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

Initial only

OPERATOR

☒ Initial Report ☒ Final Report

Name of Company	OGRID Number	Contact
EOG Y Resources, Inc.	25575	Robert Asher
Address		Telephone No.
104 S. 4th Street		575-748-1471
Facility Name		Facility Type
Woodstock State Unit #1		Battery

Surface Owner	Mineral Owner	API No.
State	State	30-025-30700

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
P	5	9S	33E	660	South	540	East	Lea

Latitude 32.55681 **Longitude** 103.58248

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Oil & Produced Water	7 B/O & 2 B/PW	2 B/O & 0 B/PW
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Well head	6/29/2017; PM	6/29/2017; PM
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? N/A	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

RECEIVED
By Olivia Yu at 2:46 pm, Aug 04, 2017

If a Watercourse was Impacted, Describe Fully. *

Describe Cause of Problem and Remedial Action Taken. *
Packing on well head stuffing box failed, causing the release. Vacuum truck(s) and roustabout crews were called.

Describe Area Affected and Cleanup Action Taken. *
An approximate area of 60'X 25'. The well and valves were closed. Vacuum truck recovered remaining oil. The impacted soils were excavated and hauled to an NMOCD approved facility. Site check on 7/5/2017, further excavation needed to remove all impacted soils. Vertical and horizontal delineation samples were collected (7/18/2017) and analysis ran for TPH & BTEX (chlorides for documentation). **Depth to Ground Water: >100' (approximately 120', Section 3, T9S-R32E, per NMOSE), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS 0. Based on the volumes recovered, impacted soils excavated/removed and enclosed analytical data, EOG Y Resources requests closure.**

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:

Printed Name: Robert Asher

Title: Environmental Supervisor

E-mail Address: Robert_Asher@eogresources.com

Date: July 31, 2017 Phone: 575-748-4217

OIL CONSERVATION DIVISION

Approved by Environmental Specialist:

Approval Date: 8/4/2017 Expiration Date:

Conditions of Approval:
see attached directive

Attached ☑

* Attach Additional Sheets If Necessary

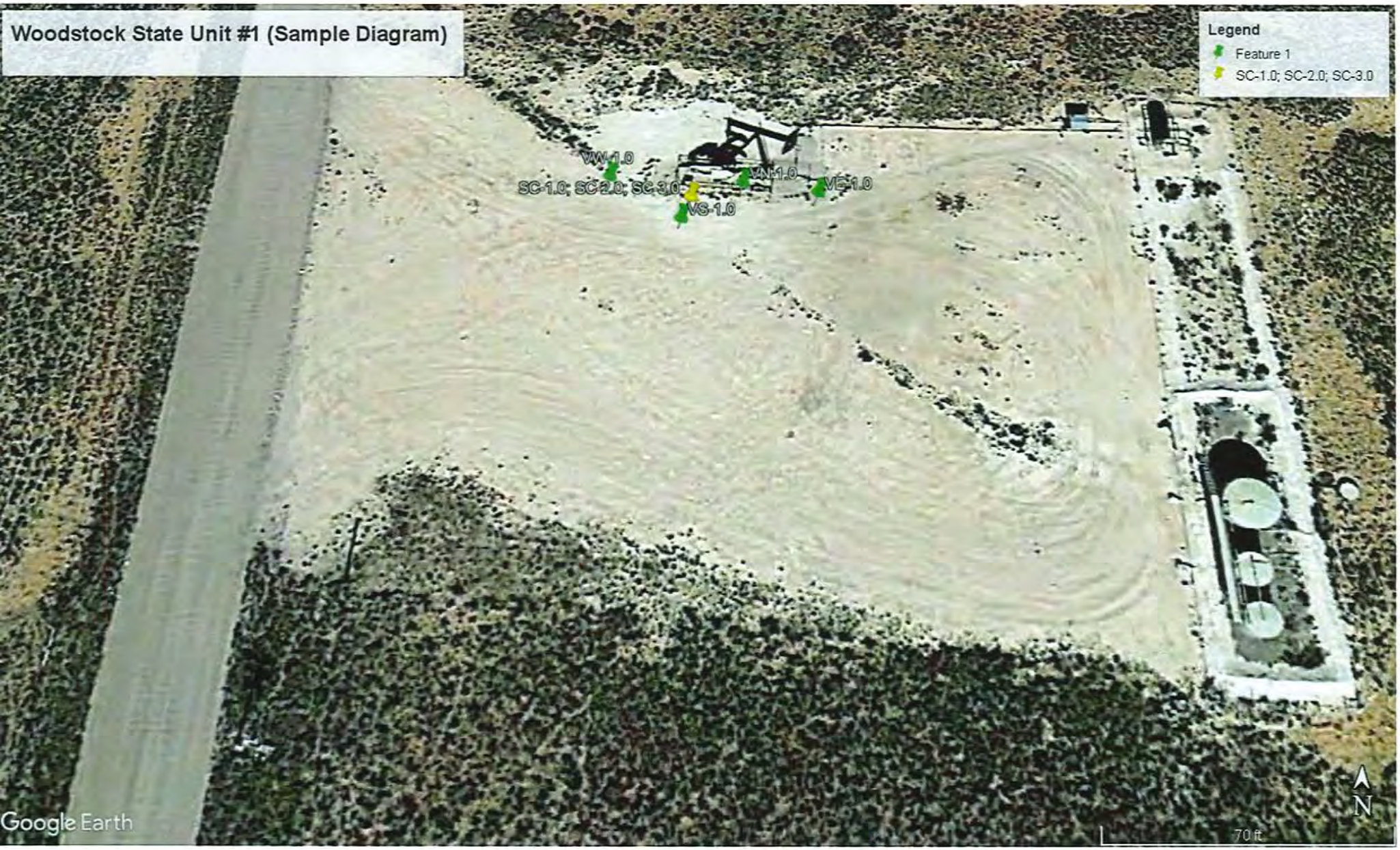
1RP-4777 nOY1721655739 pOY1721656669

Analytical Report-1704493 (Hall)	Sample Area	Sample Date	Sample Type	Depth	BTEX	GRO	DRO	Chlorides
SC-1.0	Release/Excavation/ Vertical Delineation	7/18/2017	Grab/Auger	12" (24" BSL)	ND	ND	23	45
SC-2.0	Release/Excavation/ Vertical Delineation	7/18/2017	Grab/Auger	24" (48" BSL)	ND	ND	ND	ND
SC-3.0	Release/Excavation/ Vertical Delineation	7/18/2017	Grab/Auger	36" (60" BSL)	ND	ND	ND	35
VW-1.0	Release/Excavation/ Horizontal Delineation	7/18/2017	Grab/Auger	12" (24" BSL)	ND	ND	ND	ND
VS-1.0	Release/Excavation/ Horizontal Delineation	7/18/2017	Grab/Auger	12" (24" BSL)	ND	ND	ND	ND
VN-1.0	Release/Excavation/ Horizontal Delineation	7/18/2017	Grab/Auger	12" (24" BSL)	ND	ND	ND	70
VE-1.0	Release/Excavation/ Horizontal Delineation	7/18/2017	Grab/Auger	12" (24" BSL)	ND	ND	ND	45

Site Ranking is Zero (0). Depth to Ground Water >100' (approx. 120', Section 3, T9S-R32E, per NMOSE).

