

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

May 5, 2017

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

Re: Tenneco SWD System (Vince BGH #1) Section 30, T09S-R35E Lea County, New Mexico 33.50109, -103.40025 1RP-4530

**APPROVED** By Olivia Yu at 3:51 pm, May 18, 2017

> NMOCD approves the delineation workplan and proposed remedial activities for 1RP-4530 with one condition: submit soil bore logs.

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 December 8, 2016.

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 May 19, 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.

## Tenneco SWD System (Vince BGH #1) Work Plan

Section 30, T09S-R35E

Lea County, New Mexico ICCES

May 5, 2017

1RP- 4530

energy opportunity growth

#### I. Location

From Crossroads, NM, take Carrol Rd (T-170) west for approximately 3.5 miles, then turn south on lease road, follow lease road for 0.7 mile, and then follow the pipeline ROW southwest for 1200 feet to the release area.

#### II. Background

On December 8, 2016, EOG Y Resources, Inc. submitted to the NMOCD District I office a Form C-141 for the release of 440 B/PW with none recovered. The affected area is approximately 215 feet by 30 feet around a pipeline Right of Way. Failure of a poly transfer line caused the release. Initial delineation samples were taken (12/14/2016) and sent to a NMOCD approved laboratory (12/27/2016, 12/28/2016, & 12/29/2016, results enclosed). Further sampling was conducted, at which time an impermeable/impenetrable rock plate was encountered at a depth between 14 to 17 feet BSL, (1/4/2017 & 1/10/2017) with samples sent to a NMOCD approved laboratory (1/20/2017, results enclosed). On the instruction of NMOCD, further sampling was conducted (3/17/2017, NMOCD was provided 48 hours' notice prior to sampling as an invitation to witness and provide guidance for sampling activities) and sent to a NMOCD approved laboratory (3/21/2017).

#### III. Surface and Ground Water

Area surface geology is Paleozoic Permian. The New Mexico Office of the State Engineer displays one well within 10,000 meters to have recorded depth of water. That depth is 137 feet. That well is approximately 2.9 miles east of the release area at an elevation of 4126 feet, while the release is at an elevation of 4169 feet. Therefore, depth to groundwater at this location (Section 30, T09S-R35E) is approximately 180 feet, making the site ranking 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 loam based topsoil on top of a caliche layer which overlies a rock plate, providing a naturally occurring, restrictive barrier that along with a thick clay layer at 35' to 40' below surface level (BSL) prevent migration of contaminants through the vadose zone.

#### V. Scope of Work

Based on enclosed analytical results, the depth to groundwater (180'), and a decrease in chlorides, EOG Y Resources, Inc. will excavate four (4) feet of impacted soil from the release area, hauling all excavated soil to a NMOCD approved facility for disposal. EOG Y Resources. Inc. will then install a 20 ml synthetic liner in the bottom of the excavation, with six (6) inches of topsoil cushion above and below the liner, to prohibit percolation of moisture into the impacted subsurface, restricting any further chloride migration. The 20 ml synthetic liner will be laid under any pipelines within the release area for future release protection and liner integrity purposes. EOG Y Resources, Inc. will then backfill the excavated area with two (2) feet of caliche, followed by two (2) feet of topsoil to allow for vegetative repopulation of the release site. Following backfill activities, the site will be reseeded in accordance with the private surface owner's requests. The TPH & BTEX are within the RRAL's for BTEX (50 ppm) and TPH (5000 ppm) for the Total Ranking Score of zero (0) in the release area and chloride impaction boundaries have been determined horizontally and vertically, no further analytical testing of TPH, BTEX, and/or chlorides will be conducted. When remediation work is completed a C-141 Final Report will be submitted to the NMOCD requesting closure of the site.

Page 1 of 1

													ate Engine n <b>formati</b>				
(A CLW##### In the POD suffix Indicates the POD has been replaced & no longer serves a water right	(R=POD been rep O=orphs C=the fil closed)	olaced, ined,	(quan	ers are 1= (quarters					NAD83	UTM in meters				(in fe	et)		
POD Number L 14254 POD 1	10000000	POD Subbasin L	County LE	Source Shallow	q q q 6416	l Sec	Tws R	ing	X 3241	¥ 3708776 🙆		Start Date 04/04/2017	Log File Finish Date Date 04/04/2017 04/13/2017	Depth Well 240	Water	Driller GLENN, TRAVIS	License Number 1719
L 12426 POD1		L	LE	Shallow	14	1 19	095 3	6E 65	7911	3710545	9651	08/04/2009	08/05/2009 08/20/2009	156		GILLIAM, DUB ALLEN	1145
Record Count: 2																	
UTMNAD83 Rad	lius Sear	ch (in met	lers):														
Easting (X):	648606.4	1		Northing	(Y):	3707	981.26			Radius: 10	000						

The data is furnished by the NMOSE/ISC and is accept or suitability for any particular purpose of the data. 4/25/17 10:32 AM

WELLS WITH WELL LOG INFORMATION



#### Tenneco SWD System (Vince BGH #1)

		Т	enneco SWD S	ystem (Vince	BGH #1)				
Area	Analysis	Sample Area		Sample Type	Depth	BTEX	GRO	DRO	Chlorides
E1-4'	1612928	Release Area	12/14/2016	Backhoe	4'	ND	ND	ND	490
E1-6'	1612928	Release Area	12/14/2016	Backhoe	6'	ND	ND	ND	4800
		<ul> <li>A second sec second second sec</li></ul>			8'	ND	ND	ND	3300
E1-8'	1612928	Release Area	12/14/2016	Backhoe				ND	4600
E1-9.5'	1612928	Release Area	12/14/2016	Backhoe	9.5'	ND	ND		
E2-4'	1612928	Release Area	12/14/2016	Backhoe	4'	ND	ND	ND	2400
E2-6'	1612928	Release Area	12/14/2016	Backhoe	6'	ND	ND	ND	4900
E2-8'	1612928	Release Area	12/14/2016	Backhoe	8'	ND	ND	ND	3300
E2-9.5'	1612928	Release Area	12/14/2016	Backhoe	9.5'	ND	ND	ND	3600
E3-4'	1612928	Release Area	12/14/2016	Backhoe	4'	ND	ND	ND	2000
A CONTRACT OF A	1612928	A PACIFIC PARTY AND A PACIFIC	12/14/2016	Backhoe	6'	ND	ND	ND	3000
E3-6'		Release Area		and the second second second second	8'	ND	ND	ND	4600
E3-8'	1612928	Release Area	12/14/2016	Backhoe					in statistic state
E3-10'	1612928	Release Area	12/14/2016	Backhoe	10'	ND	ND	ND	4100
E3-12'	1612928	Release Area	12/14/2016	Backhoe	12'	ND	ND	ND	3700
E3-14.5'	1701495	Release Area	12/14/2016	Trackhoe	14.5'				3100
E3-16.5'	1701495	Release Area	12/14/2016	Trackhoe	16.5'			Sec. 1	3700
E4-1'	1612928	Release Area	12/14/2016	Backhoe	1'	ND	ND	ND	ND
E4-2'	1612928	Release Area	12/14/2016	Backhoe	2'	ND	ND	ND	ND
E4-2 E4-3'	1612928	Release Area	12/14/2016	Backhoe	3'	ND	ND	ND	ND
		C CONTRACTOR OF CONTRACTOR		100 million 100	4'	ND	ND	ND	ND
E4-4'	1612928	Release Area	12/14/2016	Backhoe				ND	ND
E4-5.25'	1612928	Release Area	12/14/2016	Backhoe	5.25'	ND	ND	ND	
T1-10.5'	1701495	Release Area	1/4/2017	Trackhoe	10.5'				4200
T1-12.5'	1701495	Release Area	1/4/2017	Trackhoe	12.5'				2800
T1-14.5'	1701495	Release Area	1/4/2017	Trackhoe	14.5'				2700
T1-15.5'	1701495	Release Area	1/4/2017	Trackhoe	15.5'				3400
12-10.5	1701495	Release Area	1/10/2017	Trackhoe	10.5'				4300
	1701495	Contraction of the second s	1/10/2017	Trackhoe	12.5'				5400
T2-12.5		Release Area		Trackhoe	14.5'		1	-	3800
12-14.5	1701495	Release Area	1/10/2017					-	4300
T2-10.5	1701495	Release Area	1/10/2017	Trackhoe	10.5'				
12-12.5	1701495	Release Area	1/10/2017	Trackhoe	12.5'				5400
12-14.5	1701495	Release Area	1/10/2017	Trackhoe	14.5'				3800
C1-20'	H700714	Release Area	3/17/2017	Core Rig	20'				944
C1-25'	H700714	Release Area	3/17/2017	Core Rig	25'				240
C1-30'	H700714	Release Area	3/17/2017	Core Rig	30'				128
C1-35'	H700714	Release Area	3/17/2017	Core Rig	35'			1	112
	H700710	the second se	3/17/2017	Core Rig	20'				2240
C2-20'		Release Area			25'				2080
C2-25'	H700710	Release Area	3/17/2017	Core Rig					1500
C2-30'	H700710	Release Area	3/17/2017	Core Rig	30'				
C2-35'	H700710	Release Area	3/17/2017	Core Rig	35'			1.00	1540
C2-40'	H700710	Release Area	3/17/2017	Core Rig	40'	the second s		1	1400
C2-45'	H700710	Release Area	3/17/2017	Core Rig	45'			TOT OF A	48
C2-50'	H700710	Release Area	3/17/2017	Core Rig	50'				32
C2-55'	H700710	Release Area	3/17/2017	Core Rig	55'			Service of	48
C3-20'	H700709	Release Area	3/17/2017	Core Rig	20'				1560
			3/17/2017	Core Rig	25'				400
C3-25'	H700709	Release Area			30'				208
C3-30'	H700709	Release Area	3/17/2017	Core Rig					1380
C3-35'	H700709	Release Area	3/17/2017	Core Rig	35'				The second second second
C3-40'	H700709	Release Area	3/17/2017	Core Rig	40'	1.44		and the second	48
C3-45'	H700709	Release Area	3/17/2017	Core Rig	45'				48
C3-50'	H700709	Release Area	3/17/2017	Core Rig	50'	the second second	a la come de	- and	80
EB1-1'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
EB1-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
EB2-1	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
	1612936	Edge	12/14/2016	Backhoe	1	ND	ND	ND	ND
EB2-5'				Backhoe	1	ND	ND	ND	3900
EB3-5'	1612936	Edge	12/14/2016			and the second se		ND	4200
EB3-10'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	
EB3-F	1701495	Edge	1/4/2017	Hand Auger	1'	10112		1	370
EB3-F+3'	1701495	Edge	1/4/2017	Hand Auger	1'	1000		1000	ND
EB3-F+6'	1701495	Edge	1/4/2017	Hand Auger	1'				120
EB3-F+9'	1701495	Edge	1/4/2017	Hand Auger	1'			The Street	ND
EB3-F+12	1701495	Edge	1/4/2017	Hand Auger	1'	the second		1000	ND
EB4-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	4300
CD4-0	1012330	rafe	12/21/2010		- 70	ALC: NO.	N. Witzker		

EB4-10'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	3900
EB4-F	1701495	Edge	1/4/2017	Hand Auger	1'			C-CON	ND
EB4-F+3'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+6'	1701495	Edge	1/4/2017	Hand Auger	1'			<b>E</b> INIT	ND
EB4-F+9'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+12"	1701495	Edge	1/4/2017	Hand Auger	1'			A sugar la	ND
EB5-1'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
EB5-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
EB5-10'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
WB1-1'	1612933	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	2000
WB1-2'	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB1-F	1701495	Edge	1/4/2017	Backhoe	1'			122	ND
WB1-F+1'	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB2-1'	1612933	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	5100
WB2-2'	1701495	Edge	1/4/2017	Backhoe	1'			SUPPL	ND
WB2-F	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB2-F+1'	1701495	Edge	1/4/2017	Backhoe	1'				30
WB3-1'	1612933	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	3500
WB3-2'	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB3-F	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB3-F+1'	1701495	Edge	1/4/2017	Backhoe	1'	and the second	1 - 50 1940-5	1 Support	ND
WB4-1'	1612933	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	2200
WB4-2'	1701495	Edge	1/4/2017	Backhoe	1'				ND
WB4-F	1701495	Edge	1/4/2017	Backhoe	1'			-	ND
WB4-F+1	1701495	Edge	1/4/2017	Backhoe	1'				ND
SB-F	1701495	Edge	1/4/2017	Backhoe	1'		-		ND

Site Ranking is Zero (0). >100' (180', Section 30, T09S-R35E, NMOSE All results are ppm. Chlorides for documentation Released: 440 B/PW; Recovered: 0 B/PW Release Date: 11/30/2016



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

December 27, 2016

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

RE: Tenneco SWD System

OrderNo.: 1612928

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 18 sample(s) on 12/16/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources			<b>Client Sampl</b>	e ID: E1	-4'				
Project: Tenneco SWD System	<b>Collection Date:</b> 12/14/2016 9:57:00 AM								
Lab ID: 1612928-001	Matrix:	Received	Date: 12/	/16/2016 9:05:00 AN	Л				
Analyses	Result	PQL Qı	al Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analy	/st: LGT			
Chloride	490	30	mg/Kg	20	12/20/2016 12:06:06	PM 29304			
EPA METHOD 8015M/D: DIESEL RAM	IGE ORGANIC	S			Analy	/st: TOM			
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/22/2016 1:40:45 F	PM 29270			
Surr: DNOP	108	70-130	%Rec	1	12/22/2016 1:40:45 F	PM 29270			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	/st: NSB			
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 10:01:14	AM 29264			
Surr: BFB	90.0	68.3-144	%Rec	1	12/21/2016 10:01:14	AM 29264			
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB			
Benzene	ND	0.024	mg/Kg	1	12/21/2016 10:01:14	AM 29264			
Toluene	ND	0.047	mg/Kg	1	12/21/2016 10:01:14	AM 29264			
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2016 10:01:14	AM 29264			
Xylenes, Total	ND	0.094	mg/Kg	1	12/21/2016 10:01:14				
Surr: 4-Bromofluorobenzene	97.4	80-120	%Rec	1	12/21/2016 10:01:14	AM 29264			

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

Oualifiers:	*	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 1 of 22
	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 Laboratory, Inc.

