



*EOG Resources, Inc.
Artesia Division Office
105 S. 4th Street
Artesia, N. M. 88210*

January 6, 2017

Mr. Mike Bratcher
NMOCD District II
811 South First
Artesia, NM 88210

RE: Patriot #10 & Cutter Battery
Section 21, T19S-R25E
Eddy County, New Mexico


Mr. Bratcher,

EOG Y Resources, Inc. would like to submit the following plan of work to you regarding the release that occurred at the above mentioned facility on 11/17/2016 (2RP-4026). The release was 15 barrels of crude oil and 20 barrels of produced water with 14 barrels of crude oil and 20 barrels of produced water recovered.

With NMOCD approval of this work plan, EOG Y will hold a bid meeting allowing several contractors the opportunity to submit bids on this remediation project. Bids that are received will be forwarded to EOG Y Management for review. Once EOG Y Management reviews the bids and gives approval, the remediation project will be awarded to a contractor for work to commence.

If you have any questions or concerns, I can be reached at (575) 748-4111 or by email at amber_griffin@eogresources.com.

Thank You,


Amber Griffin
Rep Safety & Environmental II
EOG Y Resources, Inc.

EOG Y Resources, Inc. – Artesia Division Office
Patriot #10 & Cutter Battery Work Plan
Section 21, T19S-R25E
Eddy County, New Mexico
January 6, 2017

I. Location

The release is located approximately 13 miles south of Artesia, NM on Highway 285 and approximately 5.3 miles west of Highway 285 on Rocking R Red Road. The location is approximately 0.4 miles south of Rocking R Red Road on a lease road.

II. Background

On November 17, 2016 an oil tank overflowed when a knockout water dump plugged and sent produced water to the oil tank. 15 barrels of crude oil, 20 barrels of produced water were released and 14 barrels of crude oil, 20 barrels of produced water were recovered. An initial Form C-141 was submitted, via e-mail, to the NMOCD District II on December 1, 2016.

On November 29, 2016 EOG Y personnel returned to the site and collected soil samples from the release area with a backhoe at depths of 1', 2', 3', 4', 6', 8' and 10' below the surface level. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B, TPH 8015M and Chlorides 300.0. EOG Y received the analytical results on December 9, 2016 (Report 1612086 attached to this work plan). Analytical results showed that TPH and BTEX were both above NMOCD RRALS for a site ranking of zero (0). Chlorides at the site were at non-detectable levels.

On December 27, 2016 EOG Y personnel returned to the site and collected soil samples from the release area with a trackhoe at depths of 12', 14', 16' and 18' below the surface level. The soil samples were sent to an approved NMOCD laboratory and tested for BTEX 8021B and TPH 8015M. EOG Y received the analytical results on January 5, 2017 (Report 1612E59 attached to this work plan). Analytical results showed that both TPH and BTEX were below NMOCD RRALS for a site ranking of zero (0).

III. Surface and Ground Water

Area surface geology is Cenozoic. Groundwater records listed on NMOSE shows depth to groundwater to be approximately 130 feet making the site ranking for this site a zero (0). Watercourses in the area are dry except for infrequent flows in response to major precipitation events.

The ranking for this site is zero (0) based on the as following:

Depth to ground water	>100'
Wellhead Protection Area	> 1000'
Distance to surface water body	> 1000'

