

October 10, 2017

Reference No. 11135250-5

Mr. Dean Ericson ETC Field Services LLC 600 N. Marienfeld Suite 700 Midland, TX 79701

NMOCD grants backfill approval to 1RP-4523.

Dear Mr. Ericson:

Re: Assessment Summary Report MF-16 Inch ETC Field Services LLC 1RP 4523 Site Location: Unit K, Sec. 29, T 21-S, R 37-E (Lat 32.449613N°, Long -103.18858W°) Lea County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. The MF-16 Inch pipeline (hereafter referred to as the "Site") is located within Unit K, Section 29, Township 21 South, Range 37 East, in Lea County, New Mexico (see Figure 1). The property is privately owned.

On November 17, 2017, a release of approximately 140,000 standard cubic feet (Mscf) of natural gas and seven barrels (bbls) of oil was reported to the State of New Mexico Oil Conservation Division (NMOCD) via Form C-141. A leak from a 16-inch pipeline was the cause of the release. None of the released material was recovered. Contaminated soils were excavated and stockpiled on site (see Figure 2). NMOCD release number 1RP 4523 was assigned.

1. Recommended Remediation Action Limits

Based on information available from the New Mexico Office of the State Engineer New Mexico Water Rights Reporting System website, the closest well with a recorded depth to water measurement is approximately 2.7 miles from the Site. The depth to groundwater measured in this well was 70 feet (ft) below ground surface (bgs).

Based on information available from the United States Geologic Survey National Water Information System, the depth to groundwater at the Site is approximately 98 ft. bgs. This is based on a water well that is located approximately 1.5 mile north, northwest of the Site (see Appendix A, Water Well Reports for depth to water). There are no well head protection areas or surface water bodies within 1000 feet of the Site. Therefore, the preliminary total ranking score is 10 (see table below).

Based on this score, the applicable NMOCD Site specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene,





ethylbenzene, and xylenes (BTEX), 1,000 mg/kg for total petroleum hydrocarbons (TPH), and 600 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (50-99 ft. bgs)	10
Wellhead Protection Area (> 1000 ft. from water source, > 200 ft. from domestic source)	0
Distance to Surface Body Water (>1000 ft.)	0
Ranking Criteria Total Score	10*

*Because the ranking criteria total score is 10, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 1,000 mg/kg for total TPH and 600 ppm for chlorides¹.

1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993 and recent discussions with Mr. Jim Griswold with the NMOCD.

2. Assessment Activities

The impacted area had initially been excavated to a depth of approximately 10 ft. bgs and soil samples were collected by ETC Field Services LLC personnel for laboratory analysis. A sample (BtmHole) was collected from the bottom of the excavation at a depth of approximately 10 ft. bgs on November 8, 2016 (see Figure 2). The sample was submitted to Xenco Laboratories (Xenco) in Midland, Texas and analyzed for toxicity characteristic leaching procedure (TCLP) BTEX by EPA Method 8260B, TPH by EPA Method 8015B, and chloride by EPA Method 300. The analytical results for this sample were:

- TCLP Benzene: 0.568 milligrams per liter (mg/L)
- Total TCLP BTEX: 2.93 mg/L
- TPH: 22,160 milligrams per kilogram (mg/kg)
- Chloride: 8.48 mg/kg

Excavation activities to assess the horizontal and vertical extent of impacted soil from the release occurred on July 6, 2017 by GHD. Field screening of soil for petroleum hydrocarbons was performed to assess the horizontal and vertical extent of contaminated soil. Field screening of the soil was performed using the PetroFLAG Hydrocarbon Analysis System. Excavation activities were performed by Diamond Back of Hobbs, New Mexico and observed by GHD.

Once field screening indicated soil concentrations were near or below the RRALs, soil samples were collected and submitted to Hall Environmental Analysis Laboratory (HEAL) located in Albuquerque, New Mexico for analysis. The soil samples were analyzed for BTEX by EPA Method 8260B and TPH by EPA Method 8015 full range (Table 1).



Five test pits (TP) were excavated, one on each side and one in the base of the original excavation (Figure 2). One sample was collected from TP-5 in the base of the excavation at a depth of 15 ft. bgs and soil samples were collected from four test pits (TP-1 through TP-4) at a depth of 10 ft. bgs for laboratory analysis. The field screening indicated that impacted soil did not extend to a depth greater than 15 ft. bgs.