CLIENT: EOG Resources Project: Tenneco SWD System		Client Sample ID: E1-6' Collection Date: 12/14/2016 10:02:00 AM								
Lab ID: 1612928-002	Matrix:	SOIL	Received I	Date: 12/1	16/2016 9:05:00 AN	[				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch				
EPA METHOD 300.0: ANIONS					Analy	st: MRA				
Chloride	4800	150	mg/Kg	100	12/21/2016 3:06:12 P	M 29304				
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	5			Analy	st: TOM				
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/22/2016 2:50:20 P	M 29270				
Surr: DNOP	114	70-130	%Rec	1	12/22/2016 2:50:20 P	M 29270				
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB				
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/21/2016 10:24:43	AM 29264				
Surr: BFB	87.9	68.3-144	%Rec	1	12/21/2016 10:24:43	AM 29264				
EPA METHOD 8021B: VOLATILES					Analy	st: NSB				
Benzene	ND	0.025	mg/Kg	1	12/21/2016 10:24:43	AM 29264				
Toluene	ND	0.049	mg/Kg	1	12/21/2016 10:24:43	AM 29264				
Ethylbenzene	ND	0.049	mg/Kg	1	12/21/2016 10:24:43					
Xylenes, Total	ND	0.099	mg/Kg	1	12/21/2016 10:24:43					
Surr: 4-Bromofluorobenzene	95.9	80-120	%Rec	1	12/21/2016 10:24:43	AM 29264				

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

Value exceeds Maximum Contaminant Level. В

D Sample Diluted Due to Matrix

Qualifiers:

\*

- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Value above quantitation range Е
- Analyte detected below quantitation limits Page 2 of 22 J
- Р Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources Project: Tenneco SWD System		Client Sample ID: E1-8' Collection Date: 12/14/2016 10:10:00 AM							
Lab ID: 1612928-003	Matrix:	Received l	Date: 12/	16/2016 9:05:00 AM	[				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analys	st: MRA			
Chloride	3300	150	mg/Kg	100	12/21/2016 3:18:36 P	M 29304			
EPA METHOD 8015M/D: DIESEL RAM	GE ORGANICS	6			Analys	st: TOM			
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/22/2016 3:13:37 P	M 29270			
Surr: DNOP	108	70-130	%Rec	1	12/22/2016 3:13:37 P	M 29270			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/21/2016 10:48:14	AM 29264			
Surr: BFB	89.8	68.3-144	%Rec	1	12/21/2016 10:48:14	AM 29264			
EPA METHOD 8021B: VOLATILES					Analy	st: NSB			
Benzene	ND	0.025	mg/Kg	1	12/21/2016 10:48:14	AM 29264			
Toluene	ND	0.049	mg/Kg	1	12/21/2016 10:48:14	AM 29264			
Ethylbenzene	ND	0.049	mg/Kg	1	12/21/2016 10:48:14				
Xylenes, Total	ND	0.098	mg/Kg	1	12/21/2016 10:48:14				
Surr: 4-Bromofluorobenzene	96.9	80-120	%Rec	1	12/21/2016 10:48:14	AM 29264			

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-004	Client Sample ID: E1-9.5'           Collection Date: 12/14/2016 10:20:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS	4000	450	malka	100	Analy: 12/21/2016 3:31:01 P	st: <b>MRA</b> M 29304		
Chloride EPA METHOD 8015M/D: DIESEL RAN	4600 GE ORGANICS	150 S	mg/Kg	100		st: TOM		
Diesel Range Organics (DRO)	ND	9.3	mg/Kg	1	12/22/2016 4:02:09 P	M 29270		
Surr: DNOP	93.8	70-130	%Rec	1	12/22/2016 4:02:09 P	M 29270		
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 11:11:54	AM 29264		
Surr: BFB	90.6	68.3-144	%Rec	1	12/21/2016 11:11:54	AM 29264		
EPA METHOD 8021B: VOLATILES					Analy	st: NSB		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 11:11:54	AM 29264		
Toluene	ND	0.048	mg/Kg	1	12/21/2016 11:11:54			
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 11:11:54			
Xylenes, Total	ND	0.096	mg/Kg	1	12/21/2016 11:11:54			
Surr: 4-Bromofluorobenzene	98.5	80-120	%Rec	1	12/21/2016 11:11:54	AM 29264		

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

в

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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-005	Client Sample ID: E2-4'         Collection Date: 12/14/2016 10:25:00 AM         Matrix: SOIL       Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS						st: MRA		
Chloride	2400	75	mg/Kg	50	12/21/2016 3:43:26 P	M 29317		
EPA METHOD 8015M/D: DIESEL RANG	GE ORGANICS	6			Analy	st: TOM		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/22/2016 4:25:24 P	M 29270		
Surr: DNOP	93.6	70-130	%Rec	1	12/22/2016 4:25:24 P	M 29270		
EPA METHOD 8015D: GASOLINE RAM	IGE				Analy	st: NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 11:35:26	AM 29264		
Surr: BFB	90.2	68.3-144	%Rec	1	12/21/2016 11:35:26	AM 29264		
EPA METHOD 8021B: VOLATILES					Analy	st: NSB		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 11:35:26	AM 29264		
Toluene	ND	0.048	mg/Kg	1	12/21/2016 11:35:26			
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 11:35:26			
Xylenes, Total	ND	0.097	mg/Kg	1	12/21/2016 11:35:26			
Surr: 4-Bromofluorobenzene	97.5	80-120	%Rec	1	12/21/2016 11:35:26	AM 29264		

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 5 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System		Client Sample ID: E2-6' Collection Date: 12/14/2016 10:30:00 AM							
Lab ID: 1612928-006	Matrix:	SOIL	Received I	Date: 12/1	16/2016 9:05:00 AN	1			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analy	st: MRA			
Chloride	4900	300	mg/Kg	200	12/21/2016 3:55:50 P	M 29317			
EPA METHOD 8015M/D: DIESEL RAN	IGE ORGANICS	6			Analy	st: TOM			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/22/2016 4:48:44 F	M 29270			
Surr: DNOP	96.2	70-130	%Rec	1	12/22/2016 4:48:44 F	°M 29270			
EPA METHOD 8015D: GASOLINE RA	NGE				Analy	st: NSB			
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 11:59:02	AM 29264			
Surr: BFB	91.5	68.3-144	%Rec	1	12/21/2016 11:59:02	AM 29264			
EPA METHOD 8021B: VOLATILES					Analy	st: NSB			
Benzene	ND	0.024	mg/Kg	1	12/21/2016 11:59:02	AM 29264			
Toluene	ND	0.048	mg/Kg	1	12/21/2016 11:59:02	AM 29264			
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 11:59:02				
Xylenes, Total	ND	0.096	mg/Kg	1	12/21/2016 11:59:02				
Surr: 4-Bromofluorobenzene	99.0	80-120	%Rec	1	12/21/2016 11:59:02	AM 29264			

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 6 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-007	Client Sample ID: E2-8'           Collection Date: 12/14/2016 10:40:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst:	MRA		
Chloride	3300	150	mg/Kg	100	12/21/2016 4:33:04 PM	29317		
EPA METHOD 8015M/D: DIESEL RANG	E ORGANIC	S			Analyst:	том		
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/22/2016 5:11:56 PM	29270		
Surr: DNOP	97.4	70-130	%Rec	- 1	12/22/2016 5:11:56 PM	29270		
EPA METHOD 8015D: GASOLINE RANG	GE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 7:25:26 PM	29264		
Surr: BFB	92.3	68.3-144	%Rec	1	12/21/2016 7:25:26 PM	29264		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 7:25:26 PM	29264		
Toluene	ND	0.047	mg/Kg	1	12/21/2016 7:25:26 PM	29264		
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2016 7:25:26 PM			
Xylenes, Total	ND	0.095	mg/Kg	1	12/21/2016 7:25:26 PM			
Surr: 4-Bromofluorobenzene	100	80-120	%Rec	1	12/21/2016 7:25:26 PM	29264		

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 7 of 22
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report
Lab Order 1612928

Date Reported: 12/27/2016

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612928-008	Client Sample ID: E2-9.5'           Collection Date: 12/14/2016 10:48:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch				
EPA METHOD 300.0: ANIONS Chloride	3600	150	mg/Kg	Analyst: <b>MRA</b> 100 12/21/2016 4:45:28 PM 29317				
EPA METHOD 8015M/D: DIESEL RAN Diesel Range Organics (DRO) Surr: DNOP	GE ORGANICS ND 86.6	9.6 70-130	mg/Kg %Rec	Analyst: <b>TOM</b> 1 12/22/2016 5:35:16 PM 29270 1 12/22/2016 5:35:16 PM 29270				
Gasoline Range Organics (GRO)	NGE ND 91.6	4.8 68.3-144	mg/Kg %Rec	Analyst: <b>NSB</b> 1 12/21/2016 7:48:56 PM 29264 1 12/21/2016 7:48:56 PM 29264				
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 102	0.024 0.048 0.048 0.096 80-120	mg/Kg mg/Kg mg/Kg mg/Kg %Rec	Analyst:NSB112/21/2016 7:48:56 PM29264112/21/2016 7:48:56 PM29264112/21/2016 7:48:56 PM29264112/21/2016 7:48:56 PM29264112/21/2016 7:48:56 PM29264				

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 22
- 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.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612928-009	Matrix:	SOIL	Client Sample ID: E3-4' Collection Date: 12/14/2016 10:59:00 AM Received Date: 12/16/2016 9:05:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS	2000	75	mg/Kg	50	Analyst: 12/21/2016 4:57:53 PM		
EPA METHOD 8015M/D: DIESEL RANG		6			Analyst:		
Diesel Range Organics (DRO) Surr: DNOP	ND 90.9	9.2 70-130	mg/Kg %Rec	1 1	12/22/2016 5:58:22 PM 12/22/2016 5:58:22 PM		
EPA METHOD 8015D: GASOLINE RAN	GE				Analyst	NSB	
Gasoline Range Organics (GRO) Surr: BFB	ND 90.4	4.8 68.3-144	mg/Kg %Rec	1 1	12/21/2016 8:12:24 PM 12/21/2016 8:12:24 PM		
EPA METHOD 8021B: VOLATILES					Analyst		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 8:12:24 PM		
Toluene	ND	0.048	mg/Kg	1	12/21/2016 8:12:24 PM 12/21/2016 8:12:24 PM		
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 8:12:24 PM		
Xylenes, Total Surr: 4-Bromofluorobenzene	ND 99.3	0.095 80-120	mg/Kg %Rec	1	12/21/2016 8:12:24 PM		

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-010	Matrix:	SOIL	Collection <b>E</b>	Client Sample ID: E3-6' Collection Date: 12/14/2016 11:03:00 AM Received Date: 12/16/2016 9:05:00 AM				
Analyses	Result	PQL Qu	al Units	DF Date Analyzed Bate				
EPA METHOD 300.0: ANIONS Chloride	3000	150	mg/Kg	Analyst: <b>MR</b> / 100 12/21/2016 5:10:17 PM 293				
EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO)	GE ORGANICS ND	<b>3</b> 10	mg/Kg	Analyst: <b>TOI</b> 1 12/22/2016 6:21:37 PM 292'				
Surr: DNOP EPA METHOD 8015D: GASOLINE RAM	90.4 IGE	70-130	%Rec	1 12/22/2016 6:21:37 PM 292 Analyst: <b>NSI</b>				
Gasoline Range Organics (GRO) Surr: BFB	ND 89.8	4.8 68.3-144	mg/Kg %Rec	1 12/21/2016 8:35:43 PM 292 1 12/21/2016 8:35:43 PM 292				
EPA METHOD 8021B: VOLATILES Benzene	ND	0.024	mg/Kg	Analyst: NSI 1 12/21/2016 8:35:43 PM 292 1 12/21/2016 8:35:43 PM 292				
Toluene Ethylbenzene	ND ND	0.048 0.048 0.096	mg/Kg mg/Kg mg/Kg	1 12/21/2016 8:35:43 PM 292 1 12/21/2016 8:35:43 PM 292 1 12/21/2016 8:35:43 PM 292				
Xylenes, Total Surr: 4-Bromofluorobenzene	ND 96.8	0.096 80-120	%Rec	1 12/21/2016 8:35:43 PM 292				

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-011 Analyses		Matrix: S	Client Sample ID: E3-8'           Collection Date: 12/14/2016 11:09:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM								
		Result	PQL Q	1al Units	DF	Date Analyzed	Batch				
	HOD 300.0: ANIONS	4600	150	mg/Kg	100	Analyst: 12/21/2016 5:22:41 PM					
	HOD 8015M/D: DIESEL RAN	IGE ORGANICS	;			Analyst:					
Diesel Ra Surr: [	ange Organics (DRO) DNOP	ND 91.3	9.4 70-130	mg/Kg %Rec	1 1	12/22/2016 6:44:49 PM 12/22/2016 6:44:49 PM					
FPA MET	HOD 8015D: GASOLINE RA	NGE				Analyst	NSB				
	Range Organics (GRO)	ND 87.9	5.0 68.3-144	mg/Kg %Rec	1 1	12/21/2016 8:59:11 PM 12/21/2016 8:59:11 PM					
EPA MET	HOD 8021B: VOLATILES					Analyst	: NSB				
Benzene		ND	0.025	mg/Kg	1	12/21/2016 8:59:11 PM					
Toluene		ND	0.050	mg/Kg	1	12/21/2016 8:59:11 PM					
Ethylben	izene	ND	0.050	mg/Kg	1	12/21/2016 8:59:11 PM					
Xylenes, Surr: 4	Total 4-Bromofluorobenzene	ND 95.6	0.10 80-120	mg/Kg %Rec	1 1	12/21/2016 8:59:11 PM 12/21/2016 8:59:11 PM					

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

В

- \* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limit Page 11 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-012	Client Sample ID: E3-10'           Collection Date: 12/14/2016 11:14:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM						
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch			
EPA METHOD 300.0: ANIONS Chloride	4100	300	mg/Kg	Analyst: <b>MRA</b> 200 12/21/2016 5:35:06 PM 29317			
EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Surr: DNOP	GE ORGANICS ND 81.0	<b>9</b> .9 70-130	mg/Kg %Rec	Analyst: <b>TOM</b> 1 12/22/2016 7:07:57 PM 29270 1 12/22/2016 7:07:57 PM 29270			
EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	I <b>GE</b> ND 89.0	5.0 68.3-144	mg/Kg %Rec	Analyst: <b>NSB</b> 1 12/21/2016 9:22:44 PM 29264 1 12/21/2016 9:22:44 PM 29264			
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 96,7	0.025 0.050 0.050 0.10 80-120	mg/Kg mg/Kg mg/Kg mg/Kg %Rec	Analyst:         NSB           1         12/21/2016 9:22:44 PM         29264           1         12/21/2016 9:22:44 PM         29264			

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 12 of 22
- 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.

CLIENT:EOG ResourcesProject:Tenneco SWD SystemLab ID:1612928-013	Matrix:	SOIL	Collection I	lient Sample ID: E3-12' Collection Date: 12/14/2016 11:20:00 AM Received Date: 12/16/2016 9:05:00 AM				
Analyses	Result	PQL Qu	al Units	DF ]	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst			
Chloride	3700	300	mg/Kg	200	12/21/2016 5:47:30 PM	29317		
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANICS	3			Analyst:	том		
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/22/2016 7:30:56 PM	29270		
Surr: DNOP	89.1	70-130	%Rec	1	12/22/2016 7:30:56 PM	29270		
EPA METHOD 8015D: GASOLINE RAN	IGE				Analyst	NSB		
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 9:46:15 PM	29264		
Surr: BFB	90.0	68.3-144	%Rec	1	12/21/2016 9:46:15 PM	29264		
EPA METHOD 8021B: VOLATILES					Analyst	NSB		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 9:46:15 PM	29264		
Toluene	ND	0.048	mg/Kg	1	12/21/2016 9:46:15 PM	29264		
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 9:46:15 PM	29264		
Xylenes, Total	ND	0.096	mg/Kg	1	12/21/2016 9:46:15 PM	29264		
Surr: 4-Bromofluorobenzene	97.7	80-120	%Rec	1	12/21/2016 9:46:15 PM	29264		

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

в

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits page 13 of 22
- 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.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612928-014	Matrix:		Collection I	lient Sample ID: E4-1' Collection Date: 12/14/2016 11:24:00 AM Received Date: 12/16/2016 9:05:00 AM				
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	12/21/2016 12:42:48	/st: <b>MRA</b> AM 29317 /st: <b>TOM</b>		
EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Surr: DNOP	ND 103	<b>5</b> 10 70-130	mg/Kg %Rec	1 1	12/22/2016 7:54:11 I 12/22/2016 7:54:11 I	PM 29270		
EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	GE ND 89.8	4.8 68.3-144	mg/Kg %Rec	1	Anal 12/21/2016 10:09:46 12/21/2016 10:09:46			
EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Bromofluorobenzene	ND ND ND 98.0	0.024 0.048 0.048 0.096 80-120	mg/Kg mg/Kg mg/Kg mg/Kg %Rec	1 1 1 1	Anal 12/21/2016 10:09:46 12/21/2016 10:09:46 12/21/2016 10:09:46 12/21/2016 10:09:46 12/21/2016 10:09:46	6 PM 29264 6 PM 29264 6 PM 29264		

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 14 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System	Client Sample ID: E4-2'Collection Date: 12/14/2016 11:25:00 AMMatrix: SOILReceived Date: 12/16/2016 9:05:00 AM								
Lab ID: 1612928-015 	Result	al Units		DF Date Analyzed					
EPA METHOD 300.0: ANIONS					Analy	vst: MRA			
Chloride	ND	30	mg/Kg	20	12/21/2016 12:55:12	AM 29317			
EPA METHOD 8015M/D: DIESEL RAN	GE ORGANIC	S			Analy	st: TOM			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/22/2016 8:17:18 F	PM 29270			
Surr: DNOP	89.3	70-130	%Rec	1	12/22/2016 8:17:18 F	PM 29270			
EPA METHOD 8015D: GASOLINE RAI	NGE				Analy	/st: NSB			
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 10:33:17	PM 29264			
Surr: BFB	90.1	68.3-144	%Rec	1	12/21/2016 10:33:17	PM 29264			
EPA METHOD 8021B: VOLATILES					Analy	/st: NSB			
Benzene	ND	0.023	mg/Kg	1	12/21/2016 10:33:17	PM 29264			
Toluene	ND	0.047	mg/Kg	1	12/21/2016 10:33:17	PM 29264			
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2016 10:33:17	PM 29264			
Xylenes, Total	ND	0.094	mg/Kg	1	12/21/2016 10:33:17	PM 29264			
Surr: 4-Bromofluorobenzene	97.9	80-120	%Rec	1	12/21/2016 10:33:17	PM 29264			

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

Analyte detected in the associated Method Blank Value exceeds Maximum Contaminant Level. В Qualifiers: \* Value above quantitation range Sample Diluted Due to Matrix Е D Analyte detected below quantitation limits Page 15 of 22 H Holding times for preparation or analysis exceeded J Р Sample pH Not In Range ND Not Detected at the Reporting Limit Reporting Detection Limit RL RPD outside accepted recovery limits R Sample container temperature is out of limit as specified W % Recovery outside of range due to dilution or matrix S