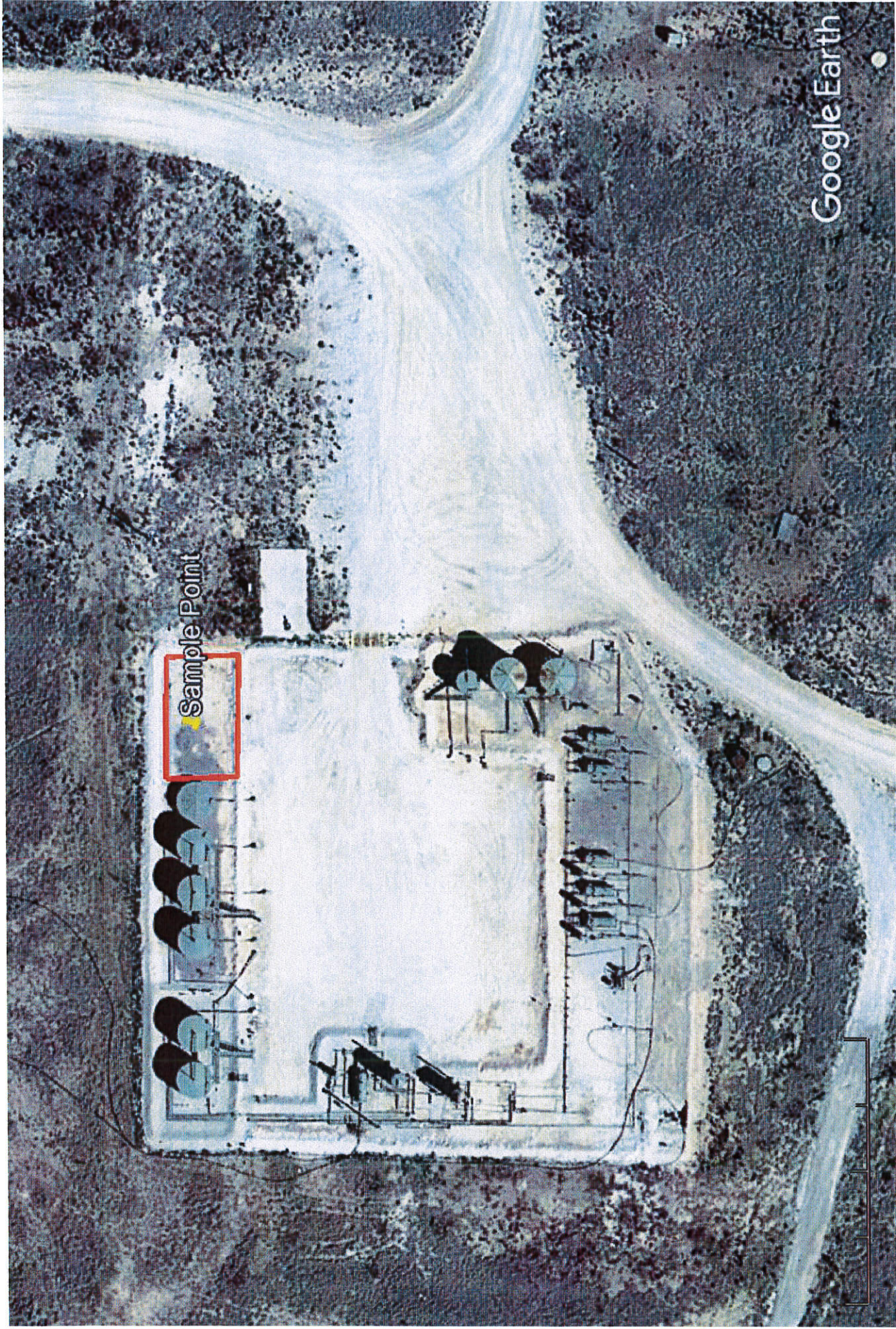
IV. Soils

The area consists of native soil, interspersed with clay seams providing a low permeability barrier to retard vertical percolation of contaminants into the subsurface.

V. Scope of Work

Based on analytical results which show complete delineation, EOG Y proposes to excavate the release area (approximately 35' x 55') to 12' below the surface level. The excavated soils will be hauled to a NMOCD approved facility. The excavation will be backfilled with caliche.

A Final C-141 will be submitted to NMOCD once all work has been completed.



