

EOG Resources, Inc. Artesia Division Office 105 S. 4<sup>th</sup> Street Artesia, N. M. 88210

February 13, 2017

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

Re: Kiwi AKX State #8 SWD Section 16, T22S-R32E Lea County, New Mexico 30-025-31889 1RP-3732

Ms. Yu,

EOG Y Resources, Inc. is submitting the enclosed work plan for the above captioned well. The plan is being submitted in response to the C-141 report dated July 14, 2015.

If there are no objections with the scope of work described in the plan, EOG Y Resources, Inc. will have a contractor begin work on or after February 27, 2017.

If you have any questions, feel free to call me at (575) 748-4171

Thank you.

EOG Y Resources, Inc.

Chase Settle Rep Safety & Environmental II EOG Y Resources, Inc.

# Kiwi AKX State #8 SWD Work Plan

Section 16, T22S-R32E

😑 🔘 Lea County, New Mexico 🖉 📿 😒

February 13, 2017

1RP- 3732

## I. Location

From the intersection of US 62/180 and Campbell Road (CR-29), travel south for approximately 10.8 miles, then turn east on lease road and follow for 3.5 miles, and then turn north and follow the road around the curve back to the west to the SWD.

## II. Background

On July 14, 2015, EOG Y Resources, Inc. submitted to the NMOCD District I office a Form C-141 for the release of 2 B/O & 10 B/PW with none recovered. The affected area is approximately 35 feet by 35 feet within the battery berm. Initial delineation samples were taken (01/09/2017) and sent to a NMOCD approved laboratory (01/18/2017, results enclosed).

## III. Surface and Ground Water

Area surface geology is Cenozoic Quaternary-Tertiary. The ChevronTexaco Trend Map displays at this location (Section 16, T22S-R32E) that depth to groundwater is approximately 300 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 soils that are sand based topsoil on top of a caliche layer which is interspersed with clay seams providing a low permeability barrier to prohibit further migration of contaminants into the subsurface.

### V. Scope of Work

Based on enclosed analytical results, the depth to groundwater (300'), and TPH & BTEX dropping below RRAL's, EOG Y Resources, Inc. will excavate to six (6) feet BSL within the release area, then backfill the excavated area with six (6) feet of caliche. The excavated material will be placed in a lined, bermed area on the production pad to undergo bioremediation using a 3% MicroBlaze treatment. Soil will be set on the liner in a 6-8" lift, then it will be treated with the recommended rate of 3% MicroBlaze. Soils will be treated with MicroBlaze and turned by machinery every 30 days, at which time a 5 point composite sample will be taken and sent for soil analysis at a NMOCD approved laboratory. Once bioremediation is complete, soil analytical results have returned under RRAL's for a site ranking zero (0), the soils will be used in downsizing the production pad. MicroBlaze treatments will not begin until May 1, 2017 when the ambient temperature meets the needs of the application solution. The TPH & BTEX for the remaining soil are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0), no further analytical testing of TPH and/or BTEX will be conducted (all chloride analytical results are for documentation). When remediation work is completed a C-141 Final Report will be submitted to the NMOCD requesting closure of the site.



Site Ranking is Zero (0). DTGW >100' (approx 300', Section 16, T22S-R32E, Trend Map) All results are ppm (chlorides for documentation).

Released: 2 B/O & 10 B/PW; Recovered: 0 B/O & 8 B/PW Release Date: 6/28/2015

# HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

January 18, 2017

Chase Settle EOG Resources 105 South Fourth Street Artesia, NM 88210 TEL: (575) 748-4111

FAX

RE: Kiwi AKX State #8 SWD

OrderNo.: 1701479

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 6 sample(s) on 1/12/2017 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

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Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