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612928-016	Client Sample ID: E4-3'           Collection Date: 12/14/2016 11:26:00 AM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM						
Analyses	Result	PQL Qua	l Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS	ND	30	mg/Kg	20	Analy: 12/21/2016 1:07:37 A	st: <b>MRA</b> M 29317	
EPA METHOD 8015M/D: DIESEL RANG		S			Analy	st: TOM	
Diesel Range Organics (DRO) Surr: DNOP	ND 104	9.6 70-130	mg/Kg %Rec	1 1	12/22/2016 8:40:29 P 12/22/2016 8:40:29 P		
EPA METHOD 8015D: GASOLINE RAN	GE				Analy	st: NSB	
Gasoline Range Organics (GRO) Surr: BFB	ND 90.4	4.8 68.3-144	mg/Kg %Rec	1 1	12/21/2016 10:56:46 12/21/2016 10:56:46		
EPA METHOD 8021B: VOLATILES					•	st: NSB	
Benzene	ND	0.024	mg/Kg	1	12/21/2016 10:56:46		
Toluene	ND	0.048	mg/Kg	1	12/21/2016 10:56:46 12/21/2016 10:56:46		
Ethylbenzene Xylenes, Total	ND ND	0.048 0.097	mg/Kg mg/Kg	1	12/21/2016 10:56:46		
Surr: 4-Bromofluorobenzene	98.9	80-120	%Rec	1	12/21/2016 10:56:46	PM 29264	

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

В

- \* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 16 of 22
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612928-017	Matrix:		4' 14/2016 11:28:00 A 16/2016 9:05:00 AN			
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	/st: MRA
Chloride	ND	30	mg/Kg	20	12/21/2016 1:20:01	AM 29317
EPA METHOD 8015M/D: DIESEL RANG		S			Anal	/st: TOM
Diesel Range Organics (DRO)	ND	9.7	mg/Kg	1	12/22/2016 9:03:38 I	PM 29270
Surr: DNOP	87.9	70-130	%Rec	1	12/22/2016 9:03:38	PM 29270
EPA METHOD 8015D: GASOLINE RAM	IGE				Anal	/st: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/22/2016 12:30:33	AM 29264
Surr: BFB	92.0	68.3-144	%Rec	1	12/22/2016 12:30:33	AM 29264
EPA METHOD 8021B: VOLATILES					Anal	yst: NSB
Benzene	ND	0.024	mg/Kg	1	12/22/2016 12:30:33	AM 29264
Toluene	ND	0.049	mg/Kg	1	12/22/2016 12:30:33	AM 29264
Ethylbenzene	ND	0.049	mg/Kg	1	12/22/2016 12:30:33	
Xylenes, Total	ND	0.097	mg/Kg	1	12/22/2016 12:30:33	
Surr: 4-Bromofluorobenzene	99.2	80-120	%Rec	1	12/22/2016 12:30:33	8 AM 29264

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limitspage 17 of 22
- 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.

CLIENT: EOG Resources	Client Sample ID: E4-5.25' Collection Date: 12/14/2016 11:40:00 AM								
Project:Tenneco SWD SystemLab ID:1612928-018	Matrix:	Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analyst	: MRA			
Chloride	ND	30	mg/Kg	20	12/21/2016 1:32:26 AN	29317			
EPA METHOD 8015M/D: DIESEL RANG		6			Analyst	: TOM			
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/22/2016 9:26:51 PN	29270			
Surr: DNOP	83.6	70-130	%Rec	1	12/22/2016 9:26:51 PN	29270			
EPA METHOD 8015D: GASOLINE RAN	IGE				Analys	t: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/22/2016 12:54:00 A	M 29264			
Surr: BFB	90.4	68.3-144	%Rec	1	12/22/2016 12:54:00 A	M 29264			
EPA METHOD 8021B: VOLATILES					Analys	t: NSB			
Benzene	ND	0.024	mg/Kg	1	12/22/2016 12:54:00 A	M 29264			
Toluene	ND	0.049	mg/Kg	1	12/22/2016 12:54:00 A	M 29264			
Ethylbenzene	ND	0.049	mg/Kg	1	12/22/2016 12:54:00 A				
Xylenes, Total	ND	0.098	mg/Kg	1	12/22/2016 12:54:00 A				
Surr: 4-Bromofluorobenzene	98.1	80-120	%Rec	1	12/22/2016 12:54:00 A	M 29264			

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

Analyte detected in the associated Method Blank Value exceeds Maximum Contaminant Level. В Qualifiers: \* Е Value above quantitation range Sample Diluted Due to Matrix D Analyte detected below quantitation limit Page 18 of 22 Holding times for preparation or analysis exceeded J Н ND Not Detected at the Reporting Limit Р Sample pH Not In Range

- R RPD outside accepted recovery limits
- % Recovery outside of range due to dilution or matrix S

- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

## QC SUMMARY REPORT

#### Hall Environmental Analysis Laboratory, Inc.

WO#: 1612928

27-Dec-16

Client: Project:		esources o SWD System								
Sample ID	MB-29304	SampType: M	BLK	Tes	Code: El	5				
Client ID:	PBS	Batch ID: 29	Batch ID: 29304			9553				
Prep Date:	12/20/2016	Analysis Date: 1	2/20/2016	S	SeqNo: 1	238673	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1.5								
Sample ID	MB-29317	SampType: m	Tes	tCode: El	s					
Client ID:	PBS	Batch ID: 29	9317	RunNo: <b>39558</b>						
Prep Date:	12/20/2016	Analysis Date: 1	2/20/2016	8	SeqNo: 1	238865	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND 1.5	•							
Sample ID	LCS-29317	SampType: Io	:S	Tes	tCode: E	PA Method	300.0: Anion	S		
	LCSS	Batch ID: 2	9317	F	RunNo: 3	9558				
Prep Date:	12/20/2016	Analysis Date: 1	2/20/2016	S	SeqNo: 1	238866	Units: mg/K	g		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14 1.5	5 15.00	0	94.3	90	110			

- \* 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
- Page 19 of 22

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

Client: EOG Resources Project: Tenneco SWD System

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Sample ID MB-29270	SampT	ype: ME	BLK	Tes	Code: El	PA Method	8015M/D: Di	esel Range	e Organics	
Client ID: PBS	Batch	ID: 29	270	R	RunNo: 39590					
Prep Date: 12/19/2016	Analysis D	ate: 12	2/22/2016	S	eqNo: 1	240365	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.7		10.00		86.6	70	130			
Sample ID LCS-29270	SampT	ype: LC	S	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	Batch	1D: 29	270	F	RunNo: 3	9590				
Prep Date: 12/19/2016	Analysis D	ate: 12	2/22/2016	5	SeqNo: 1	240399	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	10	50.00	0	85.4	63.8	116			
Surr: DNOP	3.8		5.000		77.0	70	130			

#### Qualifiers:

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

WO#: 1612928

27-Dec-16

# **QC SUMMARY REPORT**

EOG Resources

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**Client:** 

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1612928

27-Dec-16

Project: Tenneco	SWD System	m								
Sample ID MB-29264	SampTy	pe: MB	LK	Test	Code: El	PA Method	8015D: Gaso	line Rang	9	
Client ID: PBS	Batch	ID: 292	264	R	tunNo: 3	9561				
Prep Date: 12/19/2016	Analysis Da	te: 12	/21/2016	S	eqNo: 1	239411	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	ND 890	5.0	1000		88.7	68.3	144			
Sample ID LCS-29264	SampType: LCS TestCode: EPA Method 8015D: Gasoline Range									
Client ID: LCSS	Batch	ID: 292	264	F	RunNo: 3	9561				
Prep Date: 12/19/2016	Analysis Da	ate: 12	2/21/2016	S	SeqNo: 1	239412	Units: mg/H	۲g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO) Surr: BFB	27 980	5.0	25.00 1000	0	106 97.8	74.6 68.3	123 144			

- Value exceeds Maximum Contaminant Level. \*
- D Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank В
- Value above quantitation range Е
- Analyte detected below quantitation limits J
- Ρ Sample pH Not In Range
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W
- Page 21 of 22

## QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

1.0

Client: Project:	EOG Res Tenneco	sources SWD Syste	em								
Sample ID MB	-29264	SampT	ype: ME	BLK	Test	Code: El	PA Method	8021B: Volat	iles		
Client ID: PBS	S	Batch	ID: 29	264	R	tunNo: 3	9561				
Prep Date: 12	2/19/2016	Analysis D	ate: 12	2/21/2016	S	eqNo: 1	239454	Units: mg/K	g		
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-Bromofluo	probenzene	0.97		1.000		97.5	80	120			
Sample ID LC:	S-29264	SampT	ype: LC	s	TestCode: EPA Method 8021B: Volatiles						
Client ID: LC:	SS	Batch	D: 29	264	F	RunNo: 3	9561				
	2/19/2016	Analysis D	ate: 12	2/21/2016	S	SeqNo: 1	239455	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	108	75.2	115			
Toluene		1.0	0.050	1.000	0	101	80.7	112			
Ethylbenzene		1.0	0.050	1.000	0	99.6	78.9	117			
Xylenes, Total		3.0	0.10	3.000	0	100	79.2	115			
								400			

104

1.000

Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Surr: 4-Bromofluorobenzene

- 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

Page 22 of 22

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WO#: 1612928

27-Dec-16

ENVIRONMENTAL	ll Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 EL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com		e Log-In Check List
Client Name: EOG/Yates Worl	k Order Number: 1612928		RcptNo: 1
Received by/date: Ag 10		A-F	
	2016 9:05:00 AM	A	
Completed by: Merney	2016 2;57:13 PM 5	A J	
Reviewed By: AC IZ	19/16		<u></u>
1. Custody seals intact on sample bottles?	Yes	No []	Not Present
<ol> <li>Custody sears intact on sample bounds?</li> <li>Is Chain of Custody complete?</li> </ol>	Yes 🔽	No 🛄	Not Present
3. How was the sample delivered?	Courier		
3. How was the outline associate			
Log In 4. Was an attempt made to cool the samples?	Yes 🔽	No []	<b>NA</b> []]
<ol><li>Were all samples received at a temperature of &gt;0</li></ol>	" C to 6.0"C Yes 🕅	No []	NA 1.1
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 pre-	served? Yes 🖌	No L.I	
9. Was preservative added to bottles?	Yes   <sup>¨</sup> ]	No 🗹	NA []]
	Yes	No 📋	No VOA Vials 🗹
10.VOA vials have zero headspace?	Yes [.]	No 🗹	
11. Were any sample containers received broken?		No []]	# of preserved bottles checked for pH:
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗹	NO LUI	(<2 or >12 unless noted
13. Are matrices correctly identified on Chain of Custo	ody? Yes 🗹	No []]	Adjusted?
14, Is it clear what analyses were requested?	Yes 🛛	No 🛄	Checked by:
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🕅	No [.]	
Special Handling (if applicable)	rder? Yes	No []	na 🖌
16. Was client notified of all discrepancies with this o	2010 10100 (1010000000000000000000000000		
Person Notified: By Whom: Regarding: Client Instructions:	Date Via: [] eMail [] P	hone [_] Fax	
17. Additional remarks:			
18. <u>Cooler Information</u> Cooler No Temp °C Condition Seal In 1 3.5 Good Yes	ntact Seal No Seal Date	Signed By	_
Page 1 of 1		. — <del></del>	unter and a strange and a start of the second start of the second start of the second start of the second start

່ວ	nain-	of-Cu	Chain-of-Custody Record	I urn-Around I	ime:				Ì	HALL		Ĭ	02	<b>ENVIRONMENT</b>	LN	AL	
Xient: E	EOG Resources	sources		X Standarc	C Rush				A	IV	ANALYSIS	L S	AB	LABORATORY	ATO	NRY	
				Project Name:			. N		3	ww.ħŝ	www.hallenvironmental.com	namen	Ital.co	E			
Aailing A	Aailing Address:			Ţ	enneco SWD System	System	N	4901 Hawkins NE	lawkin	s NE	- Albu	duerqu	Je, NV	- Albuquerque, NM 87109	•		
05 Sout	h 4th St	05 South 4th Street Artesia, NM	88210	Project #:				Tel. 5(	505-345-3975	-3975	Fax	x 505	505-345-4107	1107			
hone #:		575-703-6537	6537								Analysis Kequest	IS Keo	duest	_			
imail or Fax#:		chase se	Deogresources.com	Project Manager:	er:									<u></u>			
JA/QC Package:	ackage:		T I main / Cull Validation)		Chase Settle PO # 205, 0750	20											
Accreditation:	ation:			Sampler:	Chase Settle				(۲.								(N
J NELAP	۵,			On Ice:	K Yes	E No			814		S			(AC			, OL
J EDD	EDD (Type)_			Sample Temperature:	erature: 3.	S.			, po		lsj9			) <b>∕∖-</b> ∣ι			Y) s
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. HEAL No.	IM + XƏT8	BTEX + Metho	нюм) нчт	hi9M) 803 AN9) 0168	М 8 АЯЭЯ	l,∃) <mark>enoinA</mark> ile99 1808	0V) 80928	ne2) 0728			Air Bubble
9:57A	9.57A	Soil	E1-4'	1 - 4oz.	ICE	100-	×	×				×					
12114/2016	4	Soil	E1-6'		ICE	600-	×	_×				×					
12/14/2015			E1-8'	1 - 4oz.	ICE	-003	×	×				×	_				
12M4/2016	127142016 10:20A Soil		E1-9.5	1 - 4oz.	ICE	hao-	×	<u>×</u>				×					
BINCH	10-25A	Soil	E2-4'	1 - 4oz.	ICE	-005	×	×				×					1
12/14/2016			E2-6'		ICE	-006	×	_×				×					_
12/14/2016	12714/2018 10:40A		E2-8'	1 - 4oz.	ICE	600	×	<u> × </u>				×					_
12/14/2016	10:48A	Soil	E2-9.5'	1 - 4oz.	ICE .	800-	×	<u>×</u>				×				+	
12/14/2016	12/14/2016 10:59A Soil	Soil	E3-4'	1 - 402.	ICE	-009	×	쒸				×					
12/14/2016	12142016 11:03A	Soil	E3-6'	1 - 4oz.	ICE	010-	×	×				×					
12114/2016	121142016 11:09A Soil	Soil	E3-8'	1 - 4oz.	ICE	110-	×	×		_		×	_				
ANCIANCE	A41.11 anounce	Soil	E3-10'	1 - 4oz.	ICE	5		×				×					
Date:	Time:		red by:	Received by:				arks:	Result	s nee	Results needed by 12/27/2016	12/27/	/2016.				
-15-14	4.300	Ŵ	- ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	JUMA													
Date:	Time:	Relinquished by:	hed by:	Received by:		Date lime											
	If varaceo	semulae er		nontracted to other a	ccredited laborator	ries. This serves as notice of th	tis possib	litv. Any	sub-con	racted d	ta will he	clearty n	intated o	n the analy	vtical repo	t,	

nomy. orator If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited lab

X X X X X BLEX + MTBE + TMB's (8021) 101 101 101 101 101 101 101 1	ase Settle # 205. 07 ase Settle seervative Type	Project #:       Project Manager:       Project Manager:       Chase Sett       Sampler:       Chase Sett       Sampler:       Container       Type and #       Type       1 - 4oz       1 - 4oz       1 - 4oz       1 - 4oz
No 013	ase Settle # 205. 07 ase Settle Yes Type Type	ect Mana ipler: iple Tem tainer be and #
NIG HEAL NO. - 013 - 0114 - 0114	0 0	impler: 1 ice: Container Ype and # - 4oz.
	Preservative Type ICE	Sontainer Spe and # 402.
	ICE	- 402. - 402. 1~
	ICE	4oZ. ^~~
	ICE	+02.
	ICE	1 - 4oz.
	ICE	1 - 4oz.
x \$10-	ICE	1 - 4oz.
Time	·	Raceived hy:
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X Kemarks:	- OLS OLD OLD Date Time Date Time Date Time	Police Date Date Date Date as This serves as

Ĺ. g If necessary, samples submitted to Hall Environmental may be subcontracted



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

December 29, 2016

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

OrderNo.: 1612933

RE: Tenneco SWD System

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/16/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612933-001	Matrix: S	OIL		ate: 12/	31-1' 14/2016 12:46:00 PM 16/2016 9:05:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	0000	75	mg/Kg	50	Analys 12/27/2016 5:26:28 Pl	it: <b>LGT</b> M 29334
Chloride EPA METHOD 8015D MOD: GASOLI	2000 NE RANGE	75	IIIg/Kg	50	Analys	
Gasoline Range Organics (GRO)	ND 89.5	4.9 70-130	mg/Kg %Rec	1 1	12/20/2016 7:44:45 PI 12/20/2016 7:44:45 PI	
Surr: BFB EPA METHOD 8015M/D: DIESEL RAI			701100	·	•	st: TOM
Diesel Range Organics (DRO)	ND 96.8	10 70-130	mg/Kg %Rec	1 1	12/21/2016 10:19:56 12/21/2016 10:19:56	
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analys	
Benzene Toluene	ND ND	0.025 0.049 0.049	mg/Kg mg/Kg mg/Kg	1 1 1	12/20/2016 7:44:45 P 12/20/2016 7:44:45 P 12/20/2016 7:44:45 P	M 29278
Ethylbenzene Xylenes, Total	ND 98.0	0.099 70-130	mg/Kg %Rec	1 1	12/20/2016 7:44:45 P 12/20/2016 7:44:45 P	
Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Dibromofluoromethane	96.8 106	70-130 70-130	%Rec %Rec	1 1	12/20/2016 7:44:45 P 12/20/2016 7:44:45 P	
Sur: Toluene-d8	102	70-130	%Rec	1	12/20/2016 7:44:45 P	M 29278

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

в

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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- 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.