Google Earth

feet
meters

300
100



Google Earth

Patriot #10 & Cutter Battery

	Sample Area	Sample Date	Analytical Report	Sample Type	Depth	B	T	E	X	BTEX	GRO	DRO	TOTAL	Chloride
Surface	Release Area	11/29/2016	1612086	Grab/Backhoe	Surface	62	400	300	340	1102	5,000	19,000	24,000	ND
1'	Release Area	11/29/2016	1612086	Grab/Backhoe	1' BSL	100	390	210	230	930	3,700	11,000	14,700	ND
2'	Release Area	11/29/2016	1612086	Grab/Backhoe	2' BSL	36	150	88	99	373	1,600	4,000	5,600	ND
3'	Release Area	11/29/2016	1612086	Grab/Backhoe	3' BSL	61	210	110	120	501	2,200	4,700	6,900	ND
4'	Release Area	11/29/2016	1612086	Grab/Backhoe	4' BSL	44	180	100	120	444	2,100	4,900	7,000	ND
6'	Release Area	11/29/2016	1612086	Grab/Backhoe	6' BSL	47	180	98	110	435	2,000	4,200	6,200	ND
8'	Release Area	11/29/2016	1612086	Grab/Backhoe	8' BSL	97	370	190	220	877	4,500	7,000	11,500	ND
10'	Release Area	11/29/2016	1612086	Grab/Backhoe	10' BSL	74	240	120	140	574	2,700	4,700	7,400	ND
12'	Release Area	12/27/2016	1612E59	Grab/Backhoe	12' BSL	ND	ND	ND	ND	ND	ND	ND	ND	-
14'	Release Area	12/27/2016	1612E59	Grab/Backhoe	14' BSL	ND	ND	ND	ND	ND	ND	ND	ND	-
16'	Release Area	12/27/2016	1612E59	Grab/Backhoe	16' BSL	ND	ND	ND	ND	ND	ND	ND	ND	-
18'	Release Area	12/27/2016	1612E59	Grab/Backhoe	18' BSL	ND	ND	ND	ND	ND	ND	ND	ND	-

Site Ranking is ZERO (0). Depth to Ground Water > 100' (approx. 130', per NMOSE 22-19S-25E).

All results are ppm.

Released: 15 B/O, 20 B/PW; Recovered: 14 B/O, 20 B/PW. Release Date: 11/17/16. 2RP-4026



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

December 09, 2016

Amber Griffin
Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111
FAX

RE: Cutter/Patriot/Rodke Battery

OrderNo.: 1612086

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 8 sample(s) on 12/2/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: Surface

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:10:00 PM

Lab ID: 1612086-001

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 2:51:18 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	19000	490		mg/Kg	50	12/7/2016 7:09:04 PM	28990
Surr: DNOP	0	70-130	S	%Rec	50	12/7/2016 7:09:04 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	5000	240		mg/Kg	50	12/5/2016 12:40:08 PM	28975
Surr: BFB	316	68.3-144	S	%Rec	50	12/5/2016 12:40:08 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	12/5/2016 12:40:08 PM	28975
Benzene	62	1.2		mg/Kg	50	12/5/2016 12:40:08 PM	28975
Toluene	400	9.5		mg/Kg	200	12/5/2016 3:26:32 PM	28975
Ethylbenzene	300	9.5		mg/Kg	200	12/5/2016 3:26:32 PM	28975
Xylenes, Total	340	4.8		mg/Kg	50	12/5/2016 12:40:08 PM	28975
Surr: 4-Bromofluorobenzene	162	80-120	S	%Rec	50	12/5/2016 12:40:08 PM	28975

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

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

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 1'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:11:00 PM

Lab ID: 1612086-002

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 3:28:31 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	11000	500		mg/Kg	50	12/8/2016 9:40:53 PM	28990
Surr: DNOP	0	70-130	S	%Rec	50	12/8/2016 9:40:53 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	3700	470		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Surr: BFB	139	68.3-144		%Rec	100	12/5/2016 1:03:51 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	9.5		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Benzene	100	2.4		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Toluene	390	4.7		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Ethylbenzene	210	4.7		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Xylenes, Total	230	9.5		mg/Kg	100	12/5/2016 1:03:51 PM	28975
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	100	12/5/2016 1:03:51 PM	28975

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

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

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 2'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:13:00 PM

Lab ID: 1612086-003

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 3:40:55 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4000	99		mg/Kg	10	12/6/2016 5:41:58 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 5:41:58 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	1600	230		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Surr: BFB	143	68.3-144		%Rec	50	12/5/2016 1:27:34 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.7		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Benzene	36	1.2		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Toluene	150	2.3		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Ethylbenzene	88	2.3		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Xylenes, Total	99	4.7		mg/Kg	50	12/5/2016 1:27:34 PM	28975
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	50	12/5/2016 1:27:34 PM	28975

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

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

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 3'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:15:00 PM

Lab ID: 1612086-004

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 4:18:09 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4700	95		mg/Kg	10	12/6/2016 6:25:08 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 6:25:08 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2200	240		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Surr: BFB	149	68.3-144	S	%Rec	50	12/5/2016 1:51:15 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Benzene	61	1.2		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Toluene	210	2.4		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Ethylbenzene	110	2.4		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Xylenes, Total	120	4.8		mg/Kg	50	12/5/2016 1:51:15 PM	28975
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	50	12/5/2016 1:51:15 PM	28975

