

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

October 10, 2015

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

APPROVED

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

#5B23978-BG3

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						
	Incident Number	API Number	Section, Township, Range				
Location	TBD, not assigned	30-025- 40890	SW/NE (Unit D)	Section 16	T 26S, R 34E NMPM		
Estimated Date of Release	Septembe	er 25, 2015					
Date Reported to NMOCD	October 9, 2015						
Reported by	Amanda Trujillo , COG Operating LLC						
Land Owner	New Mex	ico State La	and Office				
Reported To	NM Oil Co	onservation	Division (N	NMOCD)			
Source of Release	Illegal dur	nping					
Released Material	Oil and Ra	inwater					
Released Volume	0.25 bbls	oil and 35 k	obls rainwa	iter			
Recovered Volume	0 bbls oil and 0 bbls rainwater						
Net Release	0.25 bbls	oil and 35 k	obls rainwa	ter			
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

! Austr Weyant

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

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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

Gunner 16 State SWD #1 Final Closure SMA Ref 5B24422 BG1 10/10/15

FIGURE 1 VICINITY MAP



Figure 2: Site Details and Sample Location Map



Gunner 16 State SWD #1 Final Closure SMA Ref 5B24422 BG1 10/10/15

TABLE 1 RELEASE INFORMATION AND SITE RANKING

Table 1: Release information and Site Ranking					
Name	Gunner 16 State SWD #1				
Incident AP Number Numl			Section, Township, Range		
Location	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 Tr	ujillo , COG	Operating I	LLC	
Land Owner	New Mexic	o State Lan	d Office		
Reported To	NM Oil Cor	servation D	ivision (NN	1OCD)	
Source of Release	Illegal dum	ping			
Released Material	Oil and Rai	nwater			
Released Volume	0.25 bbls o	il and 35 bb	ls rainwate	r	
Recovered Volume	0 bbls oil ai	nd 0 bbls ra	inwater		
Net Release	0.25 bbls o	il and 35 bb	ls rainwate	r	
Nearest Waterway	Bobcat Dra	w is 0.28 m	iles to the s	outh of the	location.
Depth to Groundwater	Estimated t	to be 110 fe	et		
Nearest Domestic Water Source	Greater tha	an 1,000 fee	et		
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

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

FIELD SCREENING RESULTS SUMMARY								
Date	Time	Field Screening Reference	Sample Depth (Feet BGS)	PID Reading	Lab Sample Collected Y/N			
10/1/2015	11:00	Gun BG	1'-3'	0.0	Y			
10/1/2015	11:00	Gun L1	Surface	0.0	Y			
10/1/2015	11:00	Gun L2	Surface	0.4	Y			
10/1/2015	11:00	Gun L3	Surface	0.2	Y			
10/1/2015	11:00	Gun L4	Surface	0.2	Y			
10/1/2015	11:00	Gun H W	Surface	17.5	Y			
10/1/2015	11:00	Gun H E	1'	23.4	Y			



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

Table 4: Summary of Laboratory Analyses

APPENDIX A LABORATORY ANALYTICAL REPORTS



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

October 13, 2015

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

OrderNo.: 1510259

RE: Gunner 16

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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Project: Gunner 16

Client Sample ID: Gun-1 Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-001	Matrix:	Matrix: SOIL		Received Date: 10/6/2015 9:13:00 AM			
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analys	t: LGT	
Chloride	ND	30	mg/Kg	20	10/9/2015 2:25:24 PM	21767	
EPA METHOD 8015M/D: DIESEL RA	ANGE ORGANIC	S			Analys	t: 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 R	ANGE				Analys	t: 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					Analys	t: 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.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 Page 1 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Project: Gunner 16

Client Sample ID: Gun-2 Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-002	Matrix:	Matrix: SOIL		Received Date: 10/6/2015 9:13:00 AM			
Analyses	Result	RL Qu	al 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 RAM		S			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 RA	NGE				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	

Qualifiers:	*
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- * 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 Page 2 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Project: Gunner 16

Client Sample ID: Gun-3 Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-003	Matrix:	Matrix: SOIL		Received Date: 10/6/2015 9:13:00 AM			
Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analys	t: LGT	
Chloride	ND	30	mg/Kg	20	10/9/2015 2:50:14 PM	21767	
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANIC	S			Analys	t: 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 R	ANGE				Analys	t: 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					Analys	t: 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	