All results are ppm. BSL - Below Surface Level

Released: 7 B/O & 2 B/PW; Recovered: 2 B/O & 0 B/PW. Release Date: 6/29/2017


Woodstock State Unit #1 (Sample Diagram)
Legend
Feature 1
SC-1.0; SC-2.0; SC-3.0
VW-1.0
SC-1.0; SC-2.0; SC-3.0
VN-1.0
VE-1.0
VS-1.0
Google Earth
N
70 ft


Woodstock State Unit #1 (Sample Diagram)
Legend
Feature 1
SC-1.0; SC-2.0; SC-3.0
VW-1.0
VN-1.0
VE-1.0
SC-1.0; SC-2.0; SC-3.0
VS-1.0
N
Google Earth
30 ft

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 26, 2017

Robert Asher
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX

RE: Woodstock State Unit 1 OrderNo.: 1707A67

Dear Robert Asher:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/20/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: SC-1.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:15:00 AM
Lab ID: 1707A67-001
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	23	9.8		mg/Kg	1	7/21/2017 6:23:20 PM	32926
Surr: DNOP	85.2	70-130		%Rec	1	7/21/2017 6:23:20 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.6		mg/Kg	1	7/21/2017 3:20:19 PM	32925
Surr: BFB	84.3	54-150		%Rec	1	7/21/2017 3:20:19 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	7/21/2017 3:20:19 PM	32925
Toluene	ND	0.046		mg/Kg	1	7/21/2017 3:20:19 PM	32925
Ethylbenzene	ND	0.046		mg/Kg	1	7/21/2017 3:20:19 PM	32925
Xylenes, Total	ND	0.093		mg/Kg	1	7/21/2017 3:20:19 PM	32925
Surr: 4-Bromofluorobenzene	96.5	66.6-132		%Rec	1	7/21/2017 3:20:19 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: SC-2.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:29:00 AM
Lab ID: 1707A67-002
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/21/2017 6:45:48 PM	32926
Surr: DNOP	81.2	70-130		%Rec	1	7/21/2017 6:45:48 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2017 3:44:29 PM	32925
Surr: BFB	83.4	54-150		%Rec	1	7/21/2017 3:44:29 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2017 3:44:29 PM	32925
Toluene	ND	0.048		mg/Kg	1	7/21/2017 3:44:29 PM	32925
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2017 3:44:29 PM	32925
Xylenes, Total	ND	0.097		mg/Kg	1	7/21/2017 3:44:29 PM	32925
Surr: 4-Bromofluorobenzene	94.5	66.6-132		%Rec	1	7/21/2017 3:44:29 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: SC-3.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:35:00 AM
Lab ID: 1707A67-003
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/21/2017 7:08:39 PM	32926
Surr: DNOP	79.4	70-130		%Rec	1	7/21/2017 7:08:39 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2017 4:08:45 PM	32925
Surr: BFB	75.4	54-150		%Rec	1	7/21/2017 4:08:45 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2017 4:08:45 PM	32925
Toluene	ND	0.048		mg/Kg	1	7/21/2017 4:08:45 PM	32925
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2017 4:08:45 PM	32925
Xylenes, Total	ND	0.096		mg/Kg	1	7/21/2017 4:08:45 PM	32925
Surr: 4-Bromofluorobenzene	86.3	66.6-132		%Rec	1	7/21/2017 4:08:45 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: VW-1.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:41:00 AM
Lab ID: 1707A67-004
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	7/21/2017 7:31:05 PM	32926
Surr: DNOP	85.6	70-130		%Rec	1	7/21/2017 7:31:05 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	7/21/2017 4:33:05 PM	32925
Surr: BFB	84.3	54-150		%Rec	1	7/21/2017 4:33:05 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	7/21/2017 4:33:05 PM	32925
Toluene	ND	0.047		mg/Kg	1	7/21/2017 4:33:05 PM	32925
Ethylbenzene	ND	0.047		mg/Kg	1	7/21/2017 4:33:05 PM	32925
Xylenes, Total	ND	0.094		mg/Kg	1	7/21/2017 4:33:05 PM	32925
Surr: 4-Bromofluorobenzene	99.1	66.6-132		%Rec	1	7/21/2017 4:33:05 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: VS-1.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:49:00 AM
Lab ID: 1707A67-005
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	7/21/2017 7:53:35 PM	32926
Surr: DNOP	79.9	70-130		%Rec	1	7/21/2017 7:53:35 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	7/21/2017 4:57:26 PM	32925
Surr: BFB	81.7	54-150		%Rec	1	7/21/2017 4:57:26 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	7/21/2017 4:57:26 PM	32925
Toluene	ND	0.049		mg/Kg	1	7/21/2017 4:57:26 PM	32925
Ethylbenzene	ND	0.049		mg/Kg	1	7/21/2017 4:57:26 PM	32925
Xylenes, Total	ND	0.099		mg/Kg	1	7/21/2017 4:57:26 PM	32925
Surr: 4-Bromofluorobenzene	94.4	66.6-132		%Rec	1	7/21/2017 4:57:26 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: VN-1.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 11:56:00 AM
Lab ID: 1707A67-006
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	7/21/2017 8:15:52 PM	32926
Surr: DNOP	86.8	70-130		%Rec	1	7/21/2017 8:15:52 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2017 5:21:45 PM	32925
Surr: BFB	83.3	54-150		%Rec	1	7/21/2017 5:21:45 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2017 5:21:45 PM	32925
Toluene	ND	0.048		mg/Kg	1	7/21/2017 5:21:45 PM	32925
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2017 5:21:45 PM	32925
Xylenes, Total	ND	0.096		mg/Kg	1	7/21/2017 5:21:45 PM	32925
Surr: 4-Bromofluorobenzene	96.2	66.6-132		%Rec	1	7/21/2017 5:21:45 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Client Sample ID: VE-1.0
Project: Woodstock State Unit 1
Collection Date: 7/18/2017 12:01:00 PM
Lab ID: 1707A67-007
Matrix: SOIL
Received Date: 7/20/2017 9:45:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	7/21/2017 8:38:16 PM	32926
Surr: DNOP	91.7	70-130		%Rec	1	7/21/2017 8:38:16 PM	32926
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/21/2017 9:47:22 PM	32925
Surr: BFB	82.2	54-150		%Rec	1	7/21/2017 9:47:22 PM	32925
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	7/21/2017 9:47:22 PM	32925
Toluene	ND	0.048		mg/Kg	1	7/21/2017 9:47:22 PM	32925
Ethylbenzene	ND	0.048		mg/Kg	1	7/21/2017 9:47:22 PM	32925
Xylenes, Total	ND	0.096		mg/Kg	1	7/21/2017 9:47:22 PM	32925
Surr: 4-Bromofluorobenzene	95.8	66.6-132		%Rec	1	7/21/2017 9:47:22 PM	32925