					Lab Order 1701479	
Hall Environmental Analysis	Labora	tory, In	IC.	ER MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE MANAGEMENTE	Date Reported: 1/18/2017	-
CLIENT: EOG Resources			С	lient Sam	ple ID: S1-1'	2
Project: Kiwi AKX State #8 SWD				Collection	n Date: 1/9/2017 9:52:00 AM	
Lab ID: 1701479-001	Matrix:	SOIL		Received	d Date: 1/12/2017 9:35:00 AM	
Analyses	Result	PQL	Qual	Units	DF Date Analyzed Batch	_
EPA METHOD 300.0: ANIONS					Analyst: LGT	
Chloride	320	30		mg/Kg	20 1/17/2017 1:28:55 AM 29694	
EPA METHOD 8015M/D: DIESEL RANGE		5			Analyst: TOM	
Diesel Range Organics (DRO)	5600	96		mg/Kg	10 1/16/2017 1:23:57 PM 29674	
Surr: DNOP	0	70-130	S	%Rec	10 1/16/2017 1:23:57 PM 29674	
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: NSB	
Gasoline Range Organics (GRO)	290	24		mg/Kg	5 1/13/2017 2:50:55 PM 29660	
Sur: BFB	396	68.3-144	S	%Rec	5 1/13/2017 2:50:55 PM 29660	
EPA METHOD 8021B: VOLATILES					Analyst: NSB	
Benzene	ND	0.12		mg/Kg	5 1/13/2017 2:50:55 PM 29660	
Toluene	0.34	0.24		mg/Kg	5 1/13/2017 2:50:55 PM 29660	
Ethylbenzene	ND	0.24		mg/Kg	5 1/13/2017 2:50:55 PM 29660	
Xylenes, Total	2.0	0.48		mg/Kg	5 1/13/2017 2:50:55 PM 29660	
Surr: 4-Bromofluorobenzene	127	80-120	S	%Rec	5 1/13/2017 2:50:55 PM 29660	

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

Refe	i to th	e de Summary report and sample login enceknist	tor mage	geu QC data and preservation mormation.
Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 1 of 10
	ND	Not Detected at the Reporting Limit	Р	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

W Sample container temperature is out of limit as specified

**Analytical Report** Lab Order 1701479

Han Environmental Analysis	Labora	itory, In	IC.	aladati cirindini ficilarisi infancenzi incegnist	Date Reported: 1/18/2017	
CLIENT: EOG ResourcesProject:Kiwi AKX State #8 SWDLab ID:1701479-002	Matrix:	SOIL	C	Collection	ple ID: S1-2' a Date: 1/9/2017 9:54:00 AM l Date: 1/12/2017 9:35:00 AM	5
Analyses	Result	PQL	Qual	Units	DF Date Analyzed Batch	
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANGE	49 E ORGANIC	30 <b>S</b>		mg/Kg	Analyst: <b>LGT</b> 20 1/17/2017 1:41:20 AM 29694 Analyst: <b>TOM</b>	
Diesel Range Organics (DRO) Surr: DNOP	8300 0	100 70-130	S	mg/Kg %Rec	10 1/16/2017 1:45:35 PM 29674 10 1/16/2017 1:45:35 PM 29674	
EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	E 1200 335	99 68.3-144		mg/Kg %Rec	Analyst: <b>NSB</b> 20 1/13/2017 3:14:36 PM 29660 20 1/13/2017 3:14:36 PM 29660	
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total	ND 6.5 3.2 35	0.49 0.99 0.99 2.0		mg/Kg mg/Kg mg/Kg mg/Kg	Analyst: NSB 20 1/13/2017 3:14:36 PM 29660 20 1/13/2017 3:14:36 PM 29660 20 1/13/2017 3:14:36 PM 29660 20 1/13/2017 3:14:36 PM 29660	
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	20 1/13/2017 3:14:36 PM 29660	

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1701479 Date Reported: 1/18/2017