CLIENT:EOG ResourcesProject:Tenneco SWD SystemLab ID:1612933-002	Matrix: S	SOIL		ate: 12/1	2-1' 14/2016 12:49:00 PM 16/2016 9:05:00 AM	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	5100	150	mg/Kg	100	12/28/2016 11:39:30	AM 29334
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analy	st: AG
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/20/2016 8:13:17 P	M 29278
Surr: BFB	86.4	70-130	%Rec	1	12/20/2016 8:13:17 P	M 29278
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	;			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.2	mg/Kg	1	12/21/2016 10:43:15	PM 29282
Surr: DNOP	111	70-130	%Rec	1	12/21/2016 10:43:15	PM 29282
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analy	st: AG
Benzene	ND	0.024	mg/Kg	1	12/20/2016 8:13:17 P	M 29278
Toluene	ND	0.047	mg/Kg	1	12/20/2016 8:13:17 P	M 29278
Ethylbenzene	ND	0.047	mg/Kg	1	12/20/2016 8:13:17 F	M 29278
Xylenes, Total	ND	0.094	mg/Kg	1	12/20/2016 8:13:17 F	M 29278
Surr: 1,2-Dichloroethane-d4	102	70-130	%Rec	1	12/20/2016 8:13:17 F	
Surr: 4-Bromofluorobenzene	86.3	70-130	%Rec	1	12/20/2016 8:13:17 F	
Surr: Dibromofluoromethane	109	70-130	%Rec	1	12/20/2016 8:13:17 F	
Surr: Toluene-d8	101	70-130	%Rec	1	12/20/2016 8:13:17 F	M 29278

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

В

- \* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 8
- 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.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612933-003	Matrix: S			Date: 12/2	3-1' 14/2016 12:51:00 PM 16/2016 9:05:00 AM	
Analyses	Result	PQL Qual	l Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS					Analy	st: MRA
Chloride	3500	150	mg/Kg	100	12/28/2016 11:51:53	AM 29334
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analy	st: AG
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	. 1	12/20/2016 8:41:48 P	M 29278
Surr: BFB	88.4	70-130	%Rec	1	12/20/2016 8:41:48 P	M 29278
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	i			Analy	st: TOM
Diesel Range Organics (DRO)	11	9.8	mg/Kg	1	12/21/2016 11:06:23	PM 29282
Surr: DNOP	110	70-130	%Rec	1	12/21/2016 11:06:23	PM 29282
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analy	st: AG
Benzene	ND	0.024	mg/Kg	1	12/20/2016 8:41:48 P	M 29278
Toluene	ND	0.048	mg/Kg	1	12/20/2016 8:41:48 P	M 29278
Ethylbenzene	ND	0.048	mg/Kg	1	12/20/2016 8:41:48 F	M 29278
Xvlenes, Total	ND	0.097	mg/Kg	1	12/20/2016 8:41:48 F	M 29278
Surr: 1,2-Dichloroethane-d4	101	70-130	%Rec	1	12/20/2016 8:41:48 F	
Surr: 4-Bromofluorobenzene	91.7	70-130	%Rec	1	12/20/2016 8:41:48 F	
Surr: Dibromofluoromethane	109	70-130	%Rec	1	12/20/2016 8:41:48 F	
Surr: Toluene-d8	102	70-130	%Rec	1	12/20/2016 8:41:48 F	°M 29278

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

в

 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 3 of 8
- 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.

**CLIENT: EOG Resources** 

Project:

Tenneco SWD System

#### Client Sample ID: WB4-1' Collection Date: 12/14/2016 12:53:00 PM Received Date: 12/16/2016 9:05:00 AM

Lab ID:	1612933-004	Matrix: S	SOIL	Received I	Date: 12	/16/2016 9:05:00 AM	l 
Analyses		Result	PQL Qua	al Units	DF	Date Analyzed	Batch
EPA MET	THOD 300.0: ANIONS					Analys	st: LGT
Chloride		2200	75	mg/Kg	50	12/27/2016 6:03:41 P	M 29334
EPA MEI	THOD 8015D MOD: GASOL	INE RANGE				Analy	st: AG
	e Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 2:51:35 A	M 29278
Surr:	•	90.8	70-130	%Rec	1	12/21/2016 2:51:35 A	M 29278
	THOD 8015M/D: DIESEL R	ANGE ORGANICS				Analy	st: TOM
	ange Organics (DRO)	ND	9.6	mg/Kg	1	12/21/2016 11:29:40	PM 29282
	DNOP	108	70-130	%Rec	1	12/21/2016 11:29:40	PM 29282
	THOD 8260B: VOLATILES	SHORT LIST				Analy	st: AG
Benzene		ND	0.024	mg/Kg	1	12/21/2016 2:51:35 A	M 29278
Toluene		ND	0.047	mg/Kg	1	12/21/2016 2:51:35 A	M 29278
Ethylber		ND	0.047	mg/Kg	1	12/21/2016 2:51:35 A	
Xylenes		ND	0.094	mg/Kg	1	12/21/2016 2:51:35 A	
	1,2-Dichloroethane-d4	101	70-130	%Rec	1	12/21/2016 2:51:35 A	
	4-Bromofluorobenzene	93.4	70-130	%Rec	1	12/21/2016 2:51:35 A	
	Dibromofluoromethane	104	70-130	%Rec	1	12/21/2016 2:51:35 A	
	Toluene-d8	102	70-130	%Rec	1	12/21/2016 2:51:35 A	M 29278

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

В

Value exceeds Maximum Contaminant Level. \*

Sample Diluted Due to Matrix D

- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Value above quantitation range Е
- Analyte detected below quantitation limits Page 4 of 8 J
- Sample pH Not In Range Р
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified W

### Hall Environmental Analysis Laboratory, Inc.

WO#: 1612933

29-Dec-16

Client: Project:	2007	esources o SWD Syste	em								
Sample ID	MB-29334	SampTy	/pe: mb	lk				300.0: Anion	5		
Client ID:	PBS	Batch	ID: 29	334	R	unNo: 3	9630				
Prep Date:	12/21/2016	Analysis Da	ate: 12	2/22/2016	S	eqNo: 1	241440	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-29334	SampT	ype: Ics		Test	Code: El	PA Method	300.0: Anion	s		
Client ID:	LCSS	Batch	ID: 29	334	R	tunNo: 3	9630				
Prep Date:	12/21/2016	Analysis D	ate: 12	2/22/2016	S	eqNo: 1	241441	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	92.9	90	110			

#### Qualifiers:

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

Page 5 of 8

### Hall Environmental Analysis Laboratory, Inc.

Client: Project: EOG Resources Tenneco SWD System

r ojecti r omioo										
Sample ID LCS-29282	SampT	ype: LC	S	Tes	Code: El	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: LCSS	Batch	ID: 292	282	F	lunNo: 3	9576				
Prep Date: 12/19/2016	Analysis D	ate: 12	2/21/2016	S	eqNo: 1	239546	Units: mg/K	g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	63.8	116			
Diesei Range Organius (DRO)										
Surr: DNOP	5.4		5.000		107	70	130			
		ype: ME		Tes			130 8015M/D: Die	esel Rang	e Organics	
Surr: DNOP	SampT	ype: ME	BLK			PA Method		esel Rang	e Organics	
Surr: DNOP	SampT	n ID: 29	BLK	F	tCode: El	PA Method 9576			e Organics	
Surr: DNOP Sample ID MB-29282 Client ID: PBS	SampT Batch	n ID: 29	3LK 282 2/21/2016	F	tCode: El RunNo: 3 SeqNo: 1	PA Method 9576	8015M/D: Die		e Organics RPDLimit	Qual
Surr: DNOP Sample ID MB-29282 Client ID: PBS Prep Date: 12/19/2016	SampT Batch Analysis D	n ID: 29: Pate: 12	3LK 282 2/21/2016	F	tCode: El RunNo: 3 SeqNo: 1	PA Method 9576 239547	8015M/D: Die Units: mg/K	ζg		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

WO#: 1612933

29-Dec-16

Page 6 of 8

#### QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: EOG Resources

**Project:** 

Tenneco SWD System

									and the second	
Sample ID Ics-29278	SampT	ype: LC	S	Test	Code: EF	PA Method	8260B: Volat	iles Short	List	
Client ID: LCSS	Batch	n ID: 292	278	R	unNo: 3	9538				
Prep Date: 12/19/2016	Analysis D	ate: 12	2/20/2016	S	eqNo: 1	238550	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	94.6	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.0	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.8	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		109	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			
Comple ID mb 20279	Comn]	Supor ME		Tes	tCode: El	DA Mothod	8260B: Volat	tiles Short	list	
Sample ID mb-29278	Samp	Type: ME	SLK	100		Amethou	0200D. Vola	lies onon	LIGT	
Client ID: PBS		h ID: 29			RunNo: 3		02008. 0010			
		h ID: 29	278	F		9538	Units: mg/K		LIGT	
Client ID: PBS	Batc	h ID: 29	278 2/20/2016	F	RunNo: 3	9538			RPDLimit	Qual
Client ID: PBS Prep Date: 12/19/2016	Batcl Analysis [	h ID: 29 Date: 12	278 2/20/2016	۶	RunNo: <b>3</b> SeqNo: <b>1</b>	9538 238551	Units: <b>mg/K</b>	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte	Batcl Analysis D Result	h ID: 29 Date: 12 PQL	278 2/20/2016	۶	RunNo: <b>3</b> SeqNo: <b>1</b>	9538 238551	Units: <b>mg/K</b>	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte Benzene	Batcl Analysis [ <u>Result</u> ND	h ID: 29 Date: 12 PQL 0.025	278 2/20/2016	۶	RunNo: <b>3</b> SeqNo: <b>1</b>	9538 238551	Units: <b>mg/K</b>	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte Benzene Toluene	Batcl Analysis I Result ND ND	h ID: 29 Date: 12 PQL 0.025 0.050	278 2/20/2016	۶	RunNo: <b>3</b> BeqNo: <b>1</b> %REC	9538 238551 LowLimit	Units: mg/K HighLimit	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte Benzene Toluene Ethylbenzene	Batcl Analysis E Result ND ND ND	h ID: 29 Date: 12 PQL 0.025 0.050 0.050	278 2/20/2016	۶	RunNo: <b>3</b> GeqNo: <b>1</b> <u>%REC</u> 95.8	9538 238551 LowLimit 70	Units: mg/K HighLimit 130	(g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Batcl Analysis E Result ND ND ND ND	h ID: 29 Date: 12 PQL 0.025 0.050 0.050	278 2/20/2016 SPK value	۶	RunNo: <b>3</b> SeqNo: <b>1</b> <u>%REC</u> 95.8 97.9	9538 238551 LowLimit 70 70	Units: mg/M HighLimit 130 130	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4	Batcl Analysis E Result ND ND ND ND 0.48	h ID: 29 Date: 12 PQL 0.025 0.050 0.050	278 2/20/2016 SPK value 0.5000	F SPK Ref Val	RunNo: <b>3</b> SeqNo: <b>1</b> %REC 95.8 97.9 105	9538 238551 LowLimit 70 70 70 70	Units: mg/K HighLimit 130 130 130	(g		Qual
Client ID: <b>PBS</b> Prep Date: <b>12/19/2016</b> Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	Batcl Analysis E Result ND ND ND ND 0.48 0.49	h ID: 29 Date: 12 PQL 0.025 0.050 0.050	278 2/20/2016 SPK value 0.5000 0.5000	F SPK Ref Val	RunNo: <b>3</b> SeqNo: <b>1</b> <u>%REC</u> 95.8 97.9	9538 238551 LowLimit 70 70	Units: mg/M HighLimit 130 130	(g		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
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- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

WO#: 1612933

Page 7 of 8

**Client:** 

EOG Resources

#### Hall Environmental Analysis Laboratory, Inc.

29-Dec-16

Project: Tenneco	o SWD Syst	em								
Sample ID Ics-29278	SampT	ype: LC	s	Test	Code: El	PA Method	8015D Mod:	Gasoline I	Range	
Client ID: LCSS	Batch	n ID: 29	278	R	unNo: 3	9538				
Prep Date: 12/19/2016	Analysis D	ate: 12	2/20/2016	S	eqNo: 1	238582	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.2	62.9	123			
Surr: BFB	450		500.0		89.1	70	130			
Sample ID mb-29278	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8015D Mod:	Gasoline	Range	
Client ID: PBS	Batch	n ID: 29	278	F	RunNo: 3	9538				
Prep Date: 12/19/2016	Analysis D	Date: 1	2/20/2016	5	SeqNo: 1	238585	Units: mg/ł	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0			90.6	70	130			

- \* 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
- Page 8 of 8

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

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a a service a service a service de contra contra

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Client Name: EOG/Yates	Work Order Number:	1612933		RcptNo: 1
Received by/date:	12/10/10			
Logged By: Ashley Gallegos	12/16/2016 9:05:00 AM		A	
Completed By: Ashley Gallegos	12/16/2016 3:13:17 PM		AJ	
Reviewed By: , AG, AR	12/19/16		v	
Chain of Custody				
1. Custody seals intact on sample bottles?		Yes [.]	No []]	Not Present
2. Is Chain of Custody complete?		Yes 🖌	No	Not Present
3. How was the sample delivered?		<u>Courier</u>		
Log In			<i></i> .	1 °1
4. Was an attempt made to cool the sample	s?	Yes 🖌	No []]]	NA L.]
5. Were all samples received at a temperatu	re 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 tes	st(s)?	Yes 🔽	No []]	
8. Are samples (except VOA and ONG) proj		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 br	oken?	Yes	No 🗹	# of preserved
12. Does paperwork match bottle labels?		Yes 🗹	No []	bottles checked for pH: (<2 or >12 unless noted
(Note discrepancies on chain of custody) 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:
<u>Special Handling (if applicable)</u>				
16. Was client notified of all discrepancies w	ith this order?	Yes []	No []]	na 🕅
parameter and a second s	Date		NEXT MENSION MUNDOR LONG LONG	
Person Notified: By Whom:	Via:	eMail	] Phone [] Fax	

17. Additional remarks:

18 Cooler Information

Regarding: Client Instructions:

.....

...