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A67

26-Jul-17

Client: EOG

Project: Woodstock State Unit 1

Sample ID	LCS-32926	SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	32926		RunNo:	44388				
Prep Date:	7/20/2017	Analysis Date:	7/21/2017		SeqNo:	1403735	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	96.6	73.2	114			
Surr: DNOP	3.5		5.000		70.8	70	130			

Sample ID	MB-32926	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	32926		RunNo:	44388				
Prep Date:	7/20/2017	Analysis Date:	7/21/2017		SeqNo:	1403736	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	7.5		10.00		75.0	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A67

26-Jul-17

Client: EOG

Project: Woodstock State Unit 1

Sample ID	MB-32925	SampType:	MBLK		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	32925		RunNo:	44391				
Prep Date:	7/20/2017	Analysis Date:	7/21/2017		SeqNo:	1403909	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	880		1000		88.2	54	150			

Sample ID	LCS-32925	SampType:	LCS		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	32925		RunNo:	44391				
Prep Date:	7/20/2017	Analysis Date:	7/21/2017		SeqNo:	1403910	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	96.9	76.4	125			
Surr: BFB	970		1000		96.6	54	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707A67**

26-Jul-17

Client: EOG

Project: Woodstock State Unit 1

Sample ID **MB-32925**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **32925**	RunNo: **44391**
Prep Date: **7/20/2017**	Analysis Date: **7/21/2017**	SeqNo: **1403945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		102	66.6	132			