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 4'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:17:00 PM

Lab ID: 1612086-005

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 4:30:34 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4900	98		mg/Kg	10	12/6/2016 7:08:17 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 7:08:17 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2100	240		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Surr: BFB	155	68.3-144	S	%Rec	50	12/5/2016 3:50:22 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Benzene	44	1.2		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Toluene	180	2.4		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Ethylbenzene	100	2.4		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Xylenes, Total	120	4.8		mg/Kg	50	12/5/2016 3:50:22 PM	28975
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	50	12/5/2016 3:50:22 PM	28975

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

CLIENT: Yates Petroleum Corporation

Client Sample ID: 6'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:20:00 PM

Lab ID: 1612086-006

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 4:42:58 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4200	91		mg/Kg	10	12/6/2016 7:51:51 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 7:51:51 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2000	240		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Surr: BFB	149	68.3-144	S	%Rec	50	12/5/2016 4:14:06 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.7		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Benzene	47	1.2		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Toluene	180	2.4		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Ethylbenzene	98	2.4		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Xylenes, Total	110	4.7		mg/Kg	50	12/5/2016 4:14:06 PM	28975
Surr: 4-Bromofluorobenzene	126	80-120	S	%Rec	50	12/5/2016 4:14:06 PM	28975

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

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

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 8'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:25:00 PM

Lab ID: 1612086-007

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 4:55:23 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	7000	100		mg/Kg	10	12/6/2016 8:35:01 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 8:35:01 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	4500	240		mg/Kg	50	12/5/2016 4:37:50 PM	28975
Surr: BFB	232	68.3-144	S	%Rec	50	12/5/2016 4:37:50 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	12/5/2016 4:37:50 PM	28975
Benzene	97	1.2		mg/Kg	50	12/5/2016 4:37:50 PM	28975
Toluene	370	9.7		mg/Kg	200	12/7/2016 2:08:11 PM	28975
Ethylbenzene	190	2.4		mg/Kg	50	12/5/2016 4:37:50 PM	28975
Xylenes, Total	220	4.8		mg/Kg	50	12/5/2016 4:37:50 PM	28975
Surr: 4-Bromofluorobenzene	145	80-120	S	%Rec	50	12/5/2016 4:37:50 PM	28975

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

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

Analytical Report

Lab Order 1612086

Date Reported: 12/9/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Yates Petroleum Corporation

Client Sample ID: 10'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 11/29/2016 1:30:00 PM

Lab ID: 1612086-008

Matrix: SOIL

Received Date: 12/2/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	12/6/2016 5:07:48 PM	29019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	4700	95		mg/Kg	10	12/6/2016 9:18:01 PM	28990
Surr: DNOP	0	70-130	S	%Rec	10	12/6/2016 9:18:01 PM	28990
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	2700	240		mg/Kg	50	12/5/2016 5:01:30 PM	28975
Surr: BFB	162	68.3-144	S	%Rec	50	12/5/2016 5:01:30 PM	28975
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	4.8		mg/Kg	50	12/5/2016 5:01:30 PM	28975
Benzene	74	1.2		mg/Kg	50	12/5/2016 5:01:30 PM	28975
Toluene	240	9.7		mg/Kg	200	12/7/2016 4:29:44 PM	28975
Ethylbenzene	120	2.4		mg/Kg	50	12/5/2016 5:01:30 PM	28975
Xylenes, Total	140	4.8		mg/Kg	50	12/5/2016 5:01:30 PM	28975
Surr: 4-Bromofluorobenzene	129	80-120	S	%Rec	50	12/5/2016 5:01:30 PM	28975

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612086

09-Dec-16

Client: Yates Petroleum Corporation

Project: Cutter/Patriot/Rodke Battery

Sample ID	MB-29019	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	29019	RunNo:	39203					
Prep Date:	12/6/2016	Analysis Date:	12/6/2016	SeqNo:	1226607	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-29019	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	29019	RunNo:	39203					
Prep Date:	12/6/2016	Analysis Date:	12/6/2016	SeqNo:	1226608	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612086