10. <u>v</u>	DOIEL HITOH	auon					1 1
1	Cooler No	Temp ºC	Condition	Seal Intact	Seal No	Seal Date	Signed By
	1	3.5		Yes			

Cha Dient: E00	3 Rest	hain-of-Cus EOG Resources	Chain-of-Custody Record	Turn-Around Ti X Standarc	d Time: rr 🛛 Rush				AN	AL	SIS	HALL ENVIRONMENTAL ANALYSIS LABORATORY	NON	ME	EN LO	A K X	
				Project Name:				I	M	w.hall€	inviror	www.hallenvironmental.com	Lcom	_			
Mailing Address:	ress:			Τe	Tenneco SWD System	System	¥.	4901 Hawkins NE	wkins	I.	Albuq	Albuquerque, NM 87109	M	87109	_		
105 South 4th Street Artesia, NM	Eth Str	set Arte:	88210	Project #:			L	Tel. 505-345-3975	-345-(	975 A	Fax	505-345-4107	45-4	07			
<sup>chone</sup> #:	2	575-703-6537	6537				(		_	A	Analysis		វត្ត				
smail or Fax#:	1 1	hase se	Deogresources.com	Project Manager:	91.						*OS						
JAQC Package:	1.1			0 1	Chase Settle PO # 205. 0750						"Od"						
Standard			LI LEVEI 4 (Full valuation)		Chaca Settle						°ON						(N
Accreditation:	Ë	Cthor C		On Ice:		⊡ No								(wr			, OL
LI NELAT	(aq			Tem	erature: 3.									<u>יא-וו</u>			Y) e
Date	II	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 11012033	BTEX + M BTEX + M		TPH (Meth	AN9) 0168	N 8 Aମጋମ I, <sup>-</sup> T) anoinA	usə9 1808	8260B (VC	n92) 0728			Air Bubble
10.460	_	lion I	WB1-1'	1 - 4oz.	ICE	100-	×	×			<u> </u>		-+	_			
12-142015 121-UF	_	Soil	WB2-1'		ICE ICE	-002	×	×			<u>×</u>						
10-510		Soil	WB3-1'		ICE	-003	×	×			<u>×</u>		$\neg$			-	1
CF another	_	Soil	WB4-1'	1 - 4oz.	ICE	400-	×	×			<u>×</u>		-+	_	1	-	T
1274/2016 1.4.301		50												_		-+	1
+	1							_									
													-+				
-														_			
														-			$\square$
															_		
												$\square$		-+	_		
Date: Tir	Time:	Relinquished by:	l ned by:	Received by:	,	Date Time	Rems	arks: F	tesults	neede	d by 1	Remarks: Results needed by 12/27/2016.	010.				
	4:300	Ĩ		MM		11/10/000	VA										
Date: TI	Tlme:	Relinquished by:	hed by:	Received by:	$\sim$	Date little											
	ecessary.	samples su	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	l scontracted to other a	ccredited laborator	ies. This serves as notice of th	lidîseoq si	ity. Any :	ub-contra	cted data	will be c	early nota	ated on	the analy	<i>d</i> ical rep	ť	



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

December 28, 2016

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

OrderNo.: 1612936

RE: Tenneco SWD System

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 11 sample(s) on 12/16/2016 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

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

Sincerely,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources Project: Tenneco SWD System				Date: 12/	1-1' 14/2016 12:11:00 PM 16/2016 9:05:00 AM	
Lab ID: 1612936-001	Matrix: S	PQL Qu			Date Analyzed	Batch
Analyses	Kesuit					st: MRA
EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	12/22/2016 7:43:53 P	
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analy	st: AG
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 3:20:01 A	M 29278
Surr: BFB	88.4	70-130	%Rec	1	12/21/2016 3:20:01 A	M 29278
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	i			Analy	st: TOM
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/21/2016 11:52:52	PM 29282
Surr: DNOP	103	70-130	%Rec	1	12/21/2016 11:52:52	PM 29282
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analy	st: AG
Benzene	ND	0.024	mg/Kg	1	12/21/2016 3:20:01 A	M 29278
Toluene	ND	0.048	mg/Kg	1	12/21/2016 3:20:01 A	M 29278
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 3:20:01 A	M 29278
Xylenes, Total	ND	0.096	mg/Kg	1	12/21/2016 3:20:01 A	M 29278
Surr: 1,2-Dichloroethane-d4	98.2	70-130	%Rec	1	12/21/2016 3:20:01 A	M 29278
Surr: 4-Bromofluorobenzene	93.4	70-130	%Rec	1	12/21/2016 3:20:01 A	
Surr: Dibromofluoromethane	105	70-130	%Rec	1	12/21/2016 3:20:01 A	
Surr: Toluene-d8	102	70-130	%Rec	1	12/21/2016 3:20:01 A	M 29278

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 1 of 15
	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 Laboratory, Inc.

CLIENT:EOG ResourcesProject:Tenneco SWD SystemLab ID:1612936-002	Matrix: S			<b>)ate:</b> 12/	1-5' 14/2016 12:13:00 Pl 16/2016 9:05:00 AM	
Analyses	Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS		30	malka	20	Analy 12/22/2016 8:21:06 P	st: <b>MRA</b> M 29334
Chloride EPA METHOD 8015D MOD: GASOLIN	ND IE RANGE	30	mg/Kg	20		st: AG
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/21/2016 3:48:25 A	
Surr: BFB	94.0	70-130	%Rec	1		st: TOM
EPA METHOD 8015M/D: DIESEL RAN				4	12/22/2016 12:16:16	
Diesel Range Organics (DRO) Surr: DNOP	ND 98.3	9.6 70-130	mg/Kg %Rec	1 1	12/22/2016 12:16:16	
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analy	st: AG
Benzene	ND	0.025	mg/Kg	1	12/21/2016 3:48:25 A	M 29278
Toluene	ND	0.049	mg/Kg	1	12/21/2016 3:48:25 /	M 29278
Ethylbenzene	ND	0.049	mg/Kg	1	12/21/2016 3:48:25	M 29278
Xylenes, Total	ND	0.098	mg/Kg	1	12/21/2016 3:48:25 /	
Surr: 1,2-Dichloroethane-d4	97.8	70-130	%Rec	1	12/21/2016 3:48:25 /	
Surr: 4-Bromofluorobenzene	97.9	70-130	%Rec	1	12/21/2016 3:48:25 /	
Surr: Dibromofluoromethane	104	70-130	%Rec	1	12/21/2016 3:48:25 /	
Surr: Toluene-d8	107	70-130	%Rec	1	12/21/2016 3:48:25	AM 29278

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

в

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 15
- 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.

CLIENT: EOG Resources		Client Sample ID: EB2-1' Collection Date: 12/14/2016 12:15:00 PM							
Project: Tenneco SWD System									
Lab ID: 1612936-003	Matrix: S	SOIL	Received I	Date: 12/	16/2016 9:05:00 AM				
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch			
EPA METHOD 300.0: ANIONS					Analys	st: MRA			
Chloride	ND	30	mg/Kg	20	12/22/2016 8:33:31 P	M 29334			
EPA METHOD 8015D MOD: GASOL	INE RANGE				Analys	st: AG			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/21/2016 4:16:50 A	M 29278			
Surr: BFB	91.6	70-130	%Rec	1	12/21/2016 4:16:50 A	M 29278			
EPA METHOD 8015M/D: DIESEL R	ANGE ORGANICS				Analys	st: TOM			
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	12/22/2016 12:39:30	AM 29282			
Surr: DNOP	107	70-130	%Rec	1	12/22/2016 12:39:30	AM 29282			
EPA METHOD 8260B: VOLATILES	SHORT LIST				Analy	st: AG			
Benzene	ND	0.025	mg/Kg	1	12/21/2016 4:16:50 A	M 29278			
Toluene	ND	0.049	mg/Kg	1	12/21/2016 4:16:50 A	M 29278			
Ethylbenzene	ND	0.049	mg/Kg	1	12/21/2016 4:16:50 A	M 29278			
Xylenes, Total	ND	0.099	mg/Kg	1	12/21/2016 4:16:50 A				
Surr: 1,2-Dichloroethane-d4	99.9	70-130	%Rec	1	12/21/2016 4:16:50 A				
Surr: 4-Bromofluorobenzene	91.0	70-130	%Rec	1	12/21/2016 4:16:50 A				
Surr: Dibromofluoromethane	102	70-130	%Rec	1	12/21/2016 4:16:50 A				
Surr: Toluene-d8	104	70-130	%Rec	1	12/21/2016 4:16:50 A	M 29278			

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

1010	1 10 11	e Qe Buinnary report and sample reg	00	
Oualifiers:	*	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 15
	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 Laboratory, Inc.

	Resources eco SWD System 936-004	Matrix: S			<b>Date:</b> 12/	2-5' 14/2016 12:17:00 PM 16/2016 9:05:00 AM	
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch
EPA METHOD	300.0: ANIONS					Analyst:	MRA
Chloride		ND	30	mg/Kg	20	12/22/2016 8:45:56 PM	29334
	8015D MOD: GASOLIN	FRANGE				Analyst:	AG
		ND	4.9	mg/Kg	1	12/21/2016 4:45:12 AM	29278
Surr: BFB	e Organics (GRO)	90.3	70-130	%Rec	1	12/21/2016 4:45:12 AM	29278
	8015M/D: DIESEL RAN	GF ORGANICS				Analyst:	том
Diesel Range C		ND	9.6	mg/Kg	1	12/22/2016 1:03:00 AM	29282
Surr: DNOP	rganics (Dr.C)	91.1	70-130	%Rec	1	12/22/2016 1:03:00 AM	29282
	8260B: VOLATILES SH					Analyst	AG
	0200B. VOLATILLO ON	ND	0.025	mg/Kg	1	12/21/2016 4:45:12 AM	29278
Benzene		ND	0.049	mg/Kg	1	12/21/2016 4:45:12 AM	29278
Toluene Ethylbenzene		ND	0.049	mg/Kg	1	12/21/2016 4:45:12 AM	29278
Xylenes, Total		ND	0.099	mg/Kg	1	12/21/2016 4:45:12 AM	29278
•	hloroethane-d4	99.8	70-130	%Rec	1	12/21/2016 4:45:12 AM	29278
	ofluorobenzene	93.8	70-130	%Rec	1	12/21/2016 4:45:12 AM	
	ofluoromethane	101	70-130	%Rec	1	12/21/2016 4:45:12 AM	
Surr: Toluen		103	70-130	%Rec	1	12/21/2016 4:45:12 AM	29278

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 15
- 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.

CLIENT: EOG Resources		Client Sample ID: EB3-5' Collection Date: 12/14/2016 12:21:00 PM						
Project:Tenneco SWD SystemLab ID:1612936-005	Matrix: S	SOIL			6/2016 9:05:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	LGT		
Chloride	3900	300	mg/Kg	200	12/27/2016 6:16:06 PM	29334		
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	AG		
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	12/21/2016 5:13:33 AM	29278		
Surr: BFB	91.8	70-130	%Rec	1	12/21/2016 5:13:33 AM	29278		
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	5			Analyst	TOM		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/22/2016 1:26:09 AM	29282		
Surr: DNOP	94.4	70-130	%Rec	1	12/22/2016 1:26:09 AM	29282		
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	: AG		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 5:13:33 AM	29278		
Toluene	ND	0.049	mg/Kg	1	12/21/2016 5:13:33 AM	29278		
Ethylbenzene	ND	0.049	mg/Kg	1	12/21/2016 5:13:33 AM	29278		
Xylenes, Total	ND	0.097	mg/Kg	1	12/21/2016 5:13:33 AM	29278		
Surr: 1,2-Dichloroethane-d4	99.7	70-130	%Rec	1	12/21/2016 5:13:33 AM	29278		
Surr: 4-Bromofluorobenzene	98.5	70-130	%Rec	1	12/21/2016 5:13:33 AM	29278		
Surr: Dibromofluoromethane	107	70-130	%Rec	1	12/21/2016 5:13:33 AM	29278		
Surr: Toluene-d8	107	70-130	%Rec	1	12/21/2016 5:13:33 AM	29278		

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

*	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 5 of 15
ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
R	RPD outside accepted recovery limits		Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified
	ND	<ul> <li>D Sample Diluted Due to Matrix</li> <li>H Holding times for preparation or analysis exceeded</li> <li>ND Not Detected at the Reporting Limit</li> <li>R RPD outside accepted recovery limits</li> </ul>	DSample Diluted Due to MatrixEHHolding times for preparation or analysis exceededJNDNot Detected at the Reporting LimitPRRPD outside accepted recovery limitsRL

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: Project: Lab ID:	EOG Resources Tenneco SWD System 1612936-006	Matrix: S			Date: 12/1	8-10' 4/2016 12:23:00 PM 6/2016 9:05:00 AM	
Analyses		Result	PQL Qual	Units	DF	Date Analyzed	Batch
FPA MET	HOD 300.0: ANIONS					Analyst:	LGT
Chloride		4200	300	mg/Kg	200	12/27/2016 6:53:19 PM	29334
	HOD 8015D MOD: GASOLI	NE RANGE				Analyst:	AG
	Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 5:41:54 AM	29278
Surr: E	• •	91.2	70-130	%Rec	1	12/21/2016 5:41:54 AM	29278
FPA MET	HOD 8015M/D: DIESEL RA	NGE ORGANICS				Analyst	TOM
	ange Organics (DRO)	ND	9.5	mg/Kg	1	12/22/2016 1:49:25 AM	29282
Surr: I	• •	92.1	70-130	%Rec	1	12/22/2016 1:49:25 AM	29282
	HOD 8260B: VOLATILES S	HORT LIST				Analyst	: AG
Benzene		ND	0.024	mg/Kg	1	12/21/2016 5:41:54 AM	29278
Toluene	, ,	ND	0.048	mg/Kg	1	12/21/2016 5:41:54 AM	29278
Ethylber	zene	ND	0.048	mg/Kg	1	12/21/2016 5:41:54 AM	
Xylenes,		ND	0.097	mg/Kg	1	12/21/2016 5:41:54 AM	
	1,2-Dichloroethane-d4	103	70-130	%Rec	1	12/21/2016 5:41:54 AM	
	4-Bromofluorobenzene	95.2	70-130	%Rec	1	12/21/2016 5:41:54 AM	
	Dibromofluoromethane	105	70-130	%Rec	1	12/21/2016 5:41:54 AM	
Surr:	Toluene-d8	104	70-130	%Rec	1	12/21/2016 5:41:54 AM	29278

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

В

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
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Value above quantitation range Е
- Analyte detected below quantitation limits Page 6 of 15 J
- Sample pH Not In Range Р
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

#### Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources Project: Tenneco SWD System		Client Sample ID: EB4-5' Collection Date: 12/14/2016 12:27:00 PM						
Lab ID: 1612936-007	Matrix: S	SOIL	Received <b>D</b>	Date: 12/1	16/2016 9:05:00 AM			
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analyst	LGT		
Chloride	4300	150	mg/Kg	100	12/27/2016 7:05:44 PM	29334		
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analyst	: AG		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 6:10:14 AM	29278		
Surr: BFB	89.8	70-130	%Rec	1	12/21/2016 6:10:14 AM	29278		
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS	i			Analyst	: TOM		
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	12/22/2016 2:12:33 AM	29282		
Surr: DNOP	94.0	70-130	%Rec	1	12/22/2016 2:12:33 AM	29282		
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	: AG		
Benzene	ND	0.023	mg/Kg	1	12/21/2016 6:10:14 AM	29278		
Toluene	ND	0.047	mg/Kg	1	12/21/2016 6:10:14 AM	29278		
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2016 6:10:14 AM	29278		
Xylenes, Total	ND	0.093	mg/Kg	1	12/21/2016 6:10:14 AM	29278		
Surr: 1,2-Dichloroethane-d4	99.4	70-130	%Rec	1	12/21/2016 6:10:14 AM	29278		
Surr: 4-Bromofluorobenzene	92.6	70-130	%Rec	1	12/21/2016 6:10:14 AM			
Surr: Dibromofluoromethane	102	70-130	%Rec	1	12/21/2016 6:10:14 AM	29278		
Surr: Toluene-d8	105	70-130	%Rec	1	12/21/2016 6:10:14 AM	29278		

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

Oualifiers:	*	Value exceeds Maximum Contaminant Level.	В	Analyte detected in the associated Method Blank
Quanners.	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 7 of 15
	ND	Not Detected at the Reporting Limit	Р	Sample pH Not In Range
	R	RPD outside accepted recovery limits		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 ResourcesProject:Tenneco SWD SystemLab ID:1612936-008	Client Sample ID: EB4-10'           Collection Date: 12/14/2016 12:29:00 PM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qua	l Units	DF Date Analyzed Batch				
EPA METHOD 300.0: ANIONS Chloride	3900	150	mg/Kg	Analyst: LGT 100 12/27/2016 7:18:08 PM 29334				
EPA METHOD 8015D MOD: GASOLIN Gasoline Range Organics (GRO) Surr: BFB	IE RANGE ND 82.6	5.0 70-130	mg/Kg %Rec	Analyst: <b>AG</b> 1 12/21/2016 11:05:34 AM 29278 1 12/21/2016 11:05:34 AM 29278				
EPA METHOD 8015M/D: DIESEL RAN Diesel Range Organics (DRO) Surr: DNOP	NGE ORGANICS ND 99.3	9.6 70-130	mg/Kg %Rec	Analyst: <b>TOM</b> 1 12/23/2016 5:58:02 AM 29308 1 12/23/2016 5:58:02 AM 29308				
EPA METHOD 8260B: VOLATILES SI	HORT LIST			Analyst: AG				
Benzene Toluene Ethylbenzene	ND ND ND	0.025 0.050 0.050	mg/Kg mg/Kg mg/Kg	<ol> <li>12/21/2016 11:05:34 AM 29278</li> </ol>				
Xylenes, Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene	ND 102 90.7	0.10 70-130 70-130	mg/Kg %Rec %Rec	1 12/21/2016 11:05:34 AM 29278 1 12/21/2016 11:05:34 AM 29278 1 12/21/2016 11:05:34 AM 29278 1 12/21/2016 11:05:34 AM 29278				
Surr: Dibromofluoromethane Surr: Toluene-d8	115 101	70-130 70-130	%Rec %Rec	1 12/21/2016 11:05:34 AM 29278				

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

В

\* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 8 of 15
- 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.

