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

May 5, 2017

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. 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

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

May 5, 2017

1RP- 4530

eogresources

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.

New Mexico Office of the State Engineer

Wells with Well Log Information

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

POD Number	Code	POD Subbasin	County	Source	q q q 6416	4	1	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller	License Number
L 14254 POD1		L	LE	Shallow	1	4	1	27	09S	35E	653241	3708776	4702	04/04/2017	04/04/2017	04/13/2017	240	137	GLENN, TRAVIS	1719
L 12426 POD1		L	LE	Shallow	1	4	1	19	09S	36E	657911	3710545	9651	08/04/2009	08/05/2009	08/20/2009	156		GILLIAM, DUB ALLEN	1145

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 648606.41 **Northing (Y):** 3707981.26 **Radius:** 10000

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

E4
EB5
WB4
E3
TENNECO RELEASE
C3
WB3
EB4
C2
T2
WB2
EB3
E2
WB1
EB2
C1
E1
T1
EB1
SB
70 ft

Tenneco SWD System (Vince BGH #1)

Area	Analysis	Sample Area	Sample Date	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
E1-8'	1612928	Release Area	12/14/2016	Backhoe	8'	ND	ND	ND	3300
E1-9.5'	1612928	Release Area	12/14/2016	Backhoe	9.5'	ND	ND	ND	4600
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
E3-6'	1612928	Release Area	12/14/2016	Backhoe	6'	ND	ND	ND	3000
E3-8'	1612928	Release Area	12/14/2016	Backhoe	8'	ND	ND	ND	4600
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'				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
E4-3'	1612928	Release Area	12/14/2016	Backhoe	3'	ND	ND	ND	ND
E4-4'	1612928	Release Area	12/14/2016	Backhoe	4'	ND	ND	ND	ND
E4-5.25'	1612928	Release Area	12/14/2016	Backhoe	5.25'	ND	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
T2-10.5'	1701495	Release Area	1/10/2017	Trackhoe	10.5'				4300
T2-12.5'	1701495	Release Area	1/10/2017	Trackhoe	12.5'				5400
T2-14.5'	1701495	Release Area	1/10/2017	Trackhoe	14.5'				3800
T2-10.5'	1701495	Release Area	1/10/2017	Trackhoe	10.5'				4300
T2-12.5'	1701495	Release Area	1/10/2017	Trackhoe	12.5'				5400
T2-14.5'	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'				112
C2-20'	H700710	Release Area	3/17/2017	Core Rig	20'				2240
C2-25'	H700710	Release Area	3/17/2017	Core Rig	25'				2080
C2-30'	H700710	Release Area	3/17/2017	Core Rig	30'				1500
C2-35'	H700710	Release Area	3/17/2017	Core Rig	35'				1540
C2-40'	H700710	Release Area	3/17/2017	Core Rig	40'				1400
C2-45'	H700710	Release Area	3/17/2017	Core Rig	45'				48
C2-50'	H700710	Release Area	3/17/2017	Core Rig	50'				32
C2-55'	H700710	Release Area	3/17/2017	Core Rig	55'				48
C3-20'	H700709	Release Area	3/17/2017	Core Rig	20'				1560
C3-25'	H700709	Release Area	3/17/2017	Core Rig	25'				400
C3-30'	H700709	Release Area	3/17/2017	Core Rig	30'				208
C3-35'	H700709	Release Area	3/17/2017	Core Rig	35'				1380
C3-40'	H700709	Release Area	3/17/2017	Core Rig	40'				48
C3-45'	H700709	Release Area	3/17/2017	Core Rig	45'				48
C3-50'	H700709	Release Area	3/17/2017	Core Rig	50'				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
EB2-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	ND
EB3-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	3900
EB3-10'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	4200
EB3-F	1701495	Edge	1/4/2017	Hand Auger	1'				370
EB3-F+3'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB3-F+6'	1701495	Edge	1/4/2017	Hand Auger	1'				120
EB3-F+9'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB3-F+12"	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-5'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	4300

EB4-10'	1612936	Edge	12/14/2016	Backhoe	1'	ND	ND	ND	3900
EB4-F	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+3'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+6'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+9'	1701495	Edge	1/4/2017	Hand Auger	1'				ND
EB4-F+12'	1701495	Edge	1/4/2017	Hand Auger	1'				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'				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'				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'				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

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 www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1612928**
Date Reported: **12/27/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-001 **Matrix:** SOIL

Client Sample ID: E1-4'
Collection Date: 12/14/2016 9:57:00 AM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	490	30		mg/Kg	20	12/20/2016 12:06:06 PM	29304
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/22/2016 1:40:45 PM	29270
Surr: DNOP	108	70-130		%Rec	1	12/22/2016 1:40:45 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **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						Analyst: **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 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-002 **Matrix:** SOIL

Client Sample ID: E1-6'
Collection Date: 12/14/2016 10:02:00 AM
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	4800	150		mg/Kg	100	12/21/2016 3:06:12 PM	29304
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/22/2016 2:50:20 PM	29270
Surr: DNOP	114	70-130		%Rec	1	12/22/2016 2:50:20 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**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						Analyst:	**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 AM	29264
Xylenes, Total	ND	0.099		mg/Kg	1	12/21/2016 10:24:43 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-003 **Matrix:** SOIL

Client Sample ID: E1-8'
Collection Date: 12/14/2016 10:10:00 AM
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	3300	150		mg/Kg	100	12/21/2016 3:18:36 PM	29304
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/22/2016 3:13:37 PM	29270
Surr: DNOP	108	70-130		%Rec	1	12/22/2016 3:13:37 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**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						Analyst:	**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 AM	29264
Xylenes, Total	ND	0.098		mg/Kg	1	12/21/2016 10:48:14 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-004 **Matrix:** SOIL

Client Sample ID: E1-9.5'
Collection Date: 12/14/2016 10:20:00 AM
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	4600	150		mg/Kg	100	12/21/2016 3:31:01 PM	29304
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	12/22/2016 4:02:09 PM	29270
Surr: DNOP	93.8	70-130		%Rec	1	12/22/2016 4:02:09 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **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						Analyst: **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 AM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 11:11:54 AM	29264
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 11:11:54 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-005 **Matrix:** SOIL

Client Sample ID: E2-4'
Collection Date: 12/14/2016 10:25:00 AM
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	2400	75		mg/Kg	50	12/21/2016 3:43:26 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/22/2016 4:25:24 PM	29270
Surr: DNOP	93.6	70-130		%Rec	1	12/22/2016 4:25:24 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **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						Analyst: **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 AM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 11:35:26 AM	29264
Xylenes, Total	ND	0.097		mg/Kg	1	12/21/2016 11:35:26 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-006 **Matrix:** SOIL

Client Sample ID: E2-6'
Collection Date: 12/14/2016 10:30:00 AM
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	4900	300		mg/Kg	200	12/21/2016 3:55:50 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2016 4:48:44 PM	29270
Surr: DNOP	96.2	70-130		%Rec	1	12/22/2016 4:48:44 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**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						Analyst:	**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 AM	29264
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 11:59:02 AM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-007 **Matrix:** SOIL

Client Sample ID: E2-8'
Collection Date: 12/14/2016 10:40:00 AM
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	3300	150		mg/Kg	100	12/21/2016 4:33:04 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
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 RANGE						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	29264
Xylenes, Total	ND	0.095		mg/Kg	1	12/21/2016 7:25:26 PM	29264
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-008 **Matrix:** SOIL