Sample ID **LCS-32925**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **32925**	RunNo: **44391**
Prep Date: **7/20/2017**	Analysis Date: **7/21/2017**	SeqNo: **1403946** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	95.5	80	120			
Toluene	0.96	0.050	1.000	0	95.9	80	120			
Ethylbenzene	0.95	0.050	1.000	0	95.3	80	120			
Xylenes, Total	2.9	0.10	3.000	0	96.8	80	120			
Surr: 4-Bromofluorobenzene	1.0		1.000		101	66.6	132			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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: EOG/Yates | Work Order Number: 1707A67 | RcptNo: 1

Received By: Andy Jansson 7/20/2017 9:45:00 AM

Completed By: Ashley Gallegos 7/20/2017 12:02:35 PM

Reviewed By: ENM 7/20/17

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

Chain-of-Custody Record

Client: EOG Resources, Inc.

Mailing Address: 105 South 4th Street

Artesia, NM 88210

Phone #: (575) 748-4217

email: Robert_Asher@eogresources.com

QA/QC Package:
X Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
Standard Rush 72 HR TAT (7/24/2017)

Project Name:
Woodstock State Unit #1

Project #:
30-025-30700

Project Manager:
Robert Asher

PO# 205632

Sampler: Robert Asher

On Ice: ☒ Yes ☐ No

Sample Temperature: 2.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	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 (Cl)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
7/18/17	Per Robert Asher via email 7/24/17					1707A07												
~~7/11/17~~	1115 ~~9:15 AM~~	Soil	SC-1.0	1 - 4oz.	Ice	-001	X		X					X				
~~7/11/17~~	1120 ~~9:20 AM~~	Soil	SC-2.0	1 - 4oz.	Ice	-002	X		X					X				
~~7/11/17~~	1130 ~~9:25 AM~~	Soil	SC-3.0	1 - 4oz.	Ice	-003	X		X					X				
~~7/11/17~~	1141 ~~9:30 AM~~	Soil	VW-1.0	1 - 4oz.	Ice	-004	X		X					X				
~~7/11/17~~	1149 ~~9:35 AM~~	Soil	VS-1.0	1 - 4oz.	Ice	-005	X		X					X				
~~7/11/17~~	1150 ~~9:40 AM~~	Soil	VN-1.0	1 - 4oz.	Ice	-006	X		X					X				
~~7/11/17~~	1201 ~~9:45 AM~~	Soil	VE-1.0	1 - 4oz.	Ice	-007	X		X					X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/19/17	6:59 AM			7/20/17	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Analytical Results by 7/24/2017.

Remarks: Chlorides on separate report, please.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 26, 2017

Robert Asher
EOG
105 South Fourth Street
Artesia, NM 88210
TEL:
FAX

RE: Woodstock State Unit 1 OrderNo.: 1707A67

Dear Robert Asher:

Hall Environmental Analysis Laboratory received 7 sample(s) on 7/20/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1707A67**
Date Reported: **7/26/2017**

CLIENT: EOG
Project: Woodstock State Unit 1
Lab Order: 1707A67

Lab ID: 1707A67-001 **Collection Date:** 7/18/2017 11:15:00 AM
Client Sample ID: SC-1.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	45	30		mg/Kg	20	7/21/2017 3:03:09 PM	32936

Lab ID: 1707A67-002 **Collection Date:** 7/18/2017 11:29:00 AM
Client Sample ID: SC-2.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	7/21/2017 3:40:21 PM	32936

Lab ID: 1707A67-003 **Collection Date:** 7/18/2017 11:35:00 AM
Client Sample ID: SC-3.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	35	30		mg/Kg	20	7/21/2017 3:52:46 PM	32936

Lab ID: 1707A67-004 **Collection Date:** 7/18/2017 11:41:00 AM
Client Sample ID: VW-1.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	7/21/2017 4:05:10 PM	32936