CLIENT: EOG ResourcesProject:Tenneco SWD SystemLab ID:1612936-009	Client Sample ID: EB5-1'           Collection Date: 12/14/2016 12:31:00 PM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM						
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	
EPA METHOD 300.0: ANIONS					Analy	/st: MRA	
Chloride	ND	30	mg/Kg	20	12/22/2016 10:12:47	PM 29334	
EPA METHOD 8015D MOD: GASOLI	NE RANGE				Analy	/st: AG	
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	12/21/2016 11:34:24	AM 29278	
Surr: BFB	83.8	70-130	%Rec	1	12/21/2016 11:34:24	AM 29278	
EPA METHOD 8015M/D: DIESEL RA	NGE ORGANICS				Anal	yst: TOM	
Diesel Range Organics (DRO)	ND	9.8	mg/Kg	1	12/23/2016 7:07:43 /	AM 29308	
Surr: DNOP	93.3	70-130	%Rec	1	12/23/2016 7:07:43	AM 29308	
EPA METHOD 8260B: VOLATILES S	HORT LIST				Anal	yst: <b>AG</b>	
Benzene	ND	0.024	mg/Kg	1	12/21/2016 11:34:24	AM 29278	
Toluene	ND	0.048	mg/Kg	1	12/21/2016 11:34:24	AM 29278	
Ethylbenzene	ND	0.048	mg/Kg	1	12/21/2016 11:34:24	AM 29278	
Xylenes, Total	ND	0.096	mg/Kg	1	12/21/2016 11:34:24		
Surr: 1,2-Dichloroethane-d4	99.9	70-130	%Rec	1	12/21/2016 11:34:24		
Surr: 4-Bromofluorobenzene	91.8	70-130	%Rec	1	12/21/2016 11:34:24		
Surr: Dibromofluoromethane	118	70-130	%Rec	1	12/21/2016 11:34:24		
Surr: Toluene-d8	99.9	70-130	%Rec	1	12/21/2016 11:34:24	AM 29278	

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

В

Qualifiers: \* Valu

- \* 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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 9 of 15
- 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.

CLIENT: EOG Resources Project: Tenneco SWD System Lab ID: 1612936-010	Client Sample ID: EB5-5'           Collection Date: 12/14/2016 12:33:00 PM           Matrix: SOIL         Received Date: 12/16/2016 9:05:00 AM							
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch		
EPA METHOD 300.0: ANIONS					Analy	yst: MRA		
Chloride	ND	30	mg/Kg	20	12/22/2016 10:25:12	PM 29334		
EPA METHOD 8015D MOD: GASOLII					Anal	yst: AG		
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/21/2016 12:03:14	PM 29278		
Surr: BFB	83.8	70-130	%Rec	1	12/21/2016 12:03:14	PM 29278		
EPA METHOD 8015M/D: DIESEL RAI	NGE ORGANICS	i			Anal	yst: TOM		
Diesel Range Organics (DRO)	ND	9.6	mg/Kg	1	12/23/2016 7:31:00	AM 29308		
Surr: DNOP	114	70-130	%Rec	1	12/23/2016 7:31:00	AM 29308		
EPA METHOD 8260B: VOLATILES S	HORT LIST				Anal	yst: <b>AG</b>		
Benzene	ND	0.024	mg/Kg	1	12/21/2016 12:03:14	PM 29278		
Toluene	ND	0.047	mg/Kg	1	12/21/2016 12:03:14	PM 29278		
Ethylbenzene	ND	0.047	mg/Kg	1	12/21/2016 12:03:14			
Xylenes, Total	ND	0.094	mg/Kg	1	12/21/2016 12:03:14			
Surr: 1.2-Dichloroethane-d4	102	70-130	%Rec	1	12/21/2016 12:03:14			
Surr: 4-Bromofluorobenzene	93.5	70-130	%Rec	1	12/21/2016 12:03:14			
Surr: Dibromofluoromethane	118	70-130	%Rec	1	12/21/2016 12:03:14			
Surr: Toluene-d8	103	70-130	%Rec	1	12/21/2016 12:03:14	4 PM 29278		

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

В

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
- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 10 of 15
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

12/21/2016 12:31:56 PM 29278

#### Hall Environmental Analysis Laboratory, Inc. Client Sample ID: EB5-10' **CLIENT: EOG Resources** Collection Date: 12/14/2016 12:36:00 PM Tenneco SWD System **Project:** Received Date: 12/16/2016 9:05:00 AM Matrix: SOIL 1612936-011 Lab ID: Batch **DF** Date Analyzed PQL Qual Units Result Analyses Analyst: MRA EPA METHOD 300.0: ANIONS 12/22/2016 10:37:37 PM 29334 20 mg/Kg ND 30 Chloride Analyst: AG EPA METHOD 8015D MOD: GASOLINE RANGE 12/21/2016 12:31:56 PM 29278 4.9 mg/Kg 1 ND Gasoline Range Organics (GRO) 12/21/2016 12:31:56 PM 29278 %Rec 1 83.3 70-130 Surr: BFB Analyst: TOM EPA METHOD 8015M/D: DIESEL RANGE ORGANICS 12/23/2016 7:54:13 AM 29308 mg/Kg 1 ND 9.6 Diesel Range Organics (DRO) 12/23/2016 7:54:13 AM 29308 1 70-130 %Rec 109 Surr: DNOP Analyst: AG EPA METHOD 8260B: VOLATILES SHORT LIST 12/21/2016 12:31:56 PM 29278 1 0.024 mg/Kg ND Benzene 12/21/2016 12:31:56 PM 29278 mg/Kg 1 0.049 ND Toluene 12/21/2016 12:31:56 PM 29278 mg/Kg 1 ND 0.049 Ethylbenzene 12/21/2016 12:31:56 PM 29278 mg/Kg 1 ND 0.097 Xylenes, Total 12/21/2016 12:31:56 PM 29278 %Rec 1 70-130 105 Surr: 1,2-Dichloroethane-d4 1 12/21/2016 12:31:56 PM 29278 %Rec 70-130 91.1 Surr: 4-Bromofluorobenzene 12/21/2016 12:31:56 PM 29278 %Rec 1 70-130

70-130

%Rec

1

113

102

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

в

Value exceeds Maximum Contaminant Level. \*

Sample Diluted Due to Matrix D

Surr: Dibromofluoromethane

Surr: Toluene-d8

- Holding times for preparation or analysis exceeded Н
- Not Detected at the Reporting Limit ND
- RPD outside accepted recovery limits R
- % Recovery outside of range due to dilution or matrix S
- Analyte detected in the associated Method Blank
- Value above quantitation range Ε
- Analyte detected below quantitation limit Page 11 of 15 J
- Sample pH Not In Range Ρ
- Reporting Detection Limit RL
- Sample container temperature is out of limit as specified w

Hall Environmental Analysis Laboratory, Inc.

1612936 WO#:

28-Dec-16

Client: Project:	2001	esources o SWD Syste	em								
Sample ID		SampTy	/pe: mb			Code: El		300.0: Anion	S		
Client ID: Prep Date:	PBS 12/21/2016	Analysis Date				eqNo: 1		Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		ND	1.5								
Sample ID	LCS-29334	SampT	ype: Ics	;	Tes	tCode: E	PA Method	300.0: Anion	S		
Client ID:	LCSS	Batch	ID: 29	334	F	RunNo: 3	9630				
Prep Date:	12/21/2016	Analysis D	ate: 12	2/22/2016	S	SeqNo: 1	241441	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride		14	1.5	15.00	0	92.9	90	110			

#### Qualifiers:

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

Page 12 of 15

#### Hall Environmental Analysis Laboratory, Inc.

Client: EOG Resources

Project: Tenneco	o SWD System								
Sample ID LCS-29282	SampType: L	CS	Test	Code: EP	A Method	8015M/D: Die	sel Range	e Organics	
Client ID: LCSS	Batch ID: 2	9282	R	unNo: <b>39</b>	9576				
	Analysis Date:		S	egNo: 12	239546	Units: mg/K	g		
Prep Date: 12/19/2016				•		HighLimit	%RPD	RPDLimit	Qual
Analyte	Result PQL		SPK Ref Val	%REC 107	LowLimit 63.8	116		ICI Denna	Quui
Diesel Range Organics (DRO)	53 10	-	0		63.8 70	130			
Surr: DNOP	5.4	5.000		107	70	130			
Sample ID MB-29282	SampType: N	<b>IBLK</b>	Tes	Code: EF	PA Method	8015M/D: Die	esel Range	e Organics	
Client ID: PBS	Batch ID: 2	9282	F	unNo: 39	9576				
Prep Date: 12/19/2016	Analysis Date:	12/21/2016	S	eqNo: 1	239547	Units: mg/K	(g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 1	0							
Surr: DNOP	11	10.00		110	70	130			
Sample ID LCS-29308	SampType: I	_cs	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch ID: 2	29308	F	RunNo: 3	9590				
Prep Date: 12/20/2016	Analysis Date:	12/22/2016	S	SeqNo: 1	240933	Units: mg/h	٢g		
Analyte	Result PQI	_ SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47 1	0 50.00	0	94.9	63.8	116			
Surr: DNOP	4.4	5.000		88.5	70	130			
Sample ID MB-29308	SampType: I	MBLK	Tes	tCode: E	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: PBS	Batch ID:		ſ	RunNo: 3	9590				
	Analysis Date:		:	SeaNo: 1	240934	Units: mg/l	Kg		
Prep Date: 12/20/2016	Analysis Date.			•		Ū.	-	DDDLimit	Qual
Analyte	Result PQ		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Quai
Diesel Range Organics (DRO)	110	10		00.4	70	130			
Surr: DNOP	9.2	10.00		92.4	70	130			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

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

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WO#: 1612936

### QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

#### Client: EOG Resources

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Project:	Tenneco	SWD	System
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Sample ID Ics-29278 SampType: LCS TestCode: EPA Method 8260B: Volatiles Short List										
Sample ID Ics-29278										
Client ID: LCSS		ID: 292			unNo: 3					
Prep Date: 12/19/2016	Analysis D	ate: 12	/20/2016	S	eqNo: 1	238550	Units: mg/K	g		
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.95	0.025	1.000	0	94.6	70	130			
Toluene	0.92	0.050	1.000	0	92.2	70	130			
Ethylbenzene	0.93	0.050	1.000	0	93.0	70	130			
Xylenes, Total	3.2	0.10	3.000	0	108	70	130			
Surr: 1,2-Dichloroethane-d4	0.51		0.5000		102	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.8	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		109	70	130			
Surr: Toluene-d8	0.50		0.5000		99.6	70	130			
Sample ID mb-29278	SampT	ype: ME	BLK	Tes	tCode: E	PA Method	8260B: Vola	tiles Short	List	
	•	ype: <b>ME</b> h ID: <b>29</b>			tCode: E RunNo: 3		8260B: Vola	tiles Short	List	
	•	h ID: 29	278	F		9538	8260B: Vola Units: mg/ł		List	
Client ID: PBS	Batcl	h ID: 29	278 2/20/2016	F	RunNo: 3	9538			List RPDLimit	Qual
Client ID: PBS Prep Date: 12/19/2016	Batcl Analysis [	n ID: <b>29</b> Date: <b>1</b> :	278 2/20/2016	F	RunNo: 3 SeqNo: 1	9538 238551	Units: mg/ł	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte	Batcl Analysis E Result	n ID: <b>29</b> Date: <b>1</b> : PQL	278 2/20/2016	F	RunNo: 3 SeqNo: 1	9538 238551	Units: mg/ł	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene	Batcl Analysis E Result ND	n ID: <b>29</b> Date: <b>1</b> : PQL 0.025	278 2/20/2016	F	RunNo: 3 SeqNo: 1	9538 238551	Units: mg/ł	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene Toluene	Batcl Analysis E Result ND ND	n ID: 29 Date: 12 PQL 0.025 0.050	278 2/20/2016	F	RunNo: 3 SeqNo: 1 %REC	9538 238551 LowLimit	Units: <b>mg/k</b> HighLimit	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene Toluene Ethylbenzene	Batcl Analysis I Result ND ND ND	n ID: <b>29</b> Date: <b>1</b> 2 <u>PQL</u> 0.025 0.050 0.050	278 2/20/2016 SPK value 0.5000	F SPK Ref Val	RunNo: 3 SeqNo: 1 %REC 95.8	9538 238551 LowLimit 70	Units: <b>mg/F</b> HighLimit 130	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene Toluene Ethylbenzene Xylenes, Total	Analysis E Result ND ND ND ND ND	n ID: <b>29</b> Date: <b>1</b> 2 <u>PQL</u> 0.025 0.050 0.050	278 2/20/2016 SPK value 0.5000 0.5000	F SPK Ref Val	RunNo: 3 SeqNo: 1 %REC 95.8 97.9	9 <b>538</b> 238551 LowLimit 70 70	Units: <b>mg/F</b> HighLimit 130 130	٢g		Qual
Client ID: PBS Prep Date: 12/19/2016 Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 1,2-Dichloroethane-d4	Analysis E Result ND ND ND ND ND 0.48	n ID: <b>29</b> Date: <b>1</b> 2 <u>PQL</u> 0.025 0.050 0.050	278 2/20/2016 SPK value 0.5000	F SPK Ref Val	RunNo: 3 SeqNo: 1 %REC 95.8	9538 238551 LowLimit 70	Units: <b>mg/F</b> HighLimit 130	٢g		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#: 1612936

### Hall Environmental Analysis Laboratory, Inc.

EOG Resources **Client: Project:** 

EUG Res	source	s
Tenneco	SWD	System

0												
Sample ID Ics-29278	SampT	ype: LC	S	Tes	tCode: EF	EPA Method 8015D Mod: Gasoline Range						
Client ID: LCSS	Batch	n ID: 29	278	RunNo: 39538								
Prep Date: 12/19/2016	Analysis D	Analysis Date: 12/20/2016			SeqNo: 1238582			ξg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Range Organics (GRO)	25	5.0	25.00	0	99.2	62.9	123					
Surr: BFB	450		500.0		89.1	70	130					
0000		ype: ME		Tes			130 8015D Mod:	Gasoline	Range			
Surr: BFB	SampT	Type: ME h ID: 29	BLK			PA Method		Gasoline	Range			
Surr: BFB Sample ID mb-29278	SampT	h ID: 29	BLK	F	tCode: El	PA Method 9538			Range			
Surr: BFB Sample ID mb-29278 Client ID: PBS	SampT Batcl	h ID: 29	3LK 278 2/20/2016	F	tCode: El RunNo: 3	PA Method 9538	8015D Mod:		Range RPDLimit	Qual		
Surr: BFB Sample ID mb-29278 Client ID: PBS Prep Date: 12/19/2016	SampT Batcl Analysis E	h ID: 29 Date: 12	3LK 278 2/20/2016	F	tCode: El RunNo: 3 SeqNo: 1	PA Method 9538 238585	8015D Mod: Units: mg/ł	٢g		Qual		

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

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1612936 WO#:

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental A Albuq TEL: 505-345-3975 F Website: www.hall	4901 Hawkins querque, NM 87 FAX: 505-345-4	NE 109 Samp 107	ble Log-In Check List
Client Name: EOG/Yates	Work Order Number:	1612936		ReptNo: 1
Received by/date: Ag Logged By: Ashley Gallegos	12/16/2016 9:05:00 AM		AJ	
Completed By: Ashley Gallegos Reviewed By:	12/16/2016 3:43:19 PM 12/19/16		AF J	
Chain of Custody		Yes	No [.]	Not Present
1. Custody seals intact on sample bottles?		Yes 💟	No 11	Not Present
<ol> <li>Is Chain of Custody complete?</li> <li>How was the sample delivered?</li> </ol>		<u>Courier</u>	NO 1.1	Not reserve
Log In 4. Was an attempt made to cool the samples	57	Yes 🔽	No []]	NA [1]
5. Were all samples received at a temperature	re 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) prop	erly preserved?	Yes 🗹	No []]	
9. Was preservative added to bottles?		Yes	No 🕅	<b>NA</b> []
10.VOA vials have zero headspace?		Yes	No 🗔	No VOA Vials 🖌
11. Were any sample containers received bro	ken?	Yes []]	No 🗹	# of preserved bottles checked
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No	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:
<u>Special Handling (if applicable)</u>				