Client Sample ID: E2-9.5'
Collection Date: 12/14/2016 10:48:00 AM
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	3600	150		mg/Kg	100	12/21/2016 4:45:28 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/22/2016 5:35:16 PM	29270
Surr: DNOP	86.6	70-130		%Rec	1	12/22/2016 5:35:16 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 7:48:56 PM	29264
Surr: BFB	91.6	68.3-144		%Rec	1	12/21/2016 7:48:56 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	12/21/2016 7:48:56 PM	29264
Toluene	ND	0.048		mg/Kg	1	12/21/2016 7:48:56 PM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 7:48:56 PM	29264
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 7:48:56 PM	29264
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	12/21/2016 7:48:56 PM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	2000	75		mg/Kg	50	12/21/2016 4:57:53 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	12/22/2016 5:58:22 PM	29270
Surr: DNOP	90.9	70-130		%Rec	1	12/22/2016 5:58:22 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 8:12:24 PM	29264
Surr: BFB	90.4	68.3-144		%Rec	1	12/21/2016 8:12:24 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	12/21/2016 8:12:24 PM	29264
Toluene	ND	0.048		mg/Kg	1	12/21/2016 8:12:24 PM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 8:12:24 PM	29264
Xylenes, Total	ND	0.095		mg/Kg	1	12/21/2016 8:12:24 PM	29264
Surr: 4-Bromofluorobenzene	99.3	80-120		%Rec	1	12/21/2016 8:12:24 PM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-010 **Matrix:** SOIL

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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	3000	150		mg/Kg	100	12/21/2016 5:10:17 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2016 6:21:37 PM	29270
Surr: DNOP	90.4	70-130		%Rec	1	12/22/2016 6:21:37 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 8:35:43 PM	29264
Surr: BFB	89.8	68.3-144		%Rec	1	12/21/2016 8:35:43 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	12/21/2016 8:35:43 PM	29264
Toluene	ND	0.048		mg/Kg	1	12/21/2016 8:35:43 PM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 8:35:43 PM	29264
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 8:35:43 PM	29264
Surr: 4-Bromofluorobenzene	96.8	80-120		%Rec	1	12/21/2016 8:35:43 PM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-011 **Matrix:** SOIL

Client Sample ID: E3-8'
Collection Date: 12/14/2016 11:09:00 AM
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	4600	150		mg/Kg	100	12/21/2016 5:22:41 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	12/22/2016 6:44:49 PM	29270
Surr: DNOP	91.3	70-130		%Rec	1	12/22/2016 6:44:49 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/21/2016 8:59:11 PM	29264
Surr: BFB	87.9	68.3-144		%Rec	1	12/21/2016 8:59:11 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 8:59:11 PM	29264
Toluene	ND	0.050		mg/Kg	1	12/21/2016 8:59:11 PM	29264
Ethylbenzene	ND	0.050		mg/Kg	1	12/21/2016 8:59:11 PM	29264
Xylenes, Total	ND	0.10		mg/Kg	1	12/21/2016 8:59:11 PM	29264
Surr: 4-Bromofluorobenzene	95.6	80-120		%Rec	1	12/21/2016 8:59:11 PM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-012 **Matrix:** SOIL

Client Sample ID: E3-10'
Collection Date: 12/14/2016 11:14:00 AM
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	4100	300		mg/Kg	200	12/21/2016 5:35:06 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	12/22/2016 7:07:57 PM	29270
Surr: DNOP	81.0	70-130		%Rec	1	12/22/2016 7:07:57 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/21/2016 9:22:44 PM	29264
Surr: BFB	89.0	68.3-144		%Rec	1	12/21/2016 9:22:44 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 9:22:44 PM	29264
Toluene	ND	0.050		mg/Kg	1	12/21/2016 9:22:44 PM	29264
Ethylbenzene	ND	0.050		mg/Kg	1	12/21/2016 9:22:44 PM	29264
Xylenes, Total	ND	0.10		mg/Kg	1	12/21/2016 9:22:44 PM	29264
Surr: 4-Bromofluorobenzene	96.7	80-120		%Rec	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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-013 **Matrix:** SOIL

Client 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**MRA**
Chloride	3700	300		mg/Kg	200	12/21/2016 5:47:30 PM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
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 RANGE						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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-014 **Matrix:** SOIL

Client 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	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	12/21/2016 12:42:48 AM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/22/2016 7:54:11 PM	29270
Surr: DNOP	103	70-130		%Rec	1	12/22/2016 7:54:11 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 10:09:46 PM	29264
Surr: BFB	89.8	68.3-144		%Rec	1	12/21/2016 10:09:46 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/21/2016 10:09:46 PM	29264
Toluene	ND	0.048		mg/Kg	1	12/21/2016 10:09:46 PM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 10:09:46 PM	29264
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 10:09:46 PM	29264
Surr: 4-Bromofluorobenzene	98.0	80-120		%Rec	1	12/21/2016 10:09:46 PM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-015 **Matrix:** SOIL

Client Sample ID: E4-2'
Collection Date: 12/14/2016 11:25:00 AM
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 12:55:12 AM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/22/2016 8:17:18 PM	29270
Surr: DNOP	89.3	70-130		%Rec	1	12/22/2016 8:17:18 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **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						Analyst: **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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-016 **Matrix:** SOIL

Client Sample ID: E4-3'
Collection Date: 12/14/2016 11:26:00 AM
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 1:07:37 AM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/22/2016 8:40:29 PM	29270
Surr: DNOP	104	70-130		%Rec	1	12/22/2016 8:40:29 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 10:56:46 PM	29264
Surr: BFB	90.4	68.3-144		%Rec	1	12/21/2016 10:56:46 PM	29264
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/21/2016 10:56:46 PM	29264
Toluene	ND	0.048		mg/Kg	1	12/21/2016 10:56:46 PM	29264
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 10:56:46 PM	29264
Xylenes, Total	ND	0.097		mg/Kg	1	12/21/2016 10:56:46 PM	29264
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.

Qualifiers:

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

Analytical Report
Lab Order **1612928**
Date Reported: **12/27/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-017 **Matrix:** SOIL

Client Sample ID: E4-4'
Collection Date: 12/14/2016 11:28:00 AM
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 1:20:01 AM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	12/22/2016 9:03:38 PM	29270
Surr: DNOP	87.9	70-130		%Rec	1	12/22/2016 9:03:38 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **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						Analyst: **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 AM	29264
Xylenes, Total	ND	0.097		mg/Kg	1	12/22/2016 12:30:33 AM	29264
Surr: 4-Bromofluorobenzene	99.2	80-120		%Rec	1	12/22/2016 12:30:33 AM	29264

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612928-018 **Matrix:** SOIL

Client Sample ID: E4-5.25'
Collection Date: 12/14/2016 11:40:00 AM
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 AM	29317
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	12/22/2016 9:26:51 PM	29270
Surr: DNOP	83.6	70-130		%Rec	1	12/22/2016 9:26:51 PM	29270
EPA METHOD 8015D: GASOLINE RANGE						Analyst:	**NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/22/2016 12:54:00 AM	29264
Surr: BFB	90.4	68.3-144		%Rec	1	12/22/2016 12:54:00 AM	29264
EPA METHOD 8021B: VOLATILES						Analyst:	**NSB**
Benzene	ND	0.024		mg/Kg	1	12/22/2016 12:54:00 AM	29264
Toluene	ND	0.049		mg/Kg	1	12/22/2016 12:54:00 AM	29264
Ethylbenzene	ND	0.049		mg/Kg	1	12/22/2016 12:54:00 AM	29264
Xylenes, Total	ND	0.098		mg/Kg	1	12/22/2016 12:54:00 AM	29264
Surr: 4-Bromofluorobenzene	98.1	80-120		%Rec	1	12/22/2016 12:54:00 AM	29264