Qualifiers:	*
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- * 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 Page 3 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Project: Gunner 16

Client Sample ID: Gun-5 Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-004	Matrix:	SOIL	Received 1	Received Date: 10/6/2015 9:13:00 AM					
Analyses	Result	RL Qu	al 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 RA		S			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 R	ANGE				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			

Qualifiers:	*
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- * 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 Page 4 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller & Associates

Project: Gunner 16

Client Sample ID: Gun-H Collection Date: 10/1/2015 10:00:00 AM

Lab ID: 1510259-005	Matrix:	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						Analys	t: LGT			
Chloride	ND	30		mg/Kg	20	10/9/2015 3:39:51 PM	21767			
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S				Analys	t: 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 RAI	NGE					Analys	t: 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						Analys	t: 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			

Qualifiers:	*
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- * 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 Page 5 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit

Client: Project:		der, Miller & As ner 16	ssociate	es							
Sample ID	MB-21767	SampT	ype: ME	BLK	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	PBS	Batch	ID: 21	767	F	RunNo: 29	9458				
Prep Date:	10/9/2015	Analysis D	ate: 10	0/9/2015	S	SeqNo: 89	95859	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-21767	SampT	ype: LC	s	Tes	tCode: EF	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 21	767	F	RunNo: 29	9458				
Prep Date:	10/9/2015	Analysis D	ate: 10	0/9/2015	5	SeqNo: 89	95860	Units: mg/K	g		
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

