associates

Project: Gunner 16

Sample ID	MB-21767		SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS		Batch ID:	21767		RunNo:	29458				
Prep Date:	10/9/2015		Analysis Date:	10/9/2015		SeqNo:	895859		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Chloride	ND	1.5									

Sample ID	LCS-21767		SampType: LCS		TestCode: EPA Method 300.0: Anions					
Client ID:	LCSS		Batch ID: 21767		RunNo: 29458					
Prep Date:	10/9/2015		Analysis Date: 10/9/2015		SeqNo: 895860		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.0	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#: 1510259

13-Oct-15

Client: Souder, Miller & Associates

Project: Gunner 16

Sample ID	MB-21652		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21652		RunNo: 29273					
Prep Date:	10/5/2015		Analysis Date: 10/5/2015		SeqNo: 890900		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.9		10.00		78.7	57.9	140			

Sample ID	LCS-21652		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21652		RunNo: 29273					
Prep Date:	10/5/2015		Analysis Date: 10/5/2015		SeqNo: 890901		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.7		5.000		94.7	57.9	140			

Sample ID	MB-21679		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 21679		RunNo: 29273					
Prep Date:	10/6/2015		Analysis Date: 10/8/2015		SeqNo: 894236		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		105	57.9	140			

Sample ID	MB-21719		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	21719		RunNo:	29273				
Prep Date:	10/7/2015		Analysis Date:	10/8/2015		SeqNo:	894237		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	10		10.00		104	57.9	140				

Sample ID	LCS-21679		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21679		RunNo: 29273					
Prep Date:	10/6/2015		Analysis Date: 10/8/2015		SeqNo: 894238		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.6		5.000		112	57.9	140			

Sample ID	LCS-21719		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 21719		RunNo: 29273					
Prep Date:	10/7/2015		Analysis Date: 10/8/2015		SeqNo: 894239		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	41	10	50.00	0	81.9	57.4	139			
Surr: DNOP	4.9		5.000		97.7	57.9	140			

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#: 1510259

13-Oct-15

Client: Souder, Miller & Associates

Project: Gunner 16

Sample ID	MB-21716		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 21716		RunNo: 29394					
Prep Date:	10/7/2015		Analysis Date: 10/8/2015		SeqNo: 894381		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	890		1000		88.5	75.4	113			

Sample ID	LCS-21716		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 21716		RunNo: 29394					
Prep Date:	10/7/2015		Analysis Date: 10/8/2015		SeqNo: 894382		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	950		1000		95.3	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#: 1510259

13-Oct-15

Client: Souder, Miller & Associates

Project: Gunner 16

Sample ID MB-21716	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 21716		RunNo: 29394							
Prep Date: 10/7/2015	Analysis Date: 10/8/2015		SeqNo: 894406		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		106	80	120			

Sample ID LCS-21716	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 21716		RunNo: 29394							
Prep Date: 10/7/2015	Analysis Date: 10/8/2015		SeqNo: 894407		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	1.000	0	110	67.2	121			
Benzene	0.99	0.050	1.000	0	99.2	80	120			
Toluene	0.95	0.050	1.000	0	95.5	80	120			
Ethylbenzene	0.96	0.050	1.000	0	96.4	80	120			
Xylenes, Total	2.9	0.10	3.000	0	97.1	80	120			
Surr: 4-Bromofluorobenzene	1.1		1.000		112	80	120			

Sample ID 1510259-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: Gun-1	Batch ID: 21716		RunNo: 29394							
Prep Date: 10/7/2015	Analysis Date: 10/8/2015		SeqNo: 894411		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.096	0.9625	0	112	53.6	133			
Benzene	1.0	0.048	0.9625	0	105	69.6	136			
Toluene	1.0	0.048	0.9625	0	104	76.2	134			
Ethylbenzene	1.0	0.048	0.9625	0	105	75.8	137			
Xylenes, Total	3.0	0.096	2.887	0	106	78.9	133			
Surr: 4-Bromofluorobenzene	1.1		0.9625		109	80	120			

Sample ID 1510259-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: Gun-1	Batch ID: 21716		RunNo: 29394							
Prep Date: 10/7/2015	Analysis Date: 10/8/2015		SeqNo: 894412		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.097	0.9709	0	114	53.6	133	2.35	20	
Benzene	1.0	0.049	0.9709	0	104	69.6	136	0.480	20	
Toluene	1.0	0.049	0.9709	0	103	76.2	134	0.493	20	
Ethylbenzene	1.0	0.049	0.9709	0	104	75.8	137	0.138	20	

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#: 1510259

13-Oct-15

Client: Souder, Miller & Associates

Project: Gunner 16

Sample ID		1510259-001AMSD			SampType: MSD		TestCode: EPA Method 8021B: Volatiles				
Client ID:		Gun-1		Batch ID:		21716		RunNo: 29394			
Prep Date:		10/7/2015		Analysis Date:		10/8/2015		SeqNo: 894412		Units: mg/Kg	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total		3.1	0.097	2.913	0	105	78.9	133	0.129	20	
Surr: 4-Bromofluorobenzene		1.0		0.9709		108	80	120	0	0	

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

Client Name: SMA-CARLSBAD

Work Order Number: 1510259

RcptNo: 1

Received by/date:

10/06/15

Logged By: Lindsay Mangin

10/6/2015 9:13:00 AM

[Signature]

Completed By: Lindsay Mangin

10/6/2015 3:47:48 PM

[Signature]

Reviewed By:

IO
10/07/15

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? 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 ☐
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 ☐

Approved by client.