09-Dec-16

Client: Yates Petroleum Corporation

Project: Cutter/Patriot/Rodke Battery

Sample ID	LCS-28990	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	28990	RunNo:	39168					
Prep Date:	12/5/2016	Analysis Date:	12/6/2016	SeqNo:	1226377	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	50	10	50.00	0	101	62.6	124			
Surr: DNOP	4.7		5.000		93.1	70	130			

Sample ID	MB-28990	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	28990	RunNo:	39168					
Prep Date:	12/5/2016	Analysis Date:	12/6/2016	SeqNo:	1226378	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	8.9		10.00		88.9	70	130			

Sample ID	LCS-29058	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	29058	RunNo:	39238					
Prep Date:	12/7/2016	Analysis Date:	12/8/2016	SeqNo:	1228615	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.3		5.000		86.2	70	130			

Sample ID	MB-29058	SampType:	MBLK	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	29058	RunNo:	39238					
Prep Date:	12/7/2016	Analysis Date:	12/8/2016	SeqNo:	1228616	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.6		10.00		96.0	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 |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612086

09-Dec-16

Client: Yates Petroleum Corporation

Project: Cutter/Patriot/Rodke Battery

Sample ID	MB-28975	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	28975	RunNo:	39140					
Prep Date:	12/2/2016	Analysis Date:	12/5/2016	SeqNo:	1224951	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	810		1000		80.7	68.3	144			

Sample ID	LCS-28975	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	28975	RunNo:	39140					
Prep Date:	12/2/2016	Analysis Date:	12/5/2016	SeqNo:	1224952	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	21	5.0	25.00	0	85.0	74.6	123			
Surr: BFB	860		1000		86.5	68.3	144			

Sample ID	MB-29014	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	29014	RunNo:	39220					
Prep Date:	12/6/2016	Analysis Date:	12/7/2016	SeqNo:	1227407	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	840		1000		83.6	68.3	144			

Sample ID	LCS-29014	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	29014	RunNo:	39220					
Prep Date:	12/6/2016	Analysis Date:	12/7/2016	SeqNo:	1227408	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	920		1000		92.3	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612086

09-Dec-16

Client: Yates Petroleum Corporation

Project: Cutter/Patriot/Rodke Battery

Sample ID	MB-28975	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS	Batch ID: 28975		RunNo: 39140						
Prep Date:	12/2/2016	Analysis Date: 12/5/2016		SeqNo: 1224968		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.94		1.000		93.7	80	120			

Sample ID	LCS-28975		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 28975		RunNo: 39140					
Prep Date:	12/2/2016		Analysis Date: 12/5/2016		SeqNo: 1224969		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	1.1	0.10	1.000	0	112	65.7	116			
Benzene	1.1	0.025	1.000	0	108	75.2	115			
Toluene	0.99	0.050	1.000	0	99.1	80.7	112			
Ethylbenzene	0.95	0.050	1.000	0	95.5	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	94.6	79.2	115			
Surr: 4-Bromofluorobenzene	1.0		1.000		99.9	80	120			

Sample ID	MB-29014		SampType: MBLK		TestCode: EPA Method 8021B: Volatiles					
Client ID:	PBS		Batch ID: 29014		RunNo: 39220					
Prep Date:	12/6/2016		Analysis Date: 12/7/2016		SeqNo: 1227432		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	80	120			

Sample ID	LCS-29014		SampType: LCS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS		Batch ID: 29014		RunNo: 39220					
Prep Date:	12/6/2016		Analysis Date: 12/7/2016		SeqNo: 1227433		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.97		1.000		97.3	80	120			

Qualifiers:

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



Hall Environmental Analysis Laboratory
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: 1612086

RcptNo: 1

Received by/date:

Jim

12/02/2014

Logged By: Ashley Gallegos

12/2/2016 9:15:00 AM

Ag

Completed By: Ashley Gallegos

12/2/2016 12:22:25 PM

Ag

Reviewed By:

IO

12/02/16

Chain of Custody

- | | | | |
|--|----------------|----|---------------|
| 1. Custody seals intact on sample bottles? | Yes | No | Not Present ✓ |
| 2. Is Chain of Custody complete? | Yes ✓ | No | Not Present |
| 3. How was the sample delivered? | <u>Courier</u> | | |