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1612928**

27-Dec-16

Client: EOG Resources

Project: Tenneco SWD System

Sample ID **MB-29304** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **29304** RunNo: **39553**

Prep Date: **12/20/2016** Analysis Date: **12/20/2016** SeqNo: **1238673** Units: **mg/Kg**

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

Sample ID **MB-29317** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **29317** RunNo: **39558**

Prep Date: **12/20/2016** Analysis Date: **12/20/2016** SeqNo: **1238865** Units: **mg/Kg**

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

Sample ID **LCS-29317** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **29317** RunNo: **39558**

Prep Date: **12/20/2016** Analysis Date: **12/20/2016** SeqNo: **1238866** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612928**

Hall Environmental Analysis Laboratory, Inc.

27-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **MB-29270** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **29270** RunNo: **39590**
Prep Date: **12/19/2016** Analysis Date: **12/22/2016** SeqNo: **1240365** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	8.7		10.00		86.6	70	130			

Sample ID **LCS-29270** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **29270** RunNo: **39590**
Prep Date: **12/19/2016** Analysis Date: **12/22/2016** SeqNo: **1240399** Units: **mg/Kg**

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

QC SUMMARY REPORT

WO#: **1612928**

Hall Environmental Analysis Laboratory, Inc.

27-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **MB-29264** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS** Batch ID: **29264** RunNo: **39561**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239411** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.7	68.3	144			

Sample ID **LCS-29264** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS** Batch ID: **29264** RunNo: **39561**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239412** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	106	74.6	123			
Surr: BFB	980		1000		97.8	68.3	144			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612928**

Hall Environmental Analysis Laboratory, Inc.

27-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **MB-29264** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **29264** RunNo: **39561**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239454** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.97		1.000		97.5	80	120			

Sample ID **LCS-29264** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **29264** RunNo: **39561**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239455** Units: **mg/Kg**

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			
Surr: 4-Bromofluorobenzene	1.0		1.000		104	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: EOG/Yates

Work Order Number: 1612928

RcptNo: 1

Received by/date: AG 12/16/16

Logged By: Ashley Gallegos 12/16/2016 9:05:00 AM AG

Completed By: Ashley Gallegos 12/16/2016 2:57:13 PM AG

Reviewed By: AG / 12/19/16

Chain of Custody

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

Log In

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

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

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

Person Notified: Date

By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person

Regarding:

Client Instructions:

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: EOG Resources

Mailing Address:

05 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

Email or Fax#: chase_settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: Tenneco SWD System

Project #:

Project Manager: Chase Settle PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612928	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/14/2016	9:57A	Soil	E1-4'	1 - 4oz.	ICE	-001	X		X					X								
12/14/2016	10:02A	Soil	E1-6'	1 - 4oz.	ICE	-002	X		X					X								
12/14/2016	10:10A	Soil	E1-8'	1 - 4oz.	ICE	-003	X		X					X								
12/14/2016	10:20A	Soil	E1-9.5'	1 - 4oz.	ICE	-004	X		X					X								
12/14/2016	10:25A	Soil	E2-4'	1 - 4oz.	ICE	-005	X		X					X								
12/14/2016	10:30A	Soil	E2-6'	1 - 4oz.	ICE	-006	X		X					X								
12/14/2016	10:40A	Soil	E2-8'	1 - 4oz.	ICE	-007	X		X					X								
12/14/2016	10:48A	Soil	E2-9.5'	1 - 4oz.	ICE	-008	X		X					X								
12/14/2016	10:59A	Soil	E3-4'	1 - 4oz.	ICE	-009	X		X					X								
12/14/2016	11:03A	Soil	E3-6'	1 - 4oz.	ICE	-010	X		X					X								
12/14/2016	11:09A	Soil	E3-8'	1 - 4oz.	ICE	-011	X		X					X								
12/14/2016	11:14A	Soil	E3-10'	1 - 4oz.	ICE	-012	X		X					X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
-15-16	4:30P	[signature]	[signature]	12/16/16	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 12/27/2016.

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.

Chain-of-Custody Record

Client: EOG Resources

Mailing Address:

05 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

Email or Fax#: chase_settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name: Tenneco SWD System

Project #:

Project Manager: Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612928	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/14/2016	11:20A	Soil	E3-12'	1 - 4oz.	ICE	-013	X		X					X								
12/14/2016	11:24A	Soil	E4-1'	1 - 4oz.	ICE	-014	X		X					X								
12/14/2016	11:25A	Soil	E4-2'	1 - 4oz.	ICE	-015	X		X					X								
12/14/2016	11:26A	Soil	E4-3'	1 - 4oz.	ICE	-016	X		X					X								
12/14/2016	11:28A	Soil	E4-4'	1 - 4oz.	ICE	-017	X		X					X								
12/14/2016	11:40A	Soil	E4-5.25'	1 - 4oz.	ICE	-018	X		X					X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
15-16	4:30P			12/16/16	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 12/27/2016.

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.

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

December 29, 2016

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

RE: Tenneco SWD System

OrderNo.: 1612933

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 www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1612933**
Date Reported: **12/29/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612933-001 **Matrix:** SOIL

Client Sample ID: WB1-1'
Collection Date: 12/14/2016 12:46:00 PM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Chloride	2000	75		mg/Kg	50	12/27/2016 5:26:28 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/20/2016 7:44:45 PM	29278
Surr: BFB	89.5	70-130		%Rec	1	12/20/2016 7:44:45 PM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	12/21/2016 10:19:56 PM	29282
Surr: DNOP	96.8	70-130		%Rec	1	12/21/2016 10:19:56 PM	29282
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	12/20/2016 7:44:45 PM	29278
Toluene	ND	0.049		mg/Kg	1	12/20/2016 7:44:45 PM	29278
Ethylbenzene	ND	0.049		mg/Kg	1	12/20/2016 7:44:45 PM	29278
Xylenes, Total	ND	0.099		mg/Kg	1	12/20/2016 7:44:45 PM	29278
Surr: 1,2-Dichloroethane-d4	98.0	70-130		%Rec	1	12/20/2016 7:44:45 PM	29278
Surr: 4-Bromofluorobenzene	96.8	70-130		%Rec	1	12/20/2016 7:44:45 PM	29278
Surr: Dibromofluoromethane	106	70-130		%Rec	1	12/20/2016 7:44:45 PM	29278
Surr: Toluene-d8	102	70-130		%Rec	1	12/20/2016 7:44:45 PM	29278