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.8	Good	Yes			

Chain-of-Custody Record

Client: Souder Miller And Associates

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

Mailing Address: 201 S. Halagueno

Carlsbad, NM 88220

Phone #: 575-689-5351

email or Fax#: lucas.middleton@soudermiller.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Sampler: LCM

On Ice: ☒ Yes ☐ No

Sample Temperature: 6.8°C

Project Manager:

Austin Weyant

Date Time Matrix Sample Request ID

Container Type and #

Preservative Type

HEAL No.

10-15 1000 Soil Gun-1
Gun-2
Gun-3
Gun-5
Gun-H

402
402
403
404
405

1510259
-001
-002
-003
-004
-005

BTEX + MTBE + TMB's (8021)

BTEX + MTBE + TPH (Gas only)

TPH Method 8015B (Gas/Diesel)

TPH (Method 418.1)

EDB (Method 504.1)

8310 (PNA or PAH)

RCRA 8 Metals

Anions (F, Cl, NO₃, NO₂, PO₄, SO₄)

8081 Pesticides / 8082 PCB's

8260B (VOA)

8270 (Semi-VOA)

Air Bubbles (Y or N)

Analysis Request

Remarks:

Received by: Date Time

Calvin Sore 10/06/15 09/13

Relinquished by:

Date:

Relinquished by:

Date:



**HALL ENVIRONMENTAL
ANALYSIS LABORATORY**

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

APPENDIX B

FORM C141 INITIAL/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: COG Operating LLC	Contact: Robert McNeill	
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-230-0077	
Facility Name: Gunner 16 State SWD #1	Facility Type: SWD	
Surface Owner: State	Mineral Owner: State	API No. 30-025-40890

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	16	26S	34E	330'	North	330'	West	Lea

Latitude 32.0497322 Longitude -103.4822998

NATURE OF RELEASE

Type of Release: Oil & Rain Water	Volume of Release: 0.25 bbls oil; 35 bbls rain water	Volume Recovered: 0 bbls oil; 0 bbls rain water
Source of Release: Illegal Dump	Date and Hour of Occurrence: 9/25/2015 10:00 am	Date and Hour of Discovery: 9/25/2015 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? Kellie Jones – NMOCD	
By Whom? Amanda Trujillo Davis	Date and Hour: Fri 9/25/2015 4:58 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 water hauler with Maverick Coating Services. The driver was tasked with removing standing water from a recent rain from containments and disposing at the SWD. The driver chose not to wait and discharged the contents in his truck in the pasture next to the SWD. Witnesses reported the incident to the security department.

Describe Area Affected and Cleanup Action Taken.*

The release impacted the pasture adjacent to the pad. Soil samples were taken from the impacted area.

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:	Expiration Date:
E-mail Address: atrujillo@concho.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: October 9, 2015 Phone: 575-748-6940		

* Attach Additional Sheets If Necessary



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

December 30, 2015

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

RE: Ganner 16 SWD

OrderNo.: 1512798

Dear Austin Weyant:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/16/2015 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 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 1512798

Date Reported: 12/30/2015

CLIENT: Souder, Miller & Associates

Client Sample ID: GC-S

Project: Ganner 16 SWD

Collection Date: 12/10/2015 8:00:00 AM

Lab ID: 1512798-001

Matrix: SOIL

Received Date: 12/16/2015 9:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: JME
Diesel Range Organics (DRO)	210	100		mg/Kg	10	12/22/2015 1:10:44 PM	22852
Motor Oil Range Organics (MRO)	1000	510		mg/Kg	10	12/22/2015 1:10:44 PM	22852
Surr: DNOP	0	70-130	S	%REC	10	12/22/2015 1:10:44 PM	22852
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Surr: BFB	82.2	66.2-112		%REC	1	12/21/2015 12:12:37 PM	22857
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Benzene	ND	0.050		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Toluene	ND	0.050		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Ethylbenzene	ND	0.050		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Xylenes, Total	ND	0.099		mg/Kg	1	12/21/2015 12:12:37 PM	22857
Surr: 4-Bromofluorobenzene	108	80-120		%REC	1	12/21/2015 12:12:37 PM	22857

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		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512798

30-Dec-15

Client: Souder, Miller & Associates

Project: Ganner 16 SWD

Sample ID	MB-22852		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 22852		RunNo: 31000					
Prep Date:	12/17/2015		Analysis Date: 12/22/2015		SeqNo: 948209		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	9.6		10.00		95.7	70	130			

Sample ID	LCS-22852		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 22852		RunNo: 31000					
Prep Date:	12/17/2015		Analysis Date: 12/22/2015		SeqNo: 948239		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	57	10	50.00	0	114	65.8	136			
Surr: DNOP	5.0		5.000		99.1	70	130			