Analytical Report
Lab Order 1701479
Date Reported: 1/18/2017

## Hall Environmental Analysis Laboratory, Inc.

#### **CLIENT: EOG Resources** Client Sample ID: S1-3' Kiwi AKX State #8 SWD **Project:** Collection Date: 1/9/2017 9:55:00 AM Lab ID: 1701479-003 Matrix: SOIL Received Date: 1/12/2017 9:35:00 AM PQL Qual Units Result Analyses **DF** Date Analyzed Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 120 30 mg/Kg 20 1/17/2017 1:53:44 AM 29694 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM 14000 Diesel Range Organics (DRO) 1000 100 1/17/2017 1:38:18 AM 29674 mg/Kg 70-130 100 1/17/2017 1:38:18 AM 29674 Surr: DNOP 0 S %Rec **EPA METHOD 8015D: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) 1/13/2017 3:38:15 PM 2900 240 mg/Kg 50 29660 Surr: BFB 298 68.3-144 S %Rec 50 1/13/2017 3:38:15 PM 29660 **EPA METHOD 8021B: VOLATILES** Analyst: NSB 1/13/2017 3:38:15 PM Benzene 4.3 1.2 mg/Kg 50 29660

Toluene 59 2.4 mg/Kg 50 1/13/2017 3:38:15 PM 29660 Ethylbenzene 40 2.4 mg/Kg 1/13/2017 3:38:15 PM 29660 50 Xylenes, Total 110 50 1/13/2017 3:38:15 PM 4.7 mg/Kg 29660 Surr: 4-Bromofluorobenzene 127 80-120 S %Rec 50 1/13/2017 3:38:15 PM 29660

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 3 of 10
	ND	Not Detected at the Reporting Limit	Р	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	Labora	tory, In	ic.		Lab Order 1701479 Date Reported: 1/18/2017
CLIENT: EOG Resources					nple ID: S1-4'
<b>Project:</b> Kiwi AKX State #8 SWD Lab ID: 1701479-004	Matuina	SOIL			m Date: 1/9/2017 9:58:00 AM
Lab ID: 1701479-004	Matrix:	SOIL		Receive	ed Date: 1/12/2017 9:35:00 AM
Analyses	Result	PQL	Qual	Units	DF Date Analyzed Batch
EPA METHOD 300.0: ANIONS					Analyst: LGT
Chloride	120	30		mg/Kg	20 1/17/2017 2:06:08 AM 29694
EPA METHOD 8015M/D: DIESEL RANGE	ORGANIC	S			Analyst: TOM
Diesel Range Organics (DRO)	4500	100		mg/Kg	10 1/16/2017 2:50:29 PM 29674
Surr: DNOP	0	70-130	S	%Rec	10 1/16/2017 2:50:29 PM 29674
EPA METHOD 8015D: GASOLINE RANG	E				Analyst: NSB
Gasoline Range Organics (GRO)	1100	98		mg/Kg	20 1/13/2017 4:01:51 PM 29660
Surr: BFB	269	68.3-144	S	%Rec	20 1/13/2017 4:01:51 PM 29660
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	1.8	0.49		mg/Kg	20 1/13/2017 4:01:51 PM 29660
Toluene	24	0.98		mg/Kg	20 1/13/2017 4:01:51 PM 29660
Ethylbenzene	18	0.98		mg/Kg	20 1/13/2017 4:01:51 PM 29660
Xylenes, Total	45	2.0		mg/Kg	20 1/13/2017 4:01:51 PM 29660
Surr: 4-Bromofluorobenzene	124	80-120	S	%Rec	20 1/13/2017 4:01:51 PM 29660

**Analytical Report** 

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	Е	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 4 of 10
	ND	Not Detected at the Reporting Limit	Р	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