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612933-002 **Matrix:** SOIL

Client Sample ID: WB2-1'
Collection Date: 12/14/2016 12:49:00 PM
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	5100	150		mg/Kg	100	12/28/2016 11:39:30 AM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/20/2016 8:13:17 PM	29278
Surr: BFB	86.4	70-130		%Rec	1	12/20/2016 8:13:17 PM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **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 SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	12/20/2016 8:13:17 PM	29278
Toluene	ND	0.047		mg/Kg	1	12/20/2016 8:13:17 PM	29278
Ethylbenzene	ND	0.047		mg/Kg	1	12/20/2016 8:13:17 PM	29278
Xylenes, Total	ND	0.094		mg/Kg	1	12/20/2016 8:13:17 PM	29278
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/20/2016 8:13:17 PM	29278
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	12/20/2016 8:13:17 PM	29278
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/20/2016 8:13:17 PM	29278
Surr: Toluene-d8	101	70-130		%Rec	1	12/20/2016 8:13:17 PM	29278

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612933-003 **Matrix:** SOIL

Client Sample ID: WB3-1'
Collection Date: 12/14/2016 12:51:00 PM
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	3500	150		mg/Kg	100	12/28/2016 11:51:53 AM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/20/2016 8:41:48 PM	29278
Surr: BFB	88.4	70-130		%Rec	1	12/20/2016 8:41:48 PM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **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 SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	12/20/2016 8:41:48 PM	29278
Toluene	ND	0.048		mg/Kg	1	12/20/2016 8:41:48 PM	29278
Ethylbenzene	ND	0.048		mg/Kg	1	12/20/2016 8:41:48 PM	29278
Xylenes, Total	ND	0.097		mg/Kg	1	12/20/2016 8:41:48 PM	29278
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/20/2016 8:41:48 PM	29278
Surr: 4-Bromofluorobenzene	91.7	70-130		%Rec	1	12/20/2016 8:41:48 PM	29278
Surr: Dibromofluoromethane	109	70-130		%Rec	1	12/20/2016 8:41:48 PM	29278
Surr: Toluene-d8	102	70-130		%Rec	1	12/20/2016 8:41:48 PM	29278

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

Qualifiers:

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

Analytical Report
Lab Order **1612933**
Date Reported: **12/29/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612933-004 **Matrix:** SOIL

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

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Chloride	2200	75		mg/Kg	50	12/27/2016 6:03:41 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	12/21/2016 2:51:35 AM	29278
Surr: BFB	90.8	70-130		%Rec	1	12/21/2016 2:51:35 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/21/2016 11:29:40 PM	29282
Surr: DNOP	108	70-130		%Rec	1	12/21/2016 11:29:40 PM	29282
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.024		mg/Kg	1	12/21/2016 2:51:35 AM	29278
Toluene	ND	0.047		mg/Kg	1	12/21/2016 2:51:35 AM	29278
Ethylbenzene	ND	0.047		mg/Kg	1	12/21/2016 2:51:35 AM	29278
Xylenes, Total	ND	0.094		mg/Kg	1	12/21/2016 2:51:35 AM	29278
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	12/21/2016 2:51:35 AM	29278
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	12/21/2016 2:51:35 AM	29278
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/21/2016 2:51:35 AM	29278
Surr: Toluene-d8	102	70-130		%Rec	1	12/21/2016 2:51:35 AM	29278

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

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612933**

Hall Environmental Analysis Laboratory, Inc.

29-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **MB-29334** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **29334** RunNo: **39630**
Prep Date: **12/21/2016** Analysis Date: **12/22/2016** SeqNo: **1241440** Units: **mg/Kg**

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

Sample ID **LCS-29334** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **29334** RunNo: **39630**
Prep Date: **12/21/2016** Analysis Date: **12/22/2016** SeqNo: **1241441** Units: **mg/Kg**

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

QC SUMMARY REPORT

WO#: **1612933**

Hall Environmental Analysis Laboratory, Inc.

29-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **LCS-29282** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **29282** RunNo: **39576**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239546** Units: **mg/Kg**

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			
Surr: DNOP	5.4		5.000		107	70	130			

Sample ID **MB-29282** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **29282** RunNo: **39576**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		110	70	130			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612933**

Hall Environmental Analysis Laboratory, Inc.

29-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **lcs-29278** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238550** Units: **mg/Kg**

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			

Sample ID **mb-29278** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.8	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.9	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		105	70	130			
Surr: Toluene-d8	0.52		0.5000		103	70	130			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612933**

Hall Environmental Analysis Laboratory, Inc.

29-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **lcs-29278** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238582** Units: **mg/Kg**

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** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238585** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	450		500.0		90.6	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: EOG/Yates Work Order Number: 1612933 RcptNo: 1

Received by/date: AG 12/16/16

Logged By: Ashley Gallegos 12/16/2016 9:05:00 AM AG

Completed By: Ashley Gallegos 12/16/2016 3:13:17 PM AG

Reviewed By: AG 12/19/16

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: Date
By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: EOG Resources

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: chase_settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Tenneco SWD System

Project #:

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612933	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/14/2016	12:46P	Soil	WB1-1'	1 - 4oz.	ICE	-001	X		X					X								
12/14/2016	12:49P	Soil	WB2-1'	1 - 4oz.	ICE	-002	X		X					X								
12/14/2016	12:51P	Soil	WB3-1'	1 - 4oz.	ICE	-003	X		X					X								
12/14/2016	12:53P	Soil	WB4-1'	1 - 4oz.	ICE	-004	X		X					X								

Date	Time	Relinquished by:	Received by:	Date	Time
12-15-16	4:30P	[signature]	[signature]	12/16/16	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 12/27/2016.

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.

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

December 28, 2016

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

RE: Tenneco SWD System

OrderNo.: 1612936

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 www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1612936**
Date Reported: **12/28/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-001 **Matrix:** SOIL

Client Sample ID: EB1-1'
Collection Date: 12/14/2016 12:11:00 PM
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	12/22/2016 7:43:53 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 3:20:01 AM	29278
Surr: BFB	88.4	70-130		%Rec	1	12/21/2016 3:20:01 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**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						Analyst:	**AG**
Benzene	ND	0.024		mg/Kg	1	12/21/2016 3:20:01 AM	29278
Toluene	ND	0.048		mg/Kg	1	12/21/2016 3:20:01 AM	29278
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 3:20:01 AM	29278
Xylenes, Total	ND	0.096		mg/Kg	1	12/21/2016 3:20:01 AM	29278
Surr: 1,2-Dichloroethane-d4	98.2	70-130		%Rec	1	12/21/2016 3:20:01 AM	29278
Surr: 4-Bromofluorobenzene	93.4	70-130		%Rec	1	12/21/2016 3:20:01 AM	29278
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/21/2016 3:20:01 AM	29278
Surr: Toluene-d8	102	70-130		%Rec	1	12/21/2016 3:20:01 AM	29278

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-002 **Matrix:** SOIL

Client Sample ID: EB1-5'
Collection Date: 12/14/2016 12:13:00 PM
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	12/22/2016 8:21:06 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/21/2016 3:48:25 AM	29278
Surr: BFB	94.0	70-130		%Rec	1	12/21/2016 3:48:25 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/22/2016 12:16:16 AM	29282
Surr: DNOP	98.3	70-130		%Rec	1	12/22/2016 12:16:16 AM	29282
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 3:48:25 AM	29278
Toluene	ND	0.049		mg/Kg	1	12/21/2016 3:48:25 AM	29278
Ethylbenzene	ND	0.049		mg/Kg	1	12/21/2016 3:48:25 AM	29278
Xylenes, Total	ND	0.098		mg/Kg	1	12/21/2016 3:48:25 AM	29278
Surr: 1,2-Dichloroethane-d4	97.8	70-130		%Rec	1	12/21/2016 3:48:25 AM	29278
Surr: 4-Bromofluorobenzene	97.9	70-130		%Rec	1	12/21/2016 3:48:25 AM	29278
Surr: Dibromofluoromethane	104	70-130		%Rec	1	12/21/2016 3:48:25 AM	29278
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-003 **Matrix:** SOIL