#### NA 🗹 Yes []] No 🛄 16. Was client notified of all discrepancies with this order? . . . . . .... . Date Person Notified: []] eMail []] Phone []] Fax []] In Person Via: By Whom: Regarding: Client Instructions: . . . . . . . . . . . . .. ..... .. 17. Additional remarks: 18. Cooler Information

ware and the second and the second second second and the second second second second second second second second

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Yes			

Inder DRush ANALYSIS LABORATORY	Tenneco SWD System 4901 Hawkins NE - Albuquerque, NM 87109		Analysis Request	() () () () () () () () () () () () () (	se Settle # 205 0750 # 205 0750		Chase Settle T Ves		Preserva Type								z Ice	r Ice -009 x x x x		r ICE -011 x x -	Date 1	ad by: Date Time Remarks: Results needed by 12/2//2016.	The ishigher a	d by() Date Time
	1 Hawl	. 505-3		(les	eid\st								Ĵ	Ĵ						$\frac{1}{x}$				
	490	Tel		(Λļu	0 පෙළ	) H	d.L +	38	TM + Xəte			$\hat{\Box}$	Î					$\hat{\Box}$				marks		
				(1	(802	s'al	NT +	BE	TM + X3T8	_×	_×	_×	×	<u>×</u>	_×	×	×	×	×	<u>×</u>		P Y	Ы	<b></b>
	) System					2	Ø	$\leq$	۱ ۱ ۹	100-	E00-	-003	100-	-002	100-	100-	-08	600-	010-	110-	ļ		۲	
	Fenneco SWD			ger:	Chase Settle	10 - 0 - 10	Zhase sette			ICE	ICE	ICE	ICE	Ū.	Ы	<u>CE</u>	CE	ICE	ICE ICE	<u>ICE</u>		-	1/01	
I UITI-MOUTU I X Standarc Project Name:		Project #:		Project Manager:		-	Sampler: On Ice:	Tem	Container Type and #	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 4oz.	1 - 402.		Received by:	ANTA	Received by:
Chain-of-Custody Kecord EOG Resources		sia, NM 88210	6537	chase settle@eogresources.com	And the second	L Level 4 (ruii valluauuri)			Sample Request ID	EB1-1"	EB1-5'	EB2-1'	EB2-5'	EB3-5'	EB3-10'	EB4-5'	EB4-10'	EB5-1'	EB5-5'	EB5-10'		ed by:	- Law	ed by:
Chain-ot-Cu Client: EOG Resources		105 South 4th Street Artesia, NM	575-703-6537	chase se			□ Other		Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		Relinquished by:	P	Relinquished by:
ain-	Mailing Address:	4th St			ige:		tion:	(ype)	Time	12/14/2018 12:11P	1			12/14/2018 12:21P		12:14/2018 12:27P	<sup>12114/2016</sup> 12:29P	12/14/2016 12:31P Soil	12:33P			Time:	4:309	Time:
5 L	ng Ac	South	Phone #:	email or Fax#:	C Pa		Accreditation:	D EDD (Type)	Date	2018	2016	zore 1	12016	1.	uzote 1	1	uzone 1	#2016	1 shock	1 2015				Date:

clearly notated on the analysical report. oala wili de This serves as notice of this possibility. Any sub-contracted if necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.



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

January 20, 2017

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

OrderNo.: 1701495

RE: Tenneco SWD System

Dear Chase Settle:

Hall Environmental Analysis Laboratory received 32 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,

andy

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Lab Order: 1701495

Date Reported: 1/20/2017

	OG Resources enneco SWD System			La	b Order: 170149	95
Lab ID: Client Sample ID:	1701495-001 T1-10.5'		(	Collection Date: Matrix:	1/4/2017 9:52:00 AM SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300. Chloride	.0: ANIONS	4200	150	mg/Kg	Ana 100 1/16/2017 7:29:02 F	lyst: <b>LGT</b> PM 29684
Lab ID: Client Sample ID:	1701495-002 T1-12.5'			Matrix:		
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	2800	150	mg/Kg	Ana 100 1/16/2017 7:41:27 F	lyst: <b>LGT</b> PM 29684
Lab ID: Client Sample ID:	1701495-003 T1-14.5'			Collection Date: Matrix:	: 1/4/2017 10:18:00 AN : SOIL	M
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	2700	150	mg/Kg	Ana 100 1/16/2017 8:18:41	alyst: <b>LGT</b> PM 29684
Lab ID:	1701495-004 T1-15.5'			Collection Date Matrix	: 1/4/2017 10:34:00 A : SOIL	М
Client Sample ID: Analyses	11-15.5	Result	PQL Qual		DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	D.0: ANIONS	3400	150	mg/Kg	Ana 100 1/16/2017 8:31:06	alyst: <b>LGT</b> PM 29693
Lab ID: Client Sample ID:	1701495-005 WB1-2'				: 1/4/2017 11:24:00 A : SOIL	Μ
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	An 20 1/14/2017 3:37:31	alyst: <b>LGT</b> PM 29693

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

Qualifiers: \*

- \* Value exceeds Maximum Contaminant Level.D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 8
- 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: 1701495

Lab Older. 1701495

Date Reported: 1/20/2017

	OG Resources enneco SWD System				Lab Order: 17014	195
Lab ID: Client Sample ID:	1701495-006 WB1-F		(		ate: 1/4/2017 11:51:00 A rix: SOIL	Μ
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	ND	30	mg/Kg	Ana 20 1/14/2017 4:14:45	alyst: <b>LGT</b> PM 29693
Lab ID: Client Sample ID:	1701495-007 WB1-F+1'				ate: 1/4/2017 11:55:00 A rix: SOIL	М
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	ND	30	mg/Kg	An 20 1/14/2017 4:27:10	alyst: <b>LGT</b> PM 29693
Lab ID: Client Sample ID:	1701495-008 WB2-2'				ate: 1/4/2017 11:32:00 A trix: SOIL	
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	ND	30	mg/Kg	An 20 1/14/2017 5:04:24	alyst: <b>LGT</b> PM 29693
Lab ID: Client Sample ID:	1701495-009 WB2-F				Pate: 1/4/2017 11:58:00 A trix: SOIL	M
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	ND	30	mg/Kg	Ar 20 1/14/2017 5:16:4§	nalyst: <b>LGT</b> 9 PM 29693
Lab ID: Client Sample ID:	1701495-010 WB2-F+1'				Date: 1/4/2017 12:00:00 F trix: SOIL	ΡM
Analyses		Result	PQL Qua	Units	DF Date Analyzed	Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	30	30	mg/Kg	Ar 20 1/14/2017 5:29:14	nalyst: <b>LGT</b> 4 PM 29693

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

   U
   U
   Composition of completing approximation of completing approximation.
  - H Holding times for preparation or analysis exceeded
  - ND Not Detected at the Reporting Limit
  - R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

- 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 8
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Lab Order: 1701495

Date Reported: 1/20/2017

O'DI'DI'YA'	OG Resources enneco SWD System			L	ab Order:	170149	5
Lab ID: Client Sample ID:	1701495-011 WB3-2'			Collection Date Matrix	: SOIL		
Analyses		Result	PQL Qual	Units	DF Date An	alyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	ND	30	mg/Kg	20 1/14/201	Anal 7 5:41:38 P	yst: <b>LGT</b> M 29693
Lab ID: Client Sample ID:	1701495-012 WB3-F			Collection Date Matrix	e: 1/4/2017 12 a: SOIL	:05:00 PM	I
Analyses		Result	PQL Qual	Units	DF Date Ar	alyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	ND	30	mg/Kg	20 1/14/201	Anal 7 5:54:03 F	yst: <b>LGT</b> M 29693
Lab ID: Client Sample ID:	1701495-013 WB3-F+1'			Collection Date Matrix	e: 1/4/2017 12 x: SOIL	::08:00 PN	1
Analyses		Result	PQL Qua	l Units	DF Date A	nalyzed	Batch ID
EPA METHOD 300 Chloride	).0: ANIONS	ND	30	mg/Kg	20 1/14/20	Ana 17 6:06:27 F	lyst: <b>LGT</b> PM 29693
Lab ID:	1701495-014			Collection Dat		1:44:00 AN	Ν
<b>Client Sample ID:</b>	WB4-2'				x: SOIL		
Analyses		Result	PQL Qua	l Units	DF Date A	nalyzed	Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	20 1/14/20	Ana 17 6:18:52 I	llyst: <b>LGT</b> PM 29693
Lab ID: Client Sample ID:	1701495-015 WB4-F			Collection Dat Matri	e: 1/4/2017 1	2:11:00 PN	А
Analyses		Result	PQL Qua	l Units	DF Date A	nalyzed	Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	20 1/14/20	Ana 17 6:31:17	alyst: <b>LGT</b> PM 29693

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

Hall Environmental Analysis Laboratory, Inc.

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits Page 3 of 8

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Lab Order: 1701495

Date Reported: 1/20/2017

Children	EOG Resources Fenneco SWD System				Lab Order: 1701495
Lab ID: Client Sample ID:	1701495-016 WB4-F+1'				te: 1/4/2017 12:13:00 PM ix: SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 300 Chloride	D.0: ANIONS	ND	30	mg/Kg	Analyst: LGT 20 1/14/2017 6:43:42 PM 29693
Lab ID: Client Sample ID:	1701495-017 EB3-F				te: 1/4/2017 12:19:00 PM ix: SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	370	30	mg/Kg	Analyst: <b>LGT</b> 20 1/14/2017 6:56:07 PM 29693
Lab ID: Client Sample ID:	1701495-018 EB3-F+3'				te: 1/4/2017 12:21:00 PM ix: SOIL
Analyses		Result	PQL Qual	Units	DF Date Analyzed Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	Analyst: <b>LGT</b> 20 1/14/2017 7:33:20 PM 29693
Lab ID: Client Sample ID:	1701495-019 : EB3-F+6'				nte: 1/4/2017 12:24:00 PM rix: SOIL
Analyses		Result	PQL Qua	Units	DF Date Analyzed Batch ID
EPA METHOD 30 Chloride	0.0: ANIONS	120	30	mg/Kg	Analyst: LGT 20 1/14/2017 7:45:45 PM 29693
Lab ID: Client Sample ID	1701495-020 : EB3-F+9'				ate: 1/4/2017 12:26:00 PM rix: SOIL
Analyses		Result	PQL Qua	l Units	DF Date Analyzed Batch ID
EPA METHOD 30 Chloride	00.0: ANIONS	ND	30	mg/Kg	Analyst: LGT 20 1/14/2017 7:58:09 PM 29693

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 4 of 8
- 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.

Lab Order: 1701495

Date Reported: 1/20/2017

CAMERICA	OG Resources enneco SWD System			L٤	ıb Or	der:	170149	95	
Lab ID: Client Sample ID:	1701495-021 EB3-F+12'			Collection Date: Matrix:	SOI	L			tch ID
Analyses		Result	PQL Qual	Units	DFI	Date An	alyzeu	Dai	
EPA METHOD 300 Chloride	.0: ANIONS	ND	30	mg/Kg	20	1/14/201	Ana 7 8:10:34 F	-	LGT 29693
Lab ID:	1701495-022			Collection Date:			:31:00 PN	1	
Client Sample ID:	EB4-F			Matrix:	SOI	L			
Analyses		Result	PQL Qual	Units	DF	Date An	alyzed	Ba	tch ID
EPA METHOD 300 Chloride	).0: ANIONS	ND	30	mg/Kg	20	1/16/201	Ana 7 9:08:19 I	•	<b>LGT</b> 29694
Lab ID:	1701495-023			Collection Date	: 1/4/	2017 12	:33:00 PN	Л	
<b>Client Sample ID:</b>	EB4-F+3'			Matrix	: SOI	IL			
Analyses		Result	PQL Qual	Units	DF	Date Ar	alyzed	Ba	tch ID
EPA METHOD 300 Chloride	D.0: ANIONS	ND	30	mg/Kg	20	1/16/201	Ana 17 9:45:32		<b>LGT</b> 29694
Lab ID:	1701495-024			<b>Collection Date</b>	: 1/4	/2017 12	2:37:00 PI	M	
Client Sample ID:	EB4-F+6'			Matrix	: SO	IL			
Analyses		Result	PQL Qual	Units	DF	Date A	nalyzed	Ba	tch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	20	1/16/20	An: 17 9:57:57		LGT 29694
Lab ID:	1701495-025			<b>Collection Date</b>	: 1/4	/2017 12	2:39:00 P	М	
Client Sample ID:				Matrix	: SO	IL			
Analyses		Result	PQL Qua	l Units	DF	Date A	nalyzed	Ba	atch ID
EPA METHOD 30 Chloride	0.0: ANIONS	ND	30	mg/Kg	20	1/16/20	An 17 10:10:2		: <b>LGT</b> 29694

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

Hall Environmental Analysis Laboratory, Inc.

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 8

P Sample pH Not In Range

RL Reporting Detection Limit

W Sample container temperature is out of limit as specified

Lab Order: 1701495

Date Reported: 1/20/2017

	OG Resources enneco SWD System			La	ab Order: 17014	95
Lab ID: Client Sample ID:	1701495-026 EB4-F+12'		(	Collection Date: Matrix:	1/4/2017 12:40:00 PI SOIL	M
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300. Chloride	.0: ANIONS	ND	30	mg/Kg	An: 20 1/16/2017 10:47:3	alyst: <b>LGT</b> 5 PM 29694
Lab ID: Client Sample ID:	1701495-027 SB-F			Matrix:		
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	.0: ANIONS	ND	30	mg/Kg	An 20 1/16/2017 11:00:0	alyst: <b>LGT</b> 0 PM 29694
Lab ID: Client Sample ID:	1701495-028 T2-10.5'			Matrix		
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	0.0: ANIONS	4300	300	mg/Kg	An 200 1/17/2017 6:40:04	alyst: <b>LGT</b> PM 29694
Lab ID: Client Sample ID:	1701495-029 T2-12.5'			Collection Date Matrix	: 1/10/2017 12:32:00 : SOIL	PM
Analyses		Result	PQL Qual	Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	).0: ANIONS	5400	300	mg/Kg	Ar 200 1/17/2017 6:52:28	alyst: <b>LGT</b> 3 PM 29694
Lab ID: Client Sample ID:	1701495-030 T2-14.5'				: 1/10/2017 12:43:00 :: SOIL	PM
Analyses		Result	PQL Qua	l Units	DF Date Analyzed	Batch ID
EPA METHOD 300 Chloride	D.0: ANIONS	3800	150	mg/Kg	Ai 100 1/18/2017 11:18:	nalyst: <b>LGT</b> 09 PM 29694

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 6 of 8
- 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.

Lab Order: 1701495

Date Reported: 1/20/2017

CLIENT: Project:	EOG Resources Tenneco SWD System				Lab Order: 17014	195
Lab ID: Client Sample II	1701495-031 <b>D:</b> E3-14.5'				ate: 1/10/2017 1:09:00 P	М
Analyses		Result	PQL Qua	l Units	DF Date Analyzed	Batch ID
EPA METHOD 3 Chloride	300.0: ANIONS	3100	150	mg/Kg	An: 100 1/18/2017 11:30:3	alyst: <b>LGT</b> 3 PM 29694
Lab ID:	1701495-032			Collection D	ate: 1/10/2017 1:26:00 P	М
Client Sample II	<b>D:</b> E-16.5'			Mat	trix: SOIL	
Analyses		Result	PQL Qua	l Units	DF Date Analyzed	Batch ID
EPA METHOD 3 Chloride	300.0: ANIONS	3700	150	mg/Kg	An 100 1/18/2017 11:42:5	alyst: <b>LGT</b> 8 PM 29694

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

Hall Environmental Analysis Laboratory, Inc.

- 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 7 of 8
- 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.