WO#: 1510259

13-Oct-15

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Client: Project:	Souder, Gunner	Miller & Asso 16	ociates							
	PBS): 21652	R	TestCode: EPA Method 8015M/D: Diesel Range Organics RunNo: 29273 SeqNo: 890900 Units: %REC					
Analyte	10/5/2015	Analysis Date Result P		ຣ ອ SPK Ref Val		HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP		7.9	10.0)	78.7 57.9	140				
Sample ID	LCS-21652	SampType	e: LCS	Test	tCode: EPA Method	8015M/D: Die	esel Range	e Organics		
Client ID:	LCSS	Batch ID): 21652	R	RunNo: 29273					
Prep Date:	10/5/2015	Analysis Date	e: 10/5/2015	S	eqNo: 890901	Units: %RE	с			
Analyte		Result F	PQL SPK value	e SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP		4.7	5.00)	94.7 57.9	140				
Sample ID	MB-21679	SampType	e: MBLK	Test	tCode: EPA Method	8015M/D: Die	esel Range	e Organics		
Client ID:	PBS	Batch ID): 21679	R	RunNo: 29273					
Prep Date:	10/6/2015	Analysis Date	e: 10/8/2015	S	eqNo: 894236	Units: %RE	С			
Analyte		Result F	PQL SPK value	e SPK Ref Val	%REC LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP		10	10.0)	105 57.9	140				
Sample ID	MB-21719	SampType	e: MBLK	Test	tCode: EPA Method	8015M/D: Die	esel Range	e Organics		
Sample ID Client ID:			e: MBLK D: 21719		tCode: EPA Method RunNo: 29273	8015M/D: Die	esel Range	e Organics		
Client ID:): 21719	R		8015M/D: Die Units: mg/K	Ū	e Organics		
Client ID: Prep Date: Analyte	PBS 10/7/2015	Batch ID Analysis Date Result F): 21719 e: 10/8/2015	R	RunNo: 29273		Ū	e Organics RPDLimit	Qual	
Client ID: Prep Date: Analyte Diesel Range C	PBS	Batch ID Analysis Date Result F ND	9: 21719 9: 10/8/2015 PQL SPK value 10	R S Ə SPK Ref Val	RunNo: 29273 SeqNo: 894237 %REC LowLimit	Units: mg/K HighLimit	íg	-	Qual	
Client ID: Prep Date: Analyte	PBS 10/7/2015	Batch ID Analysis Date Result F	9: 21719 9: 10/8/2015 PQL SPK value	R S Ə SPK Ref Val	RunNo: 29273 GeqNo: 894237	Units: mg/K	íg	-	Qual	
Client ID: Prep Date: Analyte Diesel Range C Surr: DNOP	PBS 10/7/2015	Batch ID Analysis Date Result F ND	D: 21719 e: 10/8/2015 PQL SPK value 10 10.00	R S e SPK Ref Val	RunNo: 29273 SeqNo: 894237 %REC LowLimit	Units: mg/K HighLimit 140	g %RPD	RPDLimit	Qual	
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Client ID: Prep Date: Analyte Diesel Range C Surr: DNOP Sample ID Client ID:	PBS 10/7/2015 Drganics (DRO) LCS-21679	Batch ID Analysis Date Result F ND 10 SampType	D: 21719 2: 10/8/2015 PQL SPK value 10 10.00 2: LCS 2: 21679	R S <u>e SPK Ref Val</u> D Test R	RunNo: 29273 BeqNo: 894237 %REC LowLimit 104 57.9 tCode: EPA Method	Units: mg/K HighLimit 140	Gg %RPD esel Range	RPDLimit	Qual	
Client ID: Prep Date: Analyte Diesel Range C Surr: DNOP Sample ID Client ID: Prep Date: Analyte	PBS 10/7/2015 Drganics (DRO) LCS-21679 LCSS 10/6/2015	Batch ID Analysis Date Result F ND 10 SampType Batch ID Analysis Date Result F	2: 21719 2: 10/8/2015 2: 2015 2: 2015 2: 21679 2: 21679 2: 10/8/2015 2: 2015	R S SPK Ref Val Test R S SPK Ref Val	RunNo: 29273 SeqNo: 894237 %REC LowLimit 104 57.9 RCode: EPA Method RunNo: 29273 SeqNo: 894238 %REC LowLimit	Units: mg/K HighLimit 140 8015M/D: Die Units: %RE HighLimit	Gg %RPD esel Range	RPDLimit	Qual	
Client ID: Prep Date: Analyte Diesel Range C Surr: DNOP Sample ID Client ID: Prep Date:	PBS 10/7/2015 Drganics (DRO) LCS-21679 LCSS 10/6/2015	Batch ID Analysis Date Result F ND 10 SampType Batch ID Analysis Date	2: 21719 2: 10/8/2015 2QL SPK value 10 10.00 2: LCS 2: 21679 2: 10/8/2015	R S SPK Ref Val Test R S SPK Ref Val	RunNo: 29273 SeqNo: 894237 %REC LowLimit 104 57.9 tCode: EPA Method RunNo: 29273 SeqNo: 894238	Units: mg/K HighLimit 140 8015M/D: Die Units: %RE	Gg %RPD esel Range	RPDLimit		
Client ID: Prep Date: Analyte Diesel Range C Surr: DNOP Sample ID Client ID: Prep Date: Analyte Surr: DNOP	PBS 10/7/2015 Drganics (DRO) LCS-21679 LCSS 10/6/2015	Batch ID Analysis Date Result F ND 10 SampType Batch ID Analysis Date Result F	2: 21719 2: 10/8/2015 2: 2015 2: 2015 2: 21679 2: 21679 2: 10/8/2015 2: 2015 2: 2015 2: 2016 2: 2016 2	R S SPK Ref Val Test R S SPK Ref Val D	RunNo: 29273 SeqNo: 894237 %REC LowLimit 104 57.9 tCode: EPA Method RunNo: 29273 SeqNo: 894238 %REC LowLimit 112 57.9 tCode: EPA Method	Units: mg/K HighLimit 140 8015M/D: Die Units: %RE HighLimit 140	Gg %RPD esel Range C %RPD	RPDLimit e Organics RPDLimit		
Client ID: Prep Date: Analyte Diesel Range (Surr: DNOP Sample ID Client ID: Prep Date: Analyte Surr: DNOP Sample ID Client ID:	PBS 10/7/2015 Drganics (DRO) LCS-21679 LCSS 10/6/2015 LCS-21719 LCSS	Batch ID Analysis Date Result F ND 10 SampType Batch ID Analysis Date Result F 5.6 SampType Batch ID	e: 21719 e: 10/8/2015 PQL SPK value 10 10.00 e: LCS e: 10/8/2015 PQL SPK value 5.000 e: LCS e: 21719	R S SPK Ref Val Test R S SPK Ref Val D Test R	RunNo: 29273 SeqNo: 894237 %REC LowLimit 104 57.9 tCode: EPA Method RunNo: 29273 SeqNo: 894238 %REC LowLimit 112 57.9 tCode: EPA Method RunNo: 29273	Units: mg/K HighLimit 140 8015M/D: Die Units: %RE HighLimit 140 8015M/D: Die	Gg %RPD esel Range C %RPD esel Range	RPDLimit e Organics RPDLimit		
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Client ID: Prep Date: Analyte Diesel Range (Surr: DNOP Sample ID Client ID: Prep Date: Analyte Surr: DNOP Sample ID Client ID: Prep Date: Analyte	PBS 10/7/2015 Drganics (DRO) LCS-21679 LCSS 10/6/2015 LCS-21719 LCSS 10/7/2015	Batch ID Analysis Date Result F ND 10 SampType Batch ID Analysis Date Result F 5.6 SampType Batch ID Analysis Date	2: 21719 2: 10/8/2015 2: 2015 2: 2007 2: 21679 2: 21679 2: 10/8/2015 2: 21719 2: 21719 2: 10/8/2015	R SPK Ref Val	RunNo: 29273 SeqNo: 894237 %REC LowLimit 104 57.9 tCode: EPA Method RunNo: 29273 SeqNo: 894238 %REC LowLimit 112 57.9 tCode: EPA Method %REC LowLimit 112 57.9 tCode: EPA Method RunNo: 29273 tCode: EPA Method RunNo: 29273 SeqNo: 894239	Units: mg/K HighLimit 140 8015M/D: Die Units: %RE HighLimit 140 8015M/D: Die Units: mg/K	Gg %RPD esel Range C %RPD esel Range	RPDLimit e Organics RPDLimit e Organics	Qual	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
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- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit

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13-Oct-15

Client:Souder,Project:Gunner	Miller & As 16	ssociate	es							
Sample ID MB-21716	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: PBS	Batch ID: 21716			R	RunNo: 29394					
Prep Date: 10/7/2015	Analysis D	ate: 10	0/8/2015	S	SeqNo: 8	94381	Units: mg/H	(g		
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	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Client ID: LCSS	Batch	n ID: 21	716	R	RunNo: 2 9	9394				
Prep Date: 10/7/2015	Analysis D	ate: 10	0/8/2015	S	SeqNo: 8	94382	Units: mg/ #	ζg		
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:

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- 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:Souder, IProject:Gunner 1	Miller & A	Associate	es							
Sample ID MB-21716	Samp	Туре: МЕ	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: PBS	Batc	h ID: 21	716	R	unNo: 2	9394				
Prep Date: 10/7/2015	Analysis [Date: 10	0/8/2015	S	SeqNo: 8	94406	Units: mg/k	٢g		
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	Samp	Type: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: LCSS	Batc	h ID: 21	716	R	anNo: 2	9394				
Prep Date: 10/7/2015	Analysis [Date: 10	0/8/2015	S	eqNo: 8	94407	Units: mg/k	٢g		
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	Samp	Туре: М	6	TestCode: EPA Method 8021B: Volatiles						
Client ID: Gun-1	Batc	h ID: 21	716	R	RunNo: 2 9	9394				
Prep Date: 10/7/2015	Analysis [Date: 10	0/8/2015	S	SeqNo: 8	94411	Units: mg/k	٢g		
Analyte	Result	PQL		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 1510259-001AMS	D Samp	Туре: М	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID: Gun-1	Batc	h ID: 21	716	R	lunNo: 2	9394				
Prep Date: 10/7/2015	Analysis [Date: 10	0/8/2015	S	SeqNo: 8	94412	Units: mg/h	٢g		
Analyte	Result	PQL		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:

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- B Analyte detected in the associated Method Blank
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- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit

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Souder, Miller & Associates

Project:	Gunner 10	5									
Sample ID	1510259-001AMSE	SampT	ype: MS	SD	Test	Code: El	PA Method	8021B: Volat	tiles		
Client ID:	Gun-1	Batch	ID: 21	716	R	unNo: 2	9394				
Prep Date:	10/7/2015	Analysis D	ate: 10)/8/2015	S	eqNo: 8	94412	Units: mg/k	(g		
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-Brom	ofluorobenzene	1.0		0.9709		108	80	120	0	0	

Qualifiers:

Client:

- * 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

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LABORATORY TEL: 503-345-39	4901 Hawkins NE Ibuquerque, NM 87109 75 FAX: 505-345-4107 hallenvironmenial.com	eachipie neg in enteen met				
Client Name: SMA-CARLSBAD Work Order Numb	er 1510259		RcptNo:	1		
Received by/date: 2 10/04/15						
Logged By: Lindsay Mangin 10/6/2015 9:13:00 A	м	4 ty Alapo				
Completed By: Lindsay Mangin 10/6/2015 3:47:48 P	м	the file				
Reviewed By: 10/07/15	V					
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 Approved by cl	No 🔽				
6. Sample(s) in proper container(s)?	Yes V	No 🗌				
7. Sufficient sample volume for indicated test(s)?	Yes 🔽	No 🗌				
8. Are samples (except VOA and ONG) properly preserved?	Yes 🗹	No 🗌				
9. Was preservative added to bottles?	Yes 🗌	No 🗸	NA 🗌			
10. VOA vials have zero headspace?	Yes 🗌	No 🗆	No VOA Vials 🖌			
11, Were any sample containers received broken?	Yes	No 🔽	# of preserved			
12. Does paperwork match bottle labels?	Yes 🔽	No 🗆	bottles checked for pH:	>12 unless noted)		
(Note discrepancies on chain of custody)	Yes 🗸	No 🗆	Adjusted?	<rz noted)<="" td="" unless=""></rz>		
13. Are matrices correctly identified on Chain of Custody? 14. Is it clear what analyses were requested?	Yes 🗹					
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗹		Checked by:			

Special Handling (if applicable)

	-
C eMail C Phone C Far	x 🗌 In Person
	eMail D Phone Fa:

17. Additional remarks:

18. Cooler Information

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

Initial Topological Carlos of the transmission Condent Viller And Associates Carlos of the transmission aling Actions Term Mile And Associates Expendence Project Name: Project Name: Project Name: aling Actions Project Name: Project	Souder Mile: And Associates Easing Address: Souder Mile: And Associates Easing Address: Address: Address: Address: Address: 201 S. Halagueno Carisbad M 88220 Poject Name: Multicit Manager: Poject Manager: Address: Addres: Address: Address:	ភ	ain-	of-Cus	Chain-of-Custody Record	Turn-Around Time:	Time:				2		l	1	0	NIMIN	INTAL	
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APPENDIX B FORM C141 INITIAL/FINAL

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 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:	Volume of Release:	Volume Re	covered:			
Oil & Rain Water	0.25 bbls oil; 35 bbls rain	0 bbls oil;	0 bbls rain water			
	water					
Source of Release:	Date and Hour of Occurrence:	Date and H	our of Discovery:			
Illegal Dump	9/25/2015 10:00 am	9/25/2015	10:00 am			
Was Immediate Notice Given?	If YES, To Whom?					
🛛 Yes 🗌 No 🗌 Not Required	Kellie Jones – NMOCD					
By Whom? Amanda Trujillo Davis	Date and Hour: Fri 9/25/2015 4:58	PM				
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	tercourse.				
🗌 Yes 🖾 No						
If a Weters and I was stad Describe Fully, *						
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	g standing wat	ter from a recent rain from			
containments and disposing at the SWD. The driver chose not to wait and	discharged the contents in his truck i	n the pasture r	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 ta	ken from the impacted area.					
I hereby certify that the information given above is true and complete to the	he best of my knowledge and understa	and that pursu	ant to NMOCD rules and			
regulations all operators are required to report and/or file certain release no						
public health or the environment. The acceptance of a C-141 report by the						
should their operations have failed to adequately investigate and remediate						
or the environment. In addition, NMOCD acceptance of a C-141 report d						
federal, state, or local laws and/or regulations.		•				
	OIL CONSER	RVATION DIVISION				
A-Trijlle						
Signature:						
	Approved by Environmental Speciali	st:				
Printed Name: Amanda Trujillo Davis						
Title: Senior Environmental Coordinator	Approval Date:	Expiration D	ate:			
E mail Addresse struiille @ someho som	Conditions of Approval					
E-mail Address: <u>atrujillo@concho.com</u>	Conditions of Approval:		Attached			
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: <u>www.hallenvironmental.com</u>

December 30, 2015

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

OrderNo.: 1512798

RE: Ganner 16 SWD

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 <u>www.hallenvironmental.com</u> 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 qualifers 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytical Report Lab Order 1512798