Lab ID: 1707A67-005 **Collection Date:** 7/18/2017 11:49:00 AM
Client Sample ID: VS-1.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	7/21/2017 4:17:34 PM	32936

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG
Project: Woodstock State Unit 1
Lab Order: 1707A67

Lab ID: 1707A67-006 **Collection Date:** 7/18/2017 11:56:00 AM
Client Sample ID: VN-1.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	70	30		mg/Kg	20	7/21/2017 4:29:58 PM	32936

Lab ID: 1707A67-007 **Collection Date:** 7/18/2017 12:01:00 PM
Client Sample ID: VE-1.0 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	45	30		mg/Kg	20	7/21/2017 4:42:22 PM	32936

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
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707A67

26-Jul-17

Client: EOG

Project: Woodstock State Unit 1

Sample ID	MB-32936	SampType:	mblk	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	32936	RunNo:	44426					
Prep Date:	7/21/2017	Analysis Date:	7/21/2017	SeqNo:	1404232	Units:	mg/Kg			

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

Sample ID	LCS-32936	SampType:	lcs	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	32936	RunNo:	44426					
Prep Date:	7/21/2017	Analysis Date:	7/21/2017	SeqNo:	1404233	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	96.7	90	110			

Qualifiers:

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

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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: EOG/Yates | Work Order Number: 1707A67 | RcptNo: 1

Received By: Andy Jansson 7/20/2017 9:45:00 AM

Completed By: Ashley Gallegos 7/20/2017 12:02:35 PM

Reviewed By: ENM 7/20/17

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			

Chain-of-Custody Record

Client: EOG Resources, Inc.

Mailing Address: 105 South 4th Street

Artesia, NM 88210

Phone #: (575) 748-4217

email: Robert_Asher@eogresources.com

QA/QC Package:
X Standard ☐ Level 4 (Full Validation)

Accreditation:
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
Standard Rush 72 HR TAT (7/24/2017)

Project Name:
Woodstock State Unit #1

Project #:
30-025-30700

Project Manager:
Robert Asher
PO# 205632

Sampler: Robert Asher
On Ice: X Yes ☐ No
Sample Temperature: 2.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	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 (Cl)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)			Air Bubbles (Y or N)
7/18/17	Per Robert Asher via email on 7/24/17					1707A67														
~~7/11/17~~	~~9:15 AM~~ 1115	Soil	SC-1.0	1 - 4oz.	Ice	-001	X		X					X							
~~7/11/17~~	~~9:20 AM~~ 1120	Soil	SC-2.0	1 - 4oz.	Ice	-002	X		X					X							
~~7/11/17~~	~~9:25 AM~~ 1130	Soil	SC-3.0	1 - 4oz.	Ice	-003	X		X					X							
~~7/11/17~~	~~9:30 AM~~ 1141	Soil	VW-1.0	1 - 4oz.	Ice	-004	X		X					X							
~~7/11/17~~	~~9:35 AM~~ 1149	Soil	VS-1.0	1 - 4oz.	Ice	-005	X		X					X							
~~7/11/17~~	~~9:40 AM~~ 1150	Soil	VN-1.0	1 - 4oz.	Ice	-006	X		X					X							
~~7/11/17~~	~~9:45 AM~~ 1201	Soil	VE-1.0	1 - 4oz.	Ice	-007	X		X					X							

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/19/17	6:59 AM			7/20/17	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any

Analytical Results by 7/24/2017.

Remarks: Chlorides on separate report, please.

Operator/Responsible Party,

The OCD has received the form C-141 you provided on _8/1/2017_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number _1RP-4777__ has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District _1_ office in __Hobbs____ on or before _9/4/2017_. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

● Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

● Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

● Nominal detection limits for field and laboratory analyses must be provided.

● Composite sampling is not generally allowed.

● Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

●Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

● If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

● Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us