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CLIENT:	EOG Resources			Client Sa	mple ID: S1	-6'	
<b>Project:</b>	Kiwi AKX State #8 SWD			Collecti	on Date: 1/9	0/2017 10:03:00 AM	
Lab ID:	1701479-005	Matrix:	SOIL	Receiv	red Date: 1/1	2/2017 9:35:00 AM	
Analyses		Result	PQL	Qual Units	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS					Analyst	LGT
Chloride		110	30	mg/Kg	20	1/17/2017 2:18:33 AM	29694
EPA MET	HOD 8015M/D: DIESEL RANG	E ORGANIC	S			Analyst	: том
Diesel R	ange Organics (DRO)	ND	9.9	mg/Kg	1	1/16/2017 3:12:10 PM	29674
Surr: [	DNOP	100	70-130	%Rec	1	1/16/2017 3:12:10 PM	29674
EPA MET	THOD 8015D: GASOLINE RANG	<b>SE</b>				Analyst	: NSB
Gasoline	Range Organics (GRO)	ND	4.7	mg/Kg	1	1/13/2017 6:23:35 PM	29660
Surr: E	BFB	88.8	68.3-144	%Rec	1	1/13/2017 6:23:35 PM	29660
EPA MET	THOD 8021B: VOLATILES					Analyst	: NSB
Benzene	)	ND	0.024	mg/Kg	1	1/13/2017 6:23:35 PM	29660
Toluene		ND	0.047	mg/Kg	1	1/13/2017 6:23:35 PM	29660
Ethylben	izene	ND	0.047	mg/Kg	1	1/13/2017 6:23:35 PM	29660
Xylenes,	Total	ND	0.095	mg/Kg	1	1/13/2017 6:23:35 PM	29660
Surr: 4	4-Bromofluorobenzene	97.4	80-120	%Rec	1	1/13/2017 6:23:35 PM	29660

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

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report Lab Order 1701479 Date Reported: 1/18/2017

Analytical Report
Lab Order 1701479
Date Reported: 1/18/2017

1/13/2017 6:47:19 PM

29660

#### **CLIENT: EOG Resources** Client Sample ID: S1-8' Collection Date: 1/9/2017 10:06:00 AM **Project:** Kiwi AKX State #8 SWD Lab ID: 1701479-006 Received Date: 1/12/2017 9:35:00 AM Matrix: SOIL Result **PQL** Qual Units **DF** Date Analyzed Analyses Batch **EPA METHOD 300.0: ANIONS** Analyst: LGT Chloride 80 30 mg/Kg 20 1/17/2017 2:30:59 AM 29694 EPA METHOD 8015M/D: DIESEL RANGE ORGANICS Analyst: TOM Diesel Range Organics (DRO) ND 9.3 mg/Kg 1/16/2017 3:33:37 PM 29674 Surr: DNOP 99.3 70-130 %Rec 1 1/16/2017 3:33:37 PM 29674 EPA METHOD 8015D: GASOLINE RANGE Analyst: NSB Gasoline Range Organics (GRO) ND 4.7 mg/Kg 1/13/2017 6:47:19 PM 29660 1 Surr: BFB 89.9 68.3-144 %Rec 1/13/2017 6:47:19 PM 29660 1 **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 0.024 mg/Kg 1 1/13/2017 6:47:19 PM 29660 1/13/2017 6:47:19 PM Toluene ND 0.047 mg/Kg 1 29660 Ethylbenzene ND 0.047 mg/Kg 1 1/13/2017 6:47:19 PM 29660 Xylenes, Total ND 0.095 mg/Kg 1 1/13/2017 6:47:19 PM 29660

80-120

%Rec

1

98.0

Hall Environmental Analysis Laboratory, Inc.

Surr: 4-Bromofluorobenzene

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	в	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	Н	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits Page 6 of 10
	ND	Not Detected at the Reporting Limit	Р	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

## Client: EOG Resources Project: Kiwi AKX State #8 SWD

Sample ID MB-29694	SampType: MBLK	TestCode: EPA Method					
Client ID: PBS	Batch ID: 29694						
Prep Date: 1/13/2017	Analysis Date: 1/16/2017	SeqNo: 1255401	Units: mg/Kg				
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit	Qual		
OLL 21	110						
Chloride	ND 1.5						
Sample ID LCS-29694	ND 1.5 SampType: LCS	TestGode: EPA Method	300.0: Anions				
		TestCode: EPA Method RunNo: 40057	300.0: Anions				
Sample ID LCS-29694	SampType: LCS		1 300.0: Anions Units: mg/Kg				
Sample ID LCS-29694 Client ID: LCSS	SampType: LCS Batch ID: 29694 Analysis Date: 1/16/2017	RunNo: 40057		RPDLimit	Qual		