Client Sample ID: EB2-1'
Collection Date: 12/14/2016 12:15:00 PM
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	12/22/2016 8:33:31 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/21/2016 4:16:50 AM	29278
Surr: BFB	91.6	70-130		%Rec	1	12/21/2016 4:16:50 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**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						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 4:16:50 AM	29278
Toluene	ND	0.049		mg/Kg	1	12/21/2016 4:16:50 AM	29278
Ethylbenzene	ND	0.049		mg/Kg	1	12/21/2016 4:16:50 AM	29278
Xylenes, Total	ND	0.099		mg/Kg	1	12/21/2016 4:16:50 AM	29278
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	12/21/2016 4:16:50 AM	29278
Surr: 4-Bromofluorobenzene	91.0	70-130		%Rec	1	12/21/2016 4:16:50 AM	29278
Surr: Dibromofluoromethane	102	70-130		%Rec	1	12/21/2016 4:16:50 AM	29278
Surr: Toluene-d8	104	70-130		%Rec	1	12/21/2016 4:16:50 AM	29278

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-004 **Matrix:** SOIL

Client Sample ID: EB2-5'
Collection Date: 12/14/2016 12:17:00 PM
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	12/22/2016 8:45:56 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/21/2016 4:45:12 AM	29278
Surr: BFB	90.3	70-130		%Rec	1	12/21/2016 4:45:12 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/22/2016 1:03:00 AM	29282
Surr: DNOP	91.1	70-130		%Rec	1	12/22/2016 1:03:00 AM	29282
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 4:45:12 AM	29278
Toluene	ND	0.049		mg/Kg	1	12/21/2016 4:45:12 AM	29278
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
Surr: 1,2-Dichloroethane-d4	99.8	70-130		%Rec	1	12/21/2016 4:45:12 AM	29278
Surr: 4-Bromofluorobenzene	93.8	70-130		%Rec	1	12/21/2016 4:45:12 AM	29278
Surr: Dibromofluoromethane	101	70-130		%Rec	1	12/21/2016 4:45:12 AM	29278
Surr: Toluene-d8	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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-005 **Matrix:** SOIL

Client Sample ID: EB3-5'
Collection Date: 12/14/2016 12:21:00 PM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	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: GASOLINE 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 RANGE ORGANICS						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 SHORT 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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-006 **Matrix:** SOIL

Client Sample ID: EB3-10'
Collection Date: 12/14/2016 12:23:00 PM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Chloride	4200	300		mg/Kg	200	12/27/2016 6:53:19 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	12/21/2016 5:41:54 AM	29278
Surr: BFB	91.2	70-130		%Rec	1	12/21/2016 5:41:54 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	12/22/2016 1:49:25 AM	29282
Surr: DNOP	92.1	70-130		%Rec	1	12/22/2016 1:49:25 AM	29282
EPA METHOD 8260B: VOLATILES SHORT 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
Ethylbenzene	ND	0.048		mg/Kg	1	12/21/2016 5:41:54 AM	29278
Xylenes, Total	ND	0.097		mg/Kg	1	12/21/2016 5:41:54 AM	29278
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	12/21/2016 5:41:54 AM	29278
Surr: 4-Bromofluorobenzene	95.2	70-130		%Rec	1	12/21/2016 5:41:54 AM	29278
Surr: Dibromofluoromethane	105	70-130		%Rec	1	12/21/2016 5:41:54 AM	29278
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-007 **Matrix:** SOIL

Client Sample ID: EB4-5'
Collection Date: 12/14/2016 12:27:00 PM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	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: GASOLINE 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 RANGE ORGANICS						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 SHORT 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	29278
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-008 **Matrix:** SOIL

Client Sample ID: EB4-10'
Collection Date: 12/14/2016 12:29:00 PM
Received Date: 12/16/2016 9:05:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst:	**LGT**
Chloride	3900	150		mg/Kg	100	12/27/2016 7:18:08 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst:	**AG**
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/21/2016 11:05:34 AM	29278
Surr: BFB	82.6	70-130		%Rec	1	12/21/2016 11:05:34 AM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst:	**TOM**
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/23/2016 5:58:02 AM	29308
Surr: DNOP	99.3	70-130		%Rec	1	12/23/2016 5:58:02 AM	29308
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst:	**AG**
Benzene	ND	0.025		mg/Kg	1	12/21/2016 11:05:34 AM	29278
Toluene	ND	0.050		mg/Kg	1	12/21/2016 11:05:34 AM	29278
Ethylbenzene	ND	0.050		mg/Kg	1	12/21/2016 11:05:34 AM	29278
Xylenes, Total	ND	0.10		mg/Kg	1	12/21/2016 11:05:34 AM	29278
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/21/2016 11:05:34 AM	29278
Surr: 4-Bromofluorobenzene	90.7	70-130		%Rec	1	12/21/2016 11:05:34 AM	29278
Surr: Dibromofluoromethane	115	70-130		%Rec	1	12/21/2016 11:05:34 AM	29278
Surr: Toluene-d8	101	70-130		%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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-009 **Matrix:** SOIL

Client Sample ID: EB5-1'
Collection Date: 12/14/2016 12:31:00 PM
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	12/22/2016 10:12:47 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **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 RANGE ORGANICS						Analyst: **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 SHORT LIST						Analyst: **AG**	
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 AM	29278
Surr: 1,2-Dichloroethane-d4	99.9	70-130		%Rec	1	12/21/2016 11:34:24 AM	29278
Surr: 4-Bromofluorobenzene	91.8	70-130		%Rec	1	12/21/2016 11:34:24 AM	29278
Surr: Dibromofluoromethane	118	70-130		%Rec	1	12/21/2016 11:34:24 AM	29278
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.

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-010 **Matrix:** SOIL

Client Sample ID: EB5-5'
Collection Date: 12/14/2016 12:33:00 PM
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	12/22/2016 10:25:12 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **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 RANGE ORGANICS						Analyst: **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 SHORT LIST						Analyst: **AG**	
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 PM	29278
Xylenes, Total	ND	0.094		mg/Kg	1	12/21/2016 12:03:14 PM	29278
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	1	12/21/2016 12:03:14 PM	29278
Surr: 4-Bromofluorobenzene	93.5	70-130		%Rec	1	12/21/2016 12:03:14 PM	29278
Surr: Dibromofluoromethane	118	70-130		%Rec	1	12/21/2016 12:03:14 PM	29278
Surr: Toluene-d8	103	70-130		%Rec	1	12/21/2016 12:03:14 PM	29278

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab ID: 1612936-011 **Matrix:** SOIL

Client Sample ID: EB5-10'
Collection Date: 12/14/2016 12:36:00 PM
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	12/22/2016 10:37:37 PM	29334
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	12/21/2016 12:31:56 PM	29278
Surr: BFB	83.3	70-130		%Rec	1	12/21/2016 12:31:56 PM	29278
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	12/23/2016 7:54:13 AM	29308
Surr: DNOP	109	70-130		%Rec	1	12/23/2016 7:54:13 AM	29308
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	12/21/2016 12:31:56 PM	29278
Toluene	ND	0.049		mg/Kg	1	12/21/2016 12:31:56 PM	29278
Ethylbenzene	ND	0.049		mg/Kg	1	12/21/2016 12:31:56 PM	29278
Xylenes, Total	ND	0.097		mg/Kg	1	12/21/2016 12:31:56 PM	29278
Surr: 1,2-Dichloroethane-d4	105	70-130		%Rec	1	12/21/2016 12:31:56 PM	29278
Surr: 4-Bromofluorobenzene	91.1	70-130		%Rec	1	12/21/2016 12:31:56 PM	29278
Surr: Dibromofluoromethane	113	70-130		%Rec	1	12/21/2016 12:31:56 PM	29278
Surr: Toluene-d8	102	70-130		%Rec	1	12/21/2016 12:31:56 PM	29278

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

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612936**

Hall Environmental Analysis Laboratory, Inc.