Log In

- | | | | |
|---|-------|------|--|
| 4. Was an attempt made to cool the samples? | Yes ✓ | No | NA |
| 5. Were all samples received at a temperature of >0° C to 6.0°C | Yes ✓ | No | NA |
| 6. Sample(s) in proper container(s)? | Yes ✓ | No | |
| 7. Sufficient sample volume for indicated test(s)? | Yes ✓ | No | |
| 8. Are samples (except VOA and ONG) properly preserved? | Yes ✓ | No | |
| 9. Was preservative added to bottles? | Yes | No ✓ | NA |
| 10. VOA vials have zero headspace? | Yes | No | No VOA Vials ✓ |
| 11. Were any sample containers received broken? | Yes | No ✓ | |
| 12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) | Yes ✓ | No | # of preserved bottles checked for pH:
(<2 or >12 unless noted) |
| 13. Are matrices correctly identified on Chain of Custody? | Yes ✓ | No | Adjusted? |
| 14. Is it clear what analyses were requested? | Yes ✓ | No | |
| 15. Were all holding times able to be met?
(If no, notify customer for authorization.) | Yes ✓ | No | Checked by: |

Special Handling (if applicable)

- | | | | |
|---|-----|----|------|
| 16. Was client notified of all discrepancies with this order? | Yes | No | NA ✓ |
|---|-----|----|------|

Person Notified:

Date

By Whom:

Via:

eMail

Phone

Fax

In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.8	Good	Yes			



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

January 05, 2017

Amber Griffin
EOG Resources
105 South Fourth Street
Artesia, NM 88210
TEL: (575) 748-4111
FAX

RE: Cutter/Patriot/Rodke Battery

OrderNo.: 1612E59

Dear Amber Griffin:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/29/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 1612E59

Date Reported: 1/5/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: 12'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 12/27/2016 9:49:00 AM

Lab ID: 1612E59-001

Matrix: SOIL

Received Date: 12/29/2016 9:15:00 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	1/4/2017 1:21:02 PM	29491
Surr: DNOP	109	70-130		%Rec	1	1/4/2017 1:21:02 PM	29491
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Surr: BFB	84.8	68.3-144		%Rec	1	1/3/2017 6:29:59 PM	29481
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Benzene	ND	0.025		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Toluene	ND	0.050		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Ethylbenzene	ND	0.050		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Xylenes, Total	ND	0.099		mg/Kg	1	1/3/2017 6:29:59 PM	29481
Surr: 4-Bromofluorobenzene	91.5	80-120		%Rec	1	1/3/2017 6:29:59 PM	29481

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1612E59

Date Reported: 1/5/2017

CLIENT: EOG Resources

Client Sample ID: 14'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 12/27/2016 9:54:00 AM

Lab ID: 1612E59-002

Matrix: SOIL

Received Date: 12/29/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	1/4/2017 1:42:39 PM	29491
Surr: DNOP	108	70-130		%Rec	1	1/4/2017 1:42:39 PM	29491
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Surr: BFB	85.0	68.3-144		%Rec	1	1/3/2017 6:53:36 PM	29481
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.098		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Benzene	ND	0.024		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Toluene	ND	0.049		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Ethylbenzene	ND	0.049		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Xylenes, Total	ND	0.098		mg/Kg	1	1/3/2017 6:53:36 PM	29481
Surr: 4-Bromofluorobenzene	92.0	80-120		%Rec	1	1/3/2017 6:53:36 PM	29481

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

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

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**

Lab Order 1612E59

Date Reported: 1/5/2017

CLIENT: EOG Resources**Client Sample ID:** 16'**Project:** Cutter/Patriot/Rodke Battery**Collection Date:** 12/27/2016 9:58:00 AM**Lab ID:** 1612E59-003**Matrix:** SOIL**Received Date:** 12/29/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	1/4/2017 2:04:13 PM	29491
Surr: DNOP	110	70-130		%Rec	1	1/4/2017 2:04:13 PM	29491
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Surr: BFB	85.0	68.3-144		%Rec	1	1/3/2017 7:17:08 PM	29481
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.097		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Benzene	ND	0.024		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Toluene	ND	0.049		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Ethylbenzene	ND	0.049		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Xylenes, Total	ND	0.097		mg/Kg	1	1/3/2017 7:17:08 PM	29481
Surr: 4-Bromofluorobenzene	91.9	80-120		%Rec	1	1/3/2017 7:17:08 PM	29481

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

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

Analytical Report

Lab Order 1612E59

Date Reported: 1/5/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources

Client Sample ID: 18'