### Qualifiers:

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

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WO#: 1701479

18-Jan-17

Client: EOG Resources Project: Kiwi AKX State #8 SWD

Sample ID MB-29674	SampT	ype: ME	BLK	Tes	estCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID: PBS	Batc	n ID: 29	674	RunNo: 40030						
Prep Date: 1/13/2017	Analysis Date: 1/16/2017			: 1/16/2017 SeqNo: 1254788 Units: mg/Kg			g			
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		105	70	130			
Sample ID LCS-29674	Samp1	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Die	esel Range	organics	
Client ID: LCSS	Batcl	n ID: 29	674	F	RunNo: 4	0030				
Prep Date: 1/13/2017	Analysis D	)ate: 1/	16/2017	S	SeqNo: 1	254824	Units: mg/K	g		
Prep Date: 1/13/2017 Analyte	Analysis E Result	PQL		SPK Ref Val	eqNo: 1: %REC	254824 LowLimit	Units: <b>mg/K</b> HighLimit	g %RPD	RPDLimit	Qual
•	•						-	-	RPDLimit	Qual

Qualifiers:

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

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1701479 *18-Jan-17* 

WO#:

WO#: 1701479

18-Jan-17

	esources XX State #8 S	WD		0		æ				
Sample ID MB-29660	SampTyp	e: MBL	к	Test	Code: El	PA Method	8015D: Gaso	line Rang	e	ningalini ang ng nang nang nang ng n
Client ID: PBS	Batch II	D: 2966	0	R	unNo: 3	9999				
Prep Date: 1/12/2017	Analysis Date	e: 1/13	3/2017	s	eqNo: 1	253665	Units: mg/K	g		
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860	Number of Street Stre	1000		86.4	68.3	144			
Sample ID LCS-29660	SampTyp	e: LCS	in Chinese and	Test	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID: LCSS	Batch II	D: 2966	60	R	tunNo: 3	9999				
Prep Date: 1/12/2017	Analysis Dat	ie: 1/13	3/2017	S	eqNo: 1	253666	Units: mg/K	g		
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	108	74.6	123			
Surr: BFB	950		1000		94.7	68.3	144			

### **Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Page 9 of 10

Sample pH Not In Range RL **Reporting Detection Limit** 

Р

W Sample container temperature is out of limit as specified

**Client: EOG** Resources **Project:** Kiwi AKX State #8 SWD

Sample ID MB-29660	SampT	ype: ME	BLK	Test	tCode: E	PA Method	8021B: Volat	tiles			
Client ID: PBS	Batch	ID: 296	660	R	lunNo: 3	9999					
Prep Date: 1/12/2017	Analysis D	ate: 1/	13/2017	S	eqNo: 1	253686	Units: mg/K	g			24
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	0.95		1.000		94.9	80	120				
Sample ID LCS-29660	SampT	ype: LC	S	Tes	tCode: E	PA Method	8021B: Volat	tiles			
Client ID: LCSS	Batch	ID: 29	660	F	RunNo: 3	9999					
Prep Date: 1/12/2017	Analysis D	ate: 1/	13/2017	S	SeqNo: 1	253687	Units: mg/K	(g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	0.95	0.025	1.000	0	95.3	75.2	115				
Toluene	0.97	0.050	1.000	0	96.7	80.7	112				
Ethylbenzene	0.98	0.050	1.000	0	97.7	78.9	117				
Xylenes, Total	2.9	0.10	3.000	0	97.9	79.2	115				
reproduce, rotal	L.0	0.10	0.000	•	01.0	10.2					

Qualifiers:

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

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18-Jan-17

WO#: 1701479

ENVIRONMENTAL ANALYSIS	Albu EL: 505-345-3975	Analysis Laborator 4901 Hawkins N querquė, NM 8710. FAX: 505-345-410 lenvironmental.com	Samp	ble Log-In Check	List
Client Name: EOG/Yates Work	k Order Number:	1701479	u de Gelief in de provinsie feren	ReptNo: 1	akumalikonsi uncasungéng
Received by/date: REE (117	2/17			and an an an and a statement of the	
	017 9:35:00 AM		angina		
Completed By: Andy Jansson (12					
Reviewed By:	1/12/17				
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 🗆		
5. Were all samples received at a temperature of >0°	C to 6.0°C	Yes 🗹	No 🗌		
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 prese	erved?	Yes 🗹	No 🗌		
9. Was preservative added to bottles?		Yes 🗌	No 🗹	NA 🗌	
10. VOA vials have zero headspace?		Yes 🗌	No 🗆	No VOA Vials 🗹	
11. Were any sample containers received broken?		Yes	No 🗹 🛛		
				# of preserved bottles checked	
12. Does paperwork match bottle labels?		Yes 🗹	No 🗆	for pH:	loss netod)
(Note discrepancies on chain of custody) 13. Are matrices correctly identified on Chain of Custod	v2	Yes 🗹	No 🗆	(<2 or >12 un Adjusted?	liess noted)
14. Is it clear what analyses were requested?	.y.	Yes 🗹			
15. Were all holding times able to be met?		Yes 🗹	No 🗌	Checked by:	
(If no, notify customer for authorization.) Special Handling (if applicable)		_			
16. Was client notified of all discrepancies with this order	er?	Yes 🗌	No 🗌	NA 🗹	
Person Notified: By Whom:	Date Via:	eMail Ph	one 🗌 Fax	🗌 In Person	
Regarding:	nunun anter				
Client Instructions:					
17. Additional remarks:					
18. <u>Cooler Information</u> Cooler No Temp °C Condition Seal Inter 1 3.3 Good Yes	ct Seal No	Seal Date S	Signed By		
Page 1 of 1				na na na na katalan da penda katalan da kata	

ENVIRONMENTAL	ANALYSIS LABORATORY		7109	7.					(N	OL [	7)	səlddu8 ifA										 -		
ZO	BO	com	Albuquerque, NM 87109	505-345-4107	st					(\(		(OV) 80828 ime2) 0728									 	 		
IR		www.hallenvironmental.com	erque,	505-34	Analysis Request		cB's	SB	1908	} / S		oile99 1808									 	 	Results needed by 1/19/2017.	
NN	SIS	vironn	puque	Fax	lysis I	(†0	S'*C	<sup>5</sup> ,P(	ON	<sup>'E</sup> O	NØ	) snoinA	×	×	×	×	×	×			 	 	y 1/19	
	Š	allen			Anal					-	-	RCRA 8 Mé									 	 	ed by	
TAL	MN	h.ww	s NE	-397								EDB (Metho ANG) 0158									 	 	need	
	K	3	awkin	5-345			National State					PPH (Metho									 	 -	sults	
	П		4901 Hawkins NE	Tel. 505-345-3975		(ləs	əiQ\;	SBE	) g	910	)8 P	PPH Metho	×	×	×	×	×	×			 	 -	1.	
			49(	Te							-	BTEX + MT											Remarks:	
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	D Rush	*	Kiwi AKX State #8 SWD		30-025-31889	iger:	Chase Settle	PO # 205. 0750	Chase Settle	函 Yes	perature: 3.5	Preservative Type	ICE	ICE	ICE	ICE	ICE	ICE	· .				1	
	X Standard	Project Name:	x	Project #:		Project Mana			Sampler:		Sample Tem	Container Type and #	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 402.					Received by:	Received by:
dy Record				Artesia NM 88210		@eogresources.com		Level 4 (Full Validation)				Sample Request ID	S1-1'	S1-2'	S1-3'	S1-4'	S1-6'	S1-8'		72		-		
-ot-Cu	EOG Y Resources, Inc.					Chase S				D Other		Matrix	Soil	Soil	Soil	Soil	Soil	Soil					Relinquished by:	Relinquished by:
hain	EOG Y		falling Address:	05 South 4th Street		Fax#:	A/QC Package:	lard	ation:	ď	(Type)	Time	1/8/2017 9:52A	1/8/2017 9:54A	118/2017 9:55A	1/4/2017 9:58A	10:03A	10:06A					Time: 9.30/hn	Time:
C	lient		falling /	05 200	"hone #	mail or Fax#:	NAC P	<b>J</b> Standard	ccreditation:	J NELAP	1 EDD (Type)	Date	1/9/2017	1/02/6/1	1/8/2017	1/0/2017	1/8/2017	1/9/2017					late: 1	