28-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **MB-29334** SampType: **mblk** TestCode: **EPA Method 300.0: Anions**
Client ID: **PBS** Batch ID: **29334** RunNo: **39630**
Prep Date: **12/21/2016** Analysis Date: **12/22/2016** SeqNo: **1241440** Units: **mg/Kg**

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

Sample ID **LCS-29334** SampType: **lcs** TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSS** Batch ID: **29334** RunNo: **39630**
Prep Date: **12/21/2016** Analysis Date: **12/22/2016** SeqNo: **1241441** Units: **mg/Kg**

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

QC SUMMARY REPORT

WO#: **1612936**

Hall Environmental Analysis Laboratory, Inc.

28-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **LCS-29282** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **29282** RunNo: **39576**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239546** Units: **mg/Kg**

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			
Surr: DNOP	5.4		5.000		107	70	130			

Sample ID **MB-29282** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **29282** RunNo: **39576**
Prep Date: **12/19/2016** Analysis Date: **12/21/2016** SeqNo: **1239547** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	11		10.00		110	70	130			

Sample ID **LCS-29308** SampType: **LCS** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS** Batch ID: **29308** RunNo: **39590**
Prep Date: **12/20/2016** Analysis Date: **12/22/2016** SeqNo: **1240933** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	94.9	63.8	116			
Surr: DNOP	4.4		5.000		88.5	70	130			

Sample ID **MB-29308** SampType: **MBLK** TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS** Batch ID: **29308** RunNo: **39590**
Prep Date: **12/20/2016** Analysis Date: **12/22/2016** SeqNo: **1240934** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	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

QC SUMMARY REPORT

WO#: **1612936**

Hall Environmental Analysis Laboratory, Inc.

28-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **lcs-29278** SampType: **LCS** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238550** Units: **mg/Kg**

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			

Sample ID **mb-29278** SampType: **MBLK** TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238551** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.48		0.5000		95.8	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.9	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		105	70	130			
Surr: Toluene-d8	0.52		0.5000		103	70	130			

Qualifiers:

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

QC SUMMARY REPORT

WO#: **1612936**

Hall Environmental Analysis Laboratory, Inc.

28-Dec-16

Client: EOG Resources
Project: Tenneco SWD System

Sample ID **lcs-29278** SampType: **LCS** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **LCSS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238582** Units: **mg/Kg**

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** SampType: **MBLK** TestCode: **EPA Method 8015D Mod: Gasoline Range**
Client ID: **PBS** Batch ID: **29278** RunNo: **39538**
Prep Date: **12/19/2016** Analysis Date: **12/20/2016** SeqNo: **1238585** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	450		500.0		90.6	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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: EOG/Yates Work Order Number: 1612936 RcptNo: 1

Received by/date: AG 12/16/16
Logged By: Ashley Gallegos 12/16/2016 9:05:00 AM AG
Completed By: Ashley Gallegos 12/16/2016 3:43:19 PM AG
Reviewed By: AG/AG 12/19/16

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: Date
By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

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

Chain-of-Custody Record

Client: EOG Resources

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: chase_settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Tenneco SWD System

Project #:

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1612936	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
12/14/2016	12:11P	Soil	EB1-1'	1 - 4oz.	ICE	-001	X		X					X								
12/14/2016	12:13P	Soil	EB1-5'	1 - 4oz.	ICE	-002	X		X					X								
12/14/2016	12:15P	Soil	EB2-1'	1 - 4oz.	ICE	-003	X		X					X								
12/14/2016	12:17P	Soil	EB2-5'	1 - 4oz.	ICE	-004	X		X					X								
12/14/2016	12:21P	Soil	EB3-5'	1 - 4oz.	ICE	-005	X		X					X								
12/14/2016	12:23P	Soil	EB3-10'	1 - 4oz.	ICE	-006	X		X					X								
12/14/2016	12:27P	Soil	EB4-5'	1 - 4oz.	ICE	-007	X		X					X								
12/14/2016	12:29P	Soil	EB4-10'	1 - 4oz.	ICE	-008	X		X					X								
12/14/2016	12:31P	Soil	EB5-1'	1 - 4oz.	ICE	-009	X		X					X								
12/14/2016	12:33P	Soil	EB5-5'	1 - 4oz.	ICE	-010	X		X					X								
12/14/2016	12:36P	Soil	EB5-10'	1 - 4oz.	ICE	-011	X		X					X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
12-15-16	4:30P	[signature]	[signature]	12/16/16	0905
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 12/27/2016.

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.

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

January 20, 2017

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

RE: Tenneco SWD System

OrderNo.: 1701495

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 www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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 Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1701495**
Date Reported: **1/20/2017**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-001 **Collection Date:** 1/4/2017 9:52:00 AM
Client Sample ID: T1-10.5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	4200	150		mg/Kg	100	1/16/2017 7:29:02 PM	29684

Lab ID: 1701495-002 **Collection Date:** 1/4/2017 10:02:00 AM
Client Sample ID: T1-12.5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	2800	150		mg/Kg	100	1/16/2017 7:41:27 PM	29684

Lab ID: 1701495-003 **Collection Date:** 1/4/2017 10:18:00 AM
Client Sample ID: T1-14.5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	2700	150		mg/Kg	100	1/16/2017 8:18:41 PM	29684

Lab ID: 1701495-004 **Collection Date:** 1/4/2017 10:34:00 AM
Client Sample ID: T1-15.5' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	3400	150		mg/Kg	100	1/16/2017 8:31:06 PM	29693

Lab ID: 1701495-005 **Collection Date:** 1/4/2017 11:24:00 AM
Client Sample ID: WB1-2' **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 3:37:31 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-006
Client Sample ID: WB1-F
Collection Date: 1/4/2017 11:51:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 4:14:45 PM	29693

Lab ID: 1701495-007
Client Sample ID: WB1-F+1'
Collection Date: 1/4/2017 11:55:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 4:27:10 PM	29693

Lab ID: 1701495-008
Client Sample ID: WB2-2'
Collection Date: 1/4/2017 11:32:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 5:04:24 PM	29693

Lab ID: 1701495-009
Client Sample ID: WB2-F
Collection Date: 1/4/2017 11:58:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 5:16:49 PM	29693