Sample ID	MB-22922		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 22922		RunNo: 31000					
Prep Date:	12/22/2015		Analysis Date: 12/22/2015		SeqNo: 948736		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.3		10.00		93.0	70	130			

Sample ID	LCS-22922		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 22922		RunNo: 31000					
Prep Date:	12/22/2015		Analysis Date: 12/22/2015		SeqNo: 948737		Units: %REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		85.7	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
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#: 1512798

30-Dec-15

Client: Souder, Miller & Associates

Project: Ganner 16 SWD

Sample ID	MB-22857		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 22857		RunNo: 30983					
Prep Date:	12/17/2015		Analysis Date: 12/21/2015		SeqNo: 947868		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	870		1000		87.2	66.2	112			

Sample ID	LCS-22857		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 22857		RunNo: 30983					
Prep Date:	12/17/2015		Analysis Date: 12/21/2015		SeqNo: 947869		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	105	79.6	122			
Surr: BFB	950		1000		94.9	66.2	112			

Sample ID	1512798-001AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	GC-S		Batch ID: 22857		RunNo: 30983					
Prep Date:	12/17/2015		Analysis Date: 12/21/2015		SeqNo: 947871		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	24.85	0	92.5	62.5	151			
Surr: BFB	980		994.0		98.1	66.2	112			

Sample ID	1512798-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	GC-S		Batch ID:	22857		RunNo:	30983				
Prep Date:	12/17/2015		Analysis Date:	12/21/2015		SeqNo:	947872		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	23	5.0	24.85	0	92.5	62.5	151	0.0432	22.1		
Surr: BFB	990		994.0		99.8	66.2	112	0	0		

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#: 1512798

30-Dec-15

Client: Souder, Miller & Associates

Project: Ganner 16 SWD

Sample ID MB-22857	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 22857		RunNo: 30983							
Prep Date: 12/17/2015	Analysis Date: 12/21/2015		SeqNo: 947896		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	1.2		1.000		121	80	120			S

Sample ID LCS-22857	SampType: LCS		TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 22857		RunNo: 30983							
Prep Date: 12/17/2015	Analysis Date: 12/21/2015		SeqNo: 947897		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	1.000	0	107	67.2	121			
Benzene	0.98	0.050	1.000	0	97.6	80	120			
Toluene	0.98	0.050	1.000	0	98.0	80	120			
Ethylbenzene	0.99	0.050	1.000	0	98.8	80	120			
Xylenes, Total	3.0	0.10	3.000	0	100	80	120			
Surr: 4-Bromofluorobenzene	1.2		1.000		118	80	120			

Sample ID 1512798-001AMS	SampType: MS		TestCode: EPA Method 8021B: Volatiles							
Client ID: GC-S	Batch ID: 22857		RunNo: 30983							
Prep Date: 12/17/2015	Analysis Date: 12/21/2015		SeqNo: 947899		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.98	0.099	0.9940	0	98.3	53.6	133			
Benzene	0.87	0.050	0.9940	0	87.9	69.6	136			
Toluene	0.96	0.050	0.9940	0	96.7	76.2	134			
Ethylbenzene	0.99	0.050	0.9940	0.006262	98.9	75.8	137			
Xylenes, Total	3.0	0.099	2.982	0.01660	101	78.9	133			
Surr: 4-Bromofluorobenzene	1.3		0.9940		127	80	120			S

Sample ID 1512798-001AMSD	SampType: MSD		TestCode: EPA Method 8021B: Volatiles							
Client ID: GC-S	Batch ID: 22857		RunNo: 30983							
Prep Date: 12/17/2015	Analysis Date: 12/21/2015		SeqNo: 947900		Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.91	0.099	0.9940	0	91.3	53.6	133	7.46	20	
Benzene	0.84	0.050	0.9940	0	84.1	69.6	136	4.48	20	
Toluene	0.89	0.050	0.9940	0	89.2	76.2	134	8.01	20	
Ethylbenzene	0.92	0.050	0.9940	0.006262	91.9	75.8	137	7.20	20	

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 | |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1512798

30-Dec-15

Client: Souder, Miller & Associates

Project: Ganner 16 SWD

Sample ID 1512798-001AMSD		SampType: MSD			TestCode: EPA Method 8021B: Volatiles					
Client ID: GC-S		Batch ID: 22857			RunNo: 30983					
Prep Date: 12/17/2015		Analysis Date: 12/21/2015			SeqNo: 947900		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Xylenes, Total	2.8	0.099	2.982	0.01660	93.0	78.9	133	8.53	20	
Surr: 4-Bromofluorobenzene	1.2		0.9940		120	80	120	0	0	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



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: 1512798

RcptNo: 1

Received by/date:

Logged By: Ashley Gallegos

12/16/2015 9:10:00 AM

Completed By: Ashley Gallegos

12/16/2015 4:25:35 PM

Reviewed By:

12/17/15

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? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ 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 ☐
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	2.9	Good	Yes			