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 12/30/2015

CLIENT: Souder, Miller & Associates			Clier	nt Samp	ole ID: GO	C-S	
Project: Ganner 16 SWD			Co	llection	Date: 12/	/10/2015 8:00:00 AM	
Lab ID: 1512798-001	Matrix:	SOIL	R	eceived	Date: 12/	/16/2015 9:10:00 AM	
Analyses	Result	RL Qu	ual Ui	nits	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S				Analyst	JME
Diesel Range Organics (DRO)	210	100	m	ng/Kg	10	12/22/2015 1:10:44 PM	22852
Motor Oil Range Organics (MRO)	1000	510	m	ng/Kg	10	12/22/2015 1:10:44 PM	22852
Surr: DNOP	0	70-130	S %	6REC	10	12/22/2015 1:10:44 PM	22852
EPA METHOD 8015D: GASOLINE RANG	θE					Analyst	NSB
Gasoline Range Organics (GRO)	ND	5.0	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Surr: BFB	82.2	66.2-112	%	6REC	1	12/21/2015 12:12:37 PM	A 22857
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Methyl tert-butyl ether (MTBE)	ND	0.099	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Benzene	ND	0.050	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Toluene	ND	0.050	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Ethylbenzene	ND	0.050	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Xylenes, Total	ND	0.099	m	ng/Kg	1	12/21/2015 12:12:37 PM	A 22857
Surr: 4-Bromofluorobenzene	108	80-120	%	6REC	1	12/21/2015 12:12:37 PM	A 22857

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

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 Page 1 of 5
- P Sample pH Not In Range
- RL Reporting Detection Limit

,	Miller & Associates 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 Qu	ual
Diesel Range Organics (DRO)	ND 10		
Motor Oil Range Organics (MRO) Surr: DNOP	ND 50 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 Qu	Jal
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 Qu	Jal
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 Qu	ual
Surr: DNOP	4.3 5.000	85.7 70 130	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Н 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
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Client: Project:	Souder, N Ganner 1	/liller & As 6 SWD	ssociate	es							
Sample ID	MB-22857	SampT	ype: MI	BLK	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	PBS	Batch	ID: 22	857	F	unNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	ate: 1	2/21/2015	S	eqNo: 94	47868	Units: mg/k	ζg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	e Organics (GRO)	ND 870	5.0	1000		87.2	66.2	112			
Sample ID	LCS-22857	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	LCSS	Batch	ID: 22	857	F	unNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	ate: 1	2/21/2015	S	eqNo: 94	47869	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	je 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	SampT	ype: M	s	Tes	tCode: El	PA Method	8015D: Gaso	oline Rang	e	
Client ID:	GC-S	Batch	ID: 22	857	F	unNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	ate: 12	2/21/2015	5	eqNo: 94	47871	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je 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	1512798-001AMSI	D SampT	ype: M	SD	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	GC-S	Batch	ID: 22	857	F	RunNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	ate: 1	2/21/2015	S	SeqNo: 94	47872	Units: mg/k	٤g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	23	5.0	24.85	0	92.5	62.5	151	0.0432	22.1	

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.

Client:	Souder, N	Ailler & A	ssociate	s							
Project:	Ganner 1	6 SWD									
	ND 00057										
Sample ID			Type: ME					8021B: Volat	lles		
	PBS		h ID: 22			RunNo: 3					
Prep Date:	12/17/2015	Analysis E	Date: 12	2/21/2015	ç	SeqNo: 9	47896	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	/I ether (MTBE)	ND	0.10								
Benzene		ND	0.050								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
Surr: 4-Brom	ofluorobenzene	1.2		1.000		121	80	120			S
Sample ID	LCS-22857	SampT	ype: LC	S	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID:	LCSS	Batcl	h ID: 22	857	F	RunNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	Date: 12	2/21/2015	S	SeqNo: 9	47897	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	/I 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-Brom	ofluorobenzene	1.2		1.000		118	80	120			
Sample ID	1512798-001AMS	SampT	уре: МS	3	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID:	GC-S	Batcl	h ID: 22	857	F	RunNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	Date: 12	2/21/2015	S	SeqNo: 9	47899	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	/I 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-Brom	ofluorobenzene	1.3		0.9940		127	80	120			S
Sample ID	1512798-001AMSI	D SampT	уре: МS	SD	Tes	tCode: El	PA Method	8021B: Volat	tiles		
Client ID:	GC-S	Batcl	h ID: 22	857	F	RunNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	Date: 12	2/21/2015	S	SeqNo: 9	47900	Units: mg/K	(g		
Analyte		Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-buty	/I 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.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Η
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank

Page 4 of 5

- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit

Souder, Miller & Associates

Project:	Ganner 16	5 SWD									
Sample ID	1512798-001AMSD	SampT	ype: MS	SD	Test	Code: El	PA Method	8021B: Volat	tiles		
Client ID:	GC-S	Batch	n ID: 22	857	R	unNo: 3	0983				
Prep Date:	12/17/2015	Analysis D	ate: 12	2/21/2015	S	eqNo: 9	47900	Units: mg/k	ζg		
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-Brom	ofluorobenzene	1.2		0.9940		120	80	120	0	0	S

Qualifiers:

Client:

- * 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 Hall Environm ENVIRONMENTAL ANALYSIS LABORATORY TEL: 505-345- Website: ww	4901 Albuquerque	Hawkins / , NM 871 15-345-41	09 S	am	ole Log-In Check List	
Client Name: SMA-CARLSBAD Work Order Nur	mber: 15127	98	X		ReptNo: 1	
Received by/date: A 12/10/19	5					1
Logged By: Ashley Gallegos 12/16/2015 9:10:0	DO AM		AZ			
Completed By: Ashley Galjegos 12/16/2015 4:25:3	35 PM		A			
			0			
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?	Couri					
	1.157353.0					
<u>Log In</u>				-		
4. Was an attempt made to cool the samples?	Yes	×	No	Щ	NA 🗌	
5. Were all samples received at a temperature of >0° C to 6 0°C	Yes		No			
5. Were all samples received at a temperature of >0 C to 6 0 C	Yes	×	NU			
6. Sample(s) in proper container(s)?	Yes	~	No			
7. Sufficient sample volume for indicated test(s)?	Yes	V	No			
8. Are samples (except VOA and ONG) properly preserved?	Yes					
9. Was preservative added to bottles?			No	~	NA 🗌	
					-	
10. VOA vials have zero headspace?	Yes				No VOA Vials 🗹	
 Were any sample containers received broken? 	Yes		No	Y	# of preserved	
12. Does paperwork match bottle labels?	Yes	~	No		bottles checked for pH:	
(Note discrepancies on chain of custody)				_	(<2 or >12 unless n Adjusted?	oted)
13. Are matrices correctly identified on Chain of Custody?	Yes		No	H	Adjusted ?	
14. Is it clear what analyses were requested?	Yes Yes		No No		Checked by:	
 Were all holding times able to be met? (If no, notify customer for authorization.) 	Tes		NU			-
Special Handling (if applicable)						
16. Was client notified of all discrepancies with this order?	Yes		No		NA 🗹	
Person Notified: D	ate					
By Whom: V	ia: 🗌 eMa	III 🗌 P	hone 🗌	Fax	In Person	
Regarding:						
Client Instructions:						
17. Additional remarks:						
18. Cooler Information						
Cooler No Temp C Condition Seal Intact Seal N	o Seal Da	ate	Signed E	Зу		
1 2.9 Good Yes					1	

ITAL	FORY							(N)	0 /	() s	Air Bubble		_				 	 			toos
		www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analy	3O ⁴)	2,409, M \ OF (2MIS)	/ 808 3'' 100 ² 100 ² 100 100 100 100 100 100 100 100 100 10	+ :: + 10 90 10 10 10 10 10 10 10 10 10 1	18E 3 (C 10 c 10 c 10 c 10 c 1, 10 c 1, 10 c	M + X3T8 M + X3T8 R + X3T8 R + X978 R + X978 M + X378 M +	X							Remarks:		a lovibilizer other of bostoder utbook of 11%, and based to 11% of 11% o
Turn-Around Time:	tu standard 🗆 Rush	Project Name:			CUMPRE 16 SWU	Project Manager:	Austin Weyant	- LCM	<u> </u>	Sample Temperature: 2. 4	ContainerPreservativeHEAL No.TypeType1000000000000000000000000000000000000	100- Zeb							Received by: Date Time Dec. Plant 12/10/15 09/10	Received by: Date Time	
Chain-of-Custody Record	Kus		Mailing Address: 20 5 Hallow and	my my	574 64	=ax#:	QA/QC Package:		Other	EDD (Type)	e Time Matrix Sample Request ID	1-10-6400 Sal GC-5							Time: Relinquished by:	Time: Relinquished by:	
J	Client:		Mailinç		Phone #:	email	QA/QC	Accre			Date	10-10-10-	·						Date:	Date:	

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