Lab ID: 1701495-010
Client Sample ID: WB2-F+1'
Collection Date: 1/4/2017 12:00:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	30	30		mg/Kg	20	1/14/2017 5:29:14 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-011
Client Sample ID: WB3-2'
Collection Date: 1/4/2017 11:39:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 5:41:38 PM	29693

Lab ID: 1701495-012
Client Sample ID: WB3-F
Collection Date: 1/4/2017 12:05:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 5:54:03 PM	29693

Lab ID: 1701495-013
Client Sample ID: WB3-F+1'
Collection Date: 1/4/2017 12:08:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 6:06:27 PM	29693

Lab ID: 1701495-014
Client Sample ID: WB4-2'
Collection Date: 1/4/2017 11:44:00 AM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 6:18:52 PM	29693

Lab ID: 1701495-015
Client Sample ID: WB4-F
Collection Date: 1/4/2017 12:11:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 6:31:17 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-016
Client Sample ID: WB4-F+1'
Collection Date: 1/4/2017 12:13:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 6:43:42 PM	29693

Lab ID: 1701495-017
Client Sample ID: EB3-F
Collection Date: 1/4/2017 12:19:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	370	30		mg/Kg	20	1/14/2017 6:56:07 PM	29693

Lab ID: 1701495-018
Client Sample ID: EB3-F+3'
Collection Date: 1/4/2017 12:21:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 7:33:20 PM	29693

Lab ID: 1701495-019
Client Sample ID: EB3-F+6'
Collection Date: 1/4/2017 12:24:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	120	30		mg/Kg	20	1/14/2017 7:45:45 PM	29693

Lab ID: 1701495-020
Client Sample ID: EB3-F+9'
Collection Date: 1/4/2017 12:26:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-021
Client Sample ID: EB3-F+12'
Collection Date: 1/4/2017 12:29:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/14/2017 8:10:34 PM	29693

Lab ID: 1701495-022
Client Sample ID: EB4-F
Collection Date: 1/4/2017 12:31:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/16/2017 9:08:19 PM	29694

Lab ID: 1701495-023
Client Sample ID: EB4-F+3'
Collection Date: 1/4/2017 12:33:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/16/2017 9:45:32 PM	29694

Lab ID: 1701495-024
Client Sample ID: EB4-F+6'
Collection Date: 1/4/2017 12:37:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/16/2017 9:57:57 PM	29694

Lab ID: 1701495-025
Client Sample ID: EB4-F+9'
Collection Date: 1/4/2017 12:39:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	1/16/2017 10:10:21 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-026
Client Sample ID: EB4-F+12'
Collection Date: 1/4/2017 12:40:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**
Chloride	ND	30		mg/Kg	20	1/16/2017 10:47:35 PM	29694

Lab ID: 1701495-027
Client Sample ID: SB-F
Collection Date: 1/4/2017 12:44:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**
Chloride	ND	30		mg/Kg	20	1/16/2017 11:00:00 PM	29694

Lab ID: 1701495-028
Client Sample ID: T2-10.5'
Collection Date: 1/10/2017 12:23:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**
Chloride	4300	300		mg/Kg	200	1/17/2017 6:40:04 PM	29694

Lab ID: 1701495-029
Client Sample ID: T2-12.5'
Collection Date: 1/10/2017 12:32:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**
Chloride	5400	300		mg/Kg	200	1/17/2017 6:52:28 PM	29694

Lab ID: 1701495-030
Client Sample ID: T2-14.5'
Collection Date: 1/10/2017 12:43:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: **LGT**
Chloride	3800	150		mg/Kg	100	1/18/2017 11:18:09 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: EOG Resources
Project: Tenneco SWD System
Lab Order: 1701495

Lab ID: 1701495-031
Client Sample ID: E3-14.5'
Collection Date: 1/10/2017 1:09:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	3100	150		mg/Kg	100	1/18/2017 11:30:33 PM	29694

Lab ID: 1701495-032
Client Sample ID: E-16.5'
Collection Date: 1/10/2017 1:26:00 PM
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	3700	150		mg/Kg	100	1/18/2017 11:42:58 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.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

WO#: 1701495

Hall Environmental Analysis Laboratory, Inc.

20-Jan-17

Client: EOG Resources
Project: Tenneco 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			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: EOG/Yates Work Order Number: 1701495 RcptNo: 1

Received by/date: RE 01/12/17

Logged By: Ashley Gallegos 1/12/2017 9:35:00 AM

Completed By: Ashley Gallegos 1/12/2017 12:48:08 PM

Reviewed By: 01/12/17

Chain of Custody

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

Log In

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

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

Special Handling (if applicable)

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

Person Notified: Date
By Whom: Via: [ ] eMail [ ] Phone [ ] Fax [ ] In Person
Regarding:
Client Instructions:

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.3	Good	Yes			

Chain-of-Custody Record

Client: EOG Y Resources, Inc.

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: Chase_Settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Tenneco SWD System

Project #:

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☐ Yes ☒ No

Sample Temperature: 13.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1701495	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals Ag/Hg/Pb	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
1/4/2017	9:52A	Soil	T1-10.5'	1 - 4oz.	None	-001								X								
1/4/2017	10:02A	Soil	T1-12.5'	1 - 4oz.	None	-002								X								
1/4/2017	10:18A	Soil	T1-14.5'	1 - 4oz.	None	-003								X								
1/4/2017	10:34A	Soil	T1-15.5'	1 - 4oz.	None	-004								X								
1/4/2017	11:24A	Soil	WB1-2'	1 - 4oz.	None	-005								X								
1/4/2017	11:51A	Soil	WB1-F	1 - 4oz.	None	-006								X								
1/4/2017	11:55A	Soil	WB1-F+1'	1 - 4oz.	None	-007								X								
1/4/2017	11:32A	Soil	WB2-2'	1 - 4oz.	None	-008								X								
1/4/2017	11:58A	Soil	WB2-F	1 - 4oz.	None	-009								X								
1/4/2017	12:00A	Soil	WB2-F+1'	1 - 4oz.	None	-010								X								
1/4/2017	11:39A	Soil	WB3-2'	1 - 4oz.	None	-011								X								
1/4/2017	12:05P	Soil	WB3-F	1 - 4oz.	None	-012								X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
1-11-17	9:30			1/12/17	0935
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 1/19/2017.

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.

Chain-of-Custody Record

Client: EOG Y Resources, Inc.

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: Chase_Settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Tenneco SWD System

Project #:

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☒ Yes ☐ No

Sample Temperature: 13.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1701495	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals Acumel/2	Anions (F,Cl,NO3,NO2,PO4,SO4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
1/4/2017	12:08P	Soil	WB3-F+1'	1 - 4oz.	None	-013								X								
1/4/2017	11:44A	Soil	WB4-2'	1 - 4oz.	None	-014								X								
1/4/2017	12:11P	Soil	WB4-F	1 - 4oz.	None	-015								X								
1/4/2017	12:13P	Soil	WB4-F+1'	1 - 4oz.	None	-016								X								
1/4/2017	12:19P	Soil	EB3-F	1 - 4oz.	None	-017								X								
1/4/2017	12:21P	Soil	EB3-F+3'	1 - 4oz.	None	-018								X								
1/4/2017	12:24P	Soil	EB3-F+6'	1 - 4oz.	None	-019								X								
1/4/2017	12:26P	Soil	EB3-F+9'	1 - 4oz.	None	-020								X								
1/4/2017	12:29P	Soil	EB3-F+12'	1 - 4oz.	None	-021								X								
1/4/2017	12:31P	Soil	EB4-F	1 - 4oz.	None	-022								X								
1/4/2017	12:33P	Soil	EB4-F+3'	1 - 4oz.	None	-023								X								
1/4/2017	12:37P	Soil	EB4-F+6'	1 - 4oz.	None	-024								X								

Date	Time	Relinquished by:	Received by:	Date	Time
1-11-17	9:30	[signature]	[signature]	01/12/17	0935
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 1/19/2017.