WO#: 1701495

20-Jan-17

	esources o SWD System
Sample ID MB-29684	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 29684 RunNo: 40017
Prep Date: 1/13/2017	Analysis Date: 1/13/2017 SeqNo: 1254178 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 1.5
Sample ID LCS-29684	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 29684 RunNo: 40017
Prep Date: 1/13/2017	Analysis Date: 1/13/2017 SeqNo: 1254179 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	15 1.5 15.00 0 97.8 90 110
Sample ID MB-29693	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 29693 RunNo: 40019
Prep Date: 1/13/2017	Analysis Date: 1/14/2017 SeqNo: 1254254 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	ND 1.5
Sample ID LCS-29693	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 29693 RunNo: 40019
Prep Date: 1/13/2017	Analysis Date: 1/14/2017 SeqNo: 1254255 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	14 1.5 15.00 0 96.5 90 110
Sample ID MB-29694	SampType: MBLK TestCode: EPA Method 300.0: Anions
Client ID: PBS	Batch ID: 29694 RunNo: 40057
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
Chloride	ND 1.5
Sample ID LCS-29694	SampType: LCS TestCode: EPA Method 300.0: Anions
Client ID: LCSS	Batch ID: 29694 RunNo: 40057
Prep Date: 1/13/2017	Analysis Date: 1/16/2017 SeqNo: 1255402 Units: mg/Kg
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Chloride	15 1.5 15.00 0 97.3 90 110

- \* 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
- Page 8 of 8
  - 1 450 0

HALL ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental A Albuq TEL: 505-345-3975 I Website: www.hall	4901 Haw querque, NI FAX: 505-3	vkins NE M 87109 S 45-4107	Sam	ple Log-In Check List
Client Name: EOG/Yates	Work Order Number:	1701495	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		RcptNo: 1
Received by/date: RE	01/12/17	••••		<b>.</b>	
Logged By: Ashley Gallegos 1/	12/2017 9:35:00 AM		A	F	
Completed By: Ashley Gallegos 1/	12/2017 12:48:08 PM		A	Ŧ	
Reviewed By:	7112117			V	
Chain of Custody	< 124				ana, ao ao aminana o caona a se ana b
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	<b>)</b> []]	
7. Sufficient sample volume for indicated test(s)?		Yes 🗹	No	[]]	
8, Are samples (except VOA and ONG) properly	preserved?	Yes 🖌	No	[_]	
9. Was preservative added to bottles?		Yes [.]	No		NA
10.VOA vials have zero headspace?		Yes	No	[_]	No VOA Vials 🖌
11. Were any sample containers received broken?	•	Yes 📋	No		# of preserved bottles checked
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No	[.]	for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Cu	ustody?	Yes 🗹	No	[7]	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:
<u>Special Handling (if applicable)</u>					
16. Was client notified of all discrepancies with this	s order?	Yes []	No	[]]	NA 🗹

Person	Notified:			Date					
By Who	m:			r Via:	📋 eMail	Phone	] Fax	[ ]] In Person	
Regardi	ng:							Carlo and a contraction of the second second	
Client In	structions:		and a substantial state of the substantial sta		ander in Childi Babel Antonio and			<del>na la înderita de la înder</del> ia în înderita în înderita în înderita în înderita în înderita în înderita în înderita Înderita în înderita în înd	
Additional ren									
	Temp %	Condition	Seal Intact	Seal No	Seal Date	Signed	By		
Cooler No	1 iomh o								

Client: EOG Y Resources, inc. Mailing Address: 105 South 4th Street Artesia, NM 88210 Phone #: 575-703-6537 Phone #: 575-703-6537 email or Fax#: Chase Settle@eogresources.com Oa/QC Package: CACC Package: CACC Package: CACC Package: Date A Conter Date A Conter Date A Conter Date A Conter Date A Conter CACC Package: CACC Pac	Validation)	X Standarc Project Name:	C Rush				AN	A	<b>ISY</b>	S	AP	N N N	<b>ANALYSIS LABORATORY</b>	≿
Chase Since	Validation)	roject Name:												
Theet Artes 575-703-6 575-703-6 Chase Si Chase Si Matrix	validation)						M	w.hal	www.hallenvironmental.com	nmer	ntal.co	E		
treet Arte 575-703-6 Chase Si Chase Si Other Matrix	<u>urces.com</u> Validation)		Tenneco SWD System	System	49	01 Ha	wkins	- NE	Albuc	lbuend	ue, NN	4901 Hawkins NE - Albuquerque, NM 87109	60	
575-703-6 Chase Si Other_ Matrix	<u>rrces.com</u> Validation)	Project #:			T	Tel. 505-345-3975	-345-	3975	Fax	x 505	505-345-4107	4107		
Chase S Other Matrix								4	Analysis Request	s Re(	quest			
□ Other_ Matrix	2	Project Manager:	jer.											
□ Other_ Matrix		-	Chase Settle											
□ Other Matrix	<u></u>	1	PO # 205. 0750	50										
□ Other Matrix	-	Sampler:	Chase Settle									(\		(N 1
Matrix			100 JC								-	01		<u>。</u> 、
Matrix		sample lem										/-im		) səļ
	Sample Request ID	Container Type and #	Preservative Type	неат No. 1701495	BTEX + N BTEX + N	teM HqT	EDB (Me 9M) 803	8310 (PN	8 Aମ୍ବରମ 2	7) <mark>snoinA</mark> e99 1808	V) 80828	ə2) 0728		Iddu8 1iA
142017 9:52A Soil T1-1	T1-10.5'	1 - 4oz.	None	- 00)					×					
A Soil	T1-12.5 <sup>1</sup>	1 - 4oz.	None	-002					×					
Soil	T1-14.5'		None	-003				-	×					
Soil	T1-15.5'		None	+00-					×					
_	WB1-2'		None	-005					×					
	WB1-F		None	-900-					×					
	WB1-F+1'	1 - 4oz.	None	100-					×			·		
Soil	WB2-2'	1 - 4oz.	None	800-			-+		×					
	WB2-F	1 - 4oz.	None	-209			-+	-	Î	×				
Soil	WB2-F+1'	1 - 4oz.	None	0/0-						×				
Soil	WB3-2'	1 - 4oz.	None	-011					×	$\neg$	_			
	WB3-F	1 - 4oz.	None	<i>e10-</i>		_				J				
		Received by:	1		Remarks:		esults	need	Results needed by 1/19/2017.	1/19/2	017.			
9:30 125-		1	J	S										
Time: Relinquished by:		Received by:		Date lime							•			

it. Lity sub-contact need an D Dinou SR: If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves

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Client: EOG Y Resources, Inc. Mailing Address: 105 South 4th Street Artesia, N Phone #: 575-703-6537 email or Fax#: Chase Settle@	Resources					-						1			
ing Address: South 4th St ne #: iii or Fax#:		s, Inc.	X Standart	C Rush				A	IAL.	IS	۲ ۵	BC	DRA	<b>ANALYSIS LABORATORY</b>	≻
ing Address: South 4th St ne #. if or Fax#:			Project Name:	-				M	w.hall	www.hallenvironmental.com	menta	moo.			
South 4th Si ne #: ii or Fax#:				Tenneco SWD System	System	46	01 Hc	4901 Hawkins NE		- Albuquerque, NM 87109	lerque,	MN	37109		
le #: il or Fax#: OC Package:	treet Arte:	105 South 4th Street Artesia, NM 88210	Project #:			н Н	el. 50	Tel. 505-345-3975	3975	Fax	505-345-4107	45-41	07		
il or Fax#: Of Packane	575-703-6537	3537							Ā	Analysis	Request	est			
C Parkane	Chase Si	@eogresources.com	Project Manager:	ger.						(*0					
				Chase Settle						5'*O					
Standard		Level 4 (Full Validation)		PO # 205. 0750	50					od' <sup>2</sup> (					
Accreditation:			Sampler:	Chase Settle					(H)	"NC אבייל					(N ·
O NELAP	D Other_		On Jce:	<b>义</b> Yes					∀d	01 <sup>3</sup> کا		40			, ol
🗆 EDD (Type)			Sample Temperature:	berature:	13.5								1		Y) e
Date Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL NO. 1701495	rm + Xətə FM + Xətə	TPH Metho	dteM) HQT	ni <del>a</del> m) acia Avia) 0168	M 8 Aମ୍ପଠମ ) enoinA	litee9 1808	OV) 80828 me2) 0728			Air Bubble:
142017 12:08P	Soil	WB3-F+1'	1 - 4oz.	None	-013					×					
11:44A	Soil	WB4-2'	1 - 4oz.	None	-014					<u>×</u>					
142017 12:11P Soil	Soil	WB4-F	1 - 4oz.	None	-015					×					
MEDIT 12:13P Soil	Soil	WB4-F+1'	1 - 4oz.	None	910-					×		-+			
12:19P	Soil	EB3-F	1 - 4oz.	None	L10-					<u>×</u>					
12:21P Soil	Soil	EB3-F+3'	1 - 4oz.	None	-018					×					
W2017 12:24P	Soil	EB3-F+6'	1 - 4oz.	None	619-					×		-			
12:26P Soil	Soil	EB3-F+9'	1 - 4oz.	None	-020					×					
14/2017 12:29P Soil	Soil	EB3-F+12'	1 - 4oz.	None	-021					×		-+			+
12:31P	Soil	EB4-F	1 - 4oz.	None	-022					×		$\rightarrow$			_
14/2017 12:33P Soil	Soil	EB4-F+3'	1 - 4oz.	None	- 023					<u>×</u>					-+
142017 12:37P	Soil	EB4-F+6'	1 - 4oz.	None	Υ					×			_	_	
Date: Time:			Received by:		Date Time	Remarks:		esults	neede	Results needed by 1/19/2017.	19/201	7.			
1-11-17 9:30	R.		11	$\left( \right)$	E										
Date: Time:	Relinquished by:	ed by:	Received by:		Daté Time				•						

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HALL ENVIRONMENTAL	<b>ANALYSIS LABORATORY</b>		-																							
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Chain-of-Custody Record				105 South 4th Street Artesia, NM 88210	1537	@eogresources.com	Level 4 (Full Validation)				Sample Request ID	EB4-F+9'	EB4-F+12'	SB-F		T2-10.5	T2-12.5'	T2-14.5	E3-14.5'	E3-16.5'				ed by:	ed bv:	- 62 22
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aña sany u If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted



March 21, 2017

CHASE SETTLE EOG Y RESOURCES, INC 105 SOUTH 4TH STREET ARTESIA, NM 88210

RE: TENNECO SWD SYSTEM

Enclosed are the results of analyses for samples received by the laboratory on 03/20/17 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at <a href="https://www.tceq.texas.gov/field/qa/lab\_accred\_certif.html">www.tceq.texas.gov/field/qa/lab\_accred\_certif.html</a>.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg D. Keene

Celey D. Keene Lab Director/Quality Manager



EOG Y RESOURCES, INC CHASE SETTLE 105 SOUTH 4TH STREET ARTESIA NM, 88210 Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/17/2017	
Reported:	03/21/2017 TENNECO SWD SYSTEM	Sampling Type: Sampling Condition:	Soil ** (See Notes)	
Project Name: Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker	
Project Location:	NOT GIVEN			

## Sample ID: C1 - 20' (H700714-01)

Chloride, SM4500CI-B	A The second	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	03/21/2017	ND	416	104	400	0.00	

# Sample ID: C1 - 25' (H700714-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	03/21/2017	ND	416	104	400	0.00	

### Sample ID: C1 - 30' (H700714-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	03/21/2017	ND	416	104	400	0.00	

## Sample ID: C1 - 35' (H700714-04)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/21/2017	ND	416	104	400	0.00	

#### **Cardinal Laboratories**

\*=Accredited Analyte

PLEXEE NOTE: Liability and Damages. Cardinal's Bablity and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after comption of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, whether lawbod damages, affiliates or successors erising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

# **Notes and Definitions**

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ND Analyte NOT DETECTED at or above the reporting limit	
RPD Relative Percent Difference	
** Samples not received at proper temperature of 6°C or below.	
*** Insufficient time to reach temperature.	
- Chloride by SM4500CI-B does not require samples be received at or below 6°C	
Samples reported on an as received basis (wet) unless otherwise noted on rep	oort

#### **Cardinal Laboratories**

\*=Accredited Analyte

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Special Instructions: Relinquisted by: Relinquisted by:				421-35	3 01-30'	201-25	1 01-20	11-22		ORDER #	(lab use only)	Sampler Signature:	Telephone No:	City/State/Zip:	Company Address	Comp: (505) 393-232	ARDINAL LA 101 East Mard
Date S-20-/7 Date											9		575-748-4171	Artesia, NM 88210	Company Address: 105 South 4th Street	Compt (505) 393-232E EOG Y Resources, Inc.	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240 t Manager: Chase Settle
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March 21, 2017

CHASE SETTLE EOG Y RESOURCES, INC 105 SOUTH 4TH STREET ARTESIA, NM 88210

RE: TENNECO SWD SYSTEM

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Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



EOG Y RESOURCES, INC CHASE SETTLE 105 SOUTH 4TH STREET ARTESIA NM, 88210 Fax To: (575) 748-4131

Received: Reported: Project Name: Project Number: Project Location:	03/20/2017 03/21/2017 TENNECO SWD SYSTEM NONE GIVEN NOT GIVEN	Sampling Date: Sampling Type: Sampling Condition: Sample Received By:	03/17/2017 Soil ** (See Notes) Tamara Oldaker
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### Sample ID: C2 - 20' (H700710-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2240	16.0	03/21/2017	ND	416	104	400	3.77	

# Sample ID: C2 - 25' (H700710-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2080	16.0	03/21/2017	ND	416	104	400	3.77	

## Sample ID: C2 - 30' (H700710-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1500	16.0	03/21/2017	ND	416	104	400	3.77	

### Sample ID: C2 - 35' (H700710-04)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC				_	<u></u>
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1540	16.0	03/21/2017	ND	416	104	400	3.77	

#### **Cardinal Laboratories**

\*=Accredited Analyte

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Celeg D. Keine



EOG Y RESOURCES, INC CHASE SETTLE 105 SOUTH 4TH STREET ARTESIA NM, 88210 Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/17/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	TENNECO SWD SYSTEM	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

# Sample ID: C2 - 40' (H700710-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Analyte Result Repo	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1400	16.0	03/21/2017	ND	416	104	400	3.77	

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# Sample ID: C2 - 45' (H700710-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/21/2017	ND	416	104	400	3.77	

## Sample ID: C2 - 50' (H700710-07)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	03/21/2017	ND	416	104	400	3.77	

### Sample ID: C2 - 55' (H700710-08)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/21/2017	ND	416	104	400	3.77	

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Celeg D. Keine



## **Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
2	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

#### Cardinal Laboratories

\*=Accredited Analyte

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Celeg D. Keine

	Relinquished by:	Relinquisted by	Special Instructions:		8 22 - 55'	712-50'	6 (2-45'	5 02-40'	4 62-351	3 [2 - 30'	2 62-25'	1 22-20'	LAB # (lab use only)	ORDER #:	(iab use only)	0	Sampler Signature:	Telephone No: 575-748-4171	City/State/Zip: Artesia, N	Company Address: 105 Sout	Compt (505) 393-232EEOG Y Resources, Inc.	Project Manager: Chase Settle	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240
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March 21, 2017

CHASE SETTLE EOG Y RESOURCES, INC 105 SOUTH 4TH STREET ARTESIA, NM 88210

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Celeg D. Keine

Celey D. Keene Lab Director/Quality Manager



EOG Y RESOURCES, INC CHASE SETTLE 105 SOUTH 4TH STREET ARTESIA NM, 88210 Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/17/2017	
Reported:	03/21/2017	Sampling Type: Sampling Condition:	Soil ** (See Notes)	
Project Name: Project Number:	TENNECO SWD SYSTEM NONE GIVEN	Sample Received By:	Tamara Oldaker	
Project Location:	NOT GIVEN			

# Sample ID: C3 - 20' (H700709-01)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1560	16.0	03/21/2017	ND	416	104	400	3.77	

# Sample ID: C3 - 25' (H700709-02)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	03/21/2017	ND	416	104	400	3.77	

# Sample ID: C3 - 30' (H700709-03)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	03/21/2017	ND	416	104	400	3.77	

## Sample ID: C3 - 35' (H700709-04)

Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1380	16.0	03/21/2017	ND	416	104	400	3.77	

#### **Cardinal Laboratories**

\*=Accredited Analyte

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Celeg D. Keine



EOG Y RESOURCES, INC CHASE SETTLE 105 SOUTH 4TH STREET ARTESIA NM, 88210 Fax To: (575) 748-4131

Received:	03/20/2017	Sampling Date:	03/17/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	TENNECO SWD SYSTEM	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

## Sample ID: C3 - 40' (H700709-05)

Chloride, SM4500CI-B	mg	/kg	Analyze	а ву: АС					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/21/2017	ND	416	104	400	3.77	

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# Sample ID: C3 - 45' (H700709-06)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC	_				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	03/21/2017	ND	416	104	400	3.77	

# Sample ID: C3 - 50' (H700709-07)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	03/21/2017	ND	416	104	400	3.77	

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# **Notes and Definitions**

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Relinquished by:	Relinquished by:	Relinquisbad by:	Special Instructions:			1 63- 50'	613-45'	40' L3-40'	4 23-35"		2 23-25'	1 3-20'	LAB # (lab use only)	ORDER #:	(lab use only)	Sampler Signature:	Telephone No: 575-748-4171	City/State/Zip: Artesia, I	Company Address: 105 South 4th Street	Compt (505) 393-232t EOG Y Resources, Inc.	Project Manager: Chase Settle	ARDINAL LABORATORIES 101 East Marland, Hobbs, NM 88240
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