Project: Cutter/Patriot/Rodke Battery

Collection Date: 12/27/2016 10:04:00 AM

Lab ID: 1612E59-004

Matrix: SOIL

Received Date: 12/29/2016 9:15:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	1/4/2017 2:25:56 PM	29491
Surr: DNOP	108	70-130		%Rec	1	1/4/2017 2:25:56 PM	29491
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Surr: BFB	87.6	68.3-144		%Rec	1	1/3/2017 7:40:36 PM	29481
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.099		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Benzene	ND	0.025		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Toluene	ND	0.049		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Ethylbenzene	ND	0.049		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Xylenes, Total	ND	0.099		mg/Kg	1	1/3/2017 7:40:36 PM	29481
Surr: 4-Bromofluorobenzene	93.4	80-120		%Rec	1	1/3/2017 7:40:36 PM	29481

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612E59

05-Jan-17

Client: EOG Resources
Project: Cutter/Patriot/Rodke Battery

Sample ID	LCS-29491		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 29491		RunNo: 39801					
Prep Date:	1/3/2017		Analysis Date: 1/4/2017		SeqNo: 1247615		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.00	0	91.6	63.8	116			
Surr: DNOP	5.2		5.000		104	70	130			

Sample ID	MB-29491	SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS	Batch ID:	29491		RunNo:	39801				
Prep Date:	1/3/2017	Analysis Date:	1/4/2017		SeqNo:	1247616	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		104	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 |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612E59

05-Jan-17

Client: EOG Resources

Project: Cutter/Patriot/Rodke Battery

Sample ID	MB-29481		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 29481		RunNo: 39786					
Prep Date:	12/30/2016		Analysis Date: 1/3/2017		SeqNo: 1247192		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	820		1000		82.0	68.3	144			

Sample ID	LCS-29481		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 29481		RunNo: 39786					
Prep Date:	12/30/2016		Analysis Date: 1/3/2017		SeqNo: 1247193		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	74.6	123			
Surr: BFB	890		1000		88.9	68.3	144			

Sample ID	MB-29475		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: 29475		RunNo: 39786					
Prep Date:	12/30/2016		Analysis Date: 1/3/2017		SeqNo: 1247205		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	850		1000		84.6	68.3	144			

Sample ID	LCS-29475		SampType: LCS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS		Batch ID: 29475		RunNo: 39786					
Prep Date:	12/30/2016		Analysis Date: 1/3/2017		SeqNo: 1247206		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	930		1000		93.2	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1612E59

05-Jan-17

Client: EOG Resources

Project: Cutter/Patriot/Rodke Battery

Sample ID	MB-29481		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	29481		RunNo:	39786			
Prep Date:	12/30/2016		Analysis Date:	1/3/2017		SeqNo:	1247212		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.89		1.000		89.4	80	120			

Sample ID	LCS-29481		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	29481		RunNo:	39786			
Prep Date:	12/30/2016		Analysis Date:	1/3/2017		SeqNo:	1247214		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.90	0.10	1.000	0	89.8	65.7	116			
Benzene	1.0	0.025	1.000	0	102	75.2	115			
Toluene	0.96	0.050	1.000	0	95.5	80.7	112			
Ethylbenzene	0.93	0.050	1.000	0	93.4	78.9	117			
Xylenes, Total	2.8	0.10	3.000	0	94.8	79.2	115			
Surr: 4-Bromofluorobenzene	0.94		1.000		93.9	80	120			

Sample ID	MB-29475		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	29475		RunNo:	39786			
Prep Date:	12/30/2016		Analysis Date:	1/3/2017		SeqNo:	1247226		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.91		1.000		91.5	80	120			

Sample ID	LCS-29475		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	29475		RunNo:	39786			
Prep Date:	12/30/2016		Analysis Date:	1/3/2017		SeqNo:	1247227		Units: %Rec	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	80	120			

Qualifiers:

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



Hall Environmental Analysis Laboratory
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: 1612E59

RcptNo: 1

Received by/date: AS 12/29/16

Logged By: Lindsay Mangin 12/29/2016 9:15:00 AM

Completed By: Lindsay Mangin 12/30/2016 8:47:05 AM

Reviewed By: Ju 12/30/16

Chain of Custody

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

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:	_____	Date:	_____
By Whom:	_____	Via:	<input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> 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	1.0	Good	Yes			