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.

Chain-of-Custody Record

Client: EOG Y Resources, Inc.

Mailing Address:

105 South 4th Street Artesia, NM 88210

Phone #: 575-703-6537

email or Fax#: Chase_Settle@eogresources.com

QA/QC Package:

☐ Standard ☐ Level 4 (Full Validation)

Accreditation:

☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:

X Standard ☐ Rush

Project Name:

Tenneco SWD System

Project #:

Project Manager:

Chase Settle

PO # 205. 0750

Sampler: Chase Settle

On Ice: ☐ Yes ☒ No

Sample Temperature: 13.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1701495	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
1/4/2017	12:39P	Soil	EB4-F+9'	1 - 4oz.	None	-025								X								
1/4/2017	12:40P	Soil	EB4-F+12'	1 - 4oz.	None	-026								X								
1/4/2017	12:44P	Soil	SB-F	1 - 4oz.	None	-027								X								
1/10/2017	12:23P	Soil	T2-10.5'	1 - 4oz.	None	-028								X								
1/10/2017	12:32P	Soil	T2-12.5'	1 - 4oz.	None	-029								X								
1/10/2017	12:43P	Soil	T2-14.5'	1 - 4oz.	None	-030								X								
1/10/2017	1:09P	Soil	E3-14.5'	1 - 4oz.	None	-031								X								
1/10/2017	1:26P	Soil	E3-16.5'	1 - 4oz.	None	-032								X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
1-11-17	9:30			01/12/17	0935
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Results needed by 1/19/2017.

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.

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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: C1 - 20' (H700714-01)

Chloride, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

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 SM4500Cl-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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240
(505) 393-2326 FAX (505) 393-2476

Project Manager: Chase Settle
Compa (505) 393-2326 EOG Y Resources, Inc.
Company Address: 105 South 4th Street
City/State/Zip: Artesia, NM 88210
Telephone No: 575-748-4171
Fax No: 575-748-4131
Sampler Signature:
e-mail: Chase_Settle@eogresources.com

Project Name: Tennecco SWD System
Project #:
Project Loc: Tennecco SWD System
PO #: 205-0750
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #:

Analyze For: TCLP: / TOTAL:

LAB # (lab use only) 470714	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	TPH: 418.1 / 8015M / 8015B	TPH: TX 1005 / TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	C1-20'			3-17-17	10:50 AM		1							X		S												X			X
2	C1-25'			3-17-17	11:55 AM		1							X		S												X			X
3	C1-30'			3-17-17	12:07 PM		1							X		S												X			X
4	C1-35'			3-17-17	12:20 PM		1							X		S												X			X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
	3-20-17	9:10 AM			
Relinquished by:	Date	Time	Received by:	Date	Time
			Tamara Oldham	3-20-17	9:15
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 18.6 °C #5

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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 - 20' (H700710-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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, SM4500Cl-B **mg/kg** **Analyzed 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, SM4500Cl-B **mg/kg** **Analyzed 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** **Analyzed By: AC**

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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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, SM4500Cl-B mg/kg **Analyzed By: AC**

Analyte	Result	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	

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

Chloride, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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 **Analyzed 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	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

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 SM4500Cl-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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle
Compa (505) 393-2326 EOG Y Resources, Inc.
Company Address: 105 South 4th Street
City/State/Zip: Artesia, NM 88210
Telephone No: 575-748-4171 Fax No: 575-748-4131
Sampler Signature: [signature] e-mail: Chase_Settle@eogresources.com

Project Name: Tennico SWD System
Project #:
Project Loc: Tennico SWD System
PO #: 205-0750
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: H700710

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	C2-20'			3-17-17	1:00 pm		1							X		S												X				X
2	C2-25'			3-17-17	1:11 pm		1							X		S												X				X
3	C2-30'			3-17-17	1:20 pm		1							X		S												X				X
4	C2-35'			3-17-17	1:30 pm		1							X		S												X				X
5	C2-40'			3-17-17	1:41 pm		1							X		S												X				X
6	C2-45'			3-17-17	1:57 pm		1							X		S												X				X
7	C2-50'			3-17-17	3:15 pm		1							X		S												X				X
8	C2-55'			3-17-17	3:39 pm		1							X		S												X				X

Analyze For: TCLP: TOTAL:

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3-20-17	9:10AM			
Relinquished by:	Date	Time	Received by: Tamara Oldham	3-20-17	9:15
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N NA
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N NA
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 18.6 °C

CARDINAL Laboratories

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

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 www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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 - 20' (H700709-01)

Chloride, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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, SM4500Cl-B mg/kg **Analyzed 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 **Analyzed 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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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, SM4500Cl-B **mg/kg** **Analyzed 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 - 45' (H700709-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed 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, SM4500Cl-B **mg/kg** **Analyzed 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	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

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 SM4500Cl-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

PLEASE NOTE: Liability and Damages. Cardinal's liability 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 completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising 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.

Celey D. Keene, Lab Director/Quality Manager

ARDINAL LABORATORIES
101 East Marland, Hobbs, NM 88240 (505) 393-2326 FAX (505) 393-2476

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Chase Settle
Comp: (505) 393-2326 EOG Y Resources, Inc.
Company Address: 105 South 4th Street
City/State/Zip: Artesia, NM 88210
Telephone No: 575-748-4171 Fax No: 575-748-4131
Sampler Signature: [signature] e-mail: Chase_Settle@eogresources.com

Project Name: Tennico SWD System
Project #:
Project Loc: Tennico SWD System
PO #: 205-0750
Report Format: [x] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: H200709

Analyze For: TCLP: / TOTAL:

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Preservation & # of Containers: Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix (DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other)	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	Chlorides	SAR		RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
1	C3-20'			3-17-17	4:17 pm		1							X		S												X				X
2	C3-25'			3-17-17	4:28 pm		1							X		S												X				X
3	C3-30'			3-17-17	4:34 pm		1							X		S												X				X
4	C3-35'			3-17-17	4:42 pm		1							X		S												X				X
5	C3-40'			3-17-17	5:16 pm		1							X		S												X				X
6	C3-45'			3-17-17	5:28 pm		1							X		S												X				X
7	C3-50'			3-17-17	5:43 pm		1							X		S												X				X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3-20-17	9:00 Am			
Relinquished by:	Date	Time	Received by: [signature]	Date 3-2017	Time 9:15
Relinquished by:	Date	Time	Received by ELOT:	Date	Time

Laboratory Comments:

Sample Containers Intact?	Y	N
VOCs Free of Headspace?	Y	N NA
Labels on container(s)	Y	N
Custody seals on container(s)	Y	N
Custody seals on cooler(s)	Y	N NA
Sample Hand Delivered	Y	N
by Sampler/Client Rep. ?	Y	N
by Courier? UPS DHL FedEx Lone Star		

Temperature Upon Receipt: 18.6 °C #5