The laboratory analytical results were all non-detect and thus, below the RRALs. Initial bottom of excavation and stockpile soil samples did not contain chloride concentrations above the RRAL and thus, the confirmation samples were not analyzed for chloride. Laboratory analytical reports can be found in Appendix B and the results summarized in Table 1.

Additional assessment consisting of three test pits (TP-6 through TP-8) was performed by GHD on September 6, 2017. Soil samples were collected at a depth of 14 ft. bgs in TP-6 and TP-7 and at a depth of 6 ft. bgs in TP-8. The soil samples were submitted to HEAL and analyzed for BTEX by EPA Method 8260B, TPH by EPA Method 8015 full range, and chloride by EPA method 300 (Table 1).

The sample collected from TP-6 was the only one that contained a detectable concentration above the laboratory reporting limit for the constituents analyzed for. This sample contained a total TPH concentration of 81 mg/kg.

3. Summary and Recommendations

Soil samples collected from the base of the excavation at a depth of 15 ft. bgs, and the four test pits (see Figure 2) were submitted for laboratory analysis. The laboratory analytical results were all non-detect and thus, below the RRALs. Based on the laboratory results, GHD recommends the following:

- Backfilling of the excavation with clean fill material and wheel compacting to grade.
- Reseed the area with a seed mix that is approved by the land owner.

Following completion of the above activities a request for no further action will be made for the Site. Should you have any questions, or require additional information regarding this submittal, please feel free to contact myself or Bernie Bockisch at (505) 884-0672.

Sincerely,

GHD

AIC Brand

Alan Brandon Senior Project Manager

AB/mc/01

Bernard Bockisch New Mexico Operations Manager

Figures



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-05(000)GN-DL001.dwg



Source: Image © 2017 Google - Imagery Date: November 22, 2016



ETC FIELD SERVICES LEA COUNTY, NEW MEXICO MF-16 PIPELINE ASSESSMENT

SOIL SAMPLE LOCATION

FIGURE 2

11135250-05

Oct 3, 2017

Tables

Table 1

ETC Field Services LLC - MF-16 Section 29, Township 21 South, Range 37 East Lea County, New Mexico Soil Analytical Results Summary

Sample ID	Date	Sample Depth	Chlorides	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН	ТРН	Total TPH
		(ft.)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO (C6-C-10)	DRO (C10-C28)	EXT DRO (C28- C36)	GRO/DRO
									(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMOCD Remediatio	on Action Levels		600	10	NE	NE	NE	50	NE	NE	NE	1,000
						EXCAVAT	TION SAMPLES					
WstPile*	11/08/2016		18.1	0.154*	0.595*	0.226*	0.505*	1.48*	5,720	12,300	NA	18,020.0
FntWal*	11/08/2016	10	7.38	0.0301*	0.19*	0.114*	0.27*	0.604*	1,900.0	5,970.0	NA	7,870.0
BtmHol*	11/08/2016	10	8.48	0.568*	1.05*	0.357*	0.955*	2.93*	7,960.0	14,200.0	NA	22,160.0
NsidWal*	11/08/2016	8	7.87	<0.005*	<0.005*	<0.005*	<0.015*	<0.030*	15.3	60.3	NA	75.6
11135250-05-070617-MG-TP-1-10'	07/06/2017	10	NA	<0.025	< 0.049	< 0.049	<0.098	<0.221	<4.9	<10	<50	<64.9
11135250-05-070617-MG-TP-2-10'	07/06/2017	10	NA	<0.025	< 0.049	< 0.049	< 0.099	<0.222	<4.9	<9.5	<47	<61.4
11135250-05-070617-MG-TP-3-10'	07/06/2017	10	NA	<0.025	< 0.049	< 0.049	<0.099	<0.222	<4.9	<9.7	<49	<63.6
11135250-05-070617-MG-TP-4-10'	07/06/2017	10	NA	< 0.024	< 0.049	< 0.049	<0.097	<0.219	<4.9	<9.4	<47	<61.3
11135250-05-070617-MG-TP-5-15'	07/06/2017	15	NA	< 0.024	< 0.049	< 0.049	<0.098	<0.220	<4.9	<10	<50	<64.9
S-11135250-05-090617-MG-TP-6-14	09/06/2017	14	<30	< 0.024	< 0.049	< 0.049	<0.098	<0.220	<4.9	32.0	49.0	81.0
S-11135250-05-090617-MG-TP-7-14	09/06/2017	14	<30	<0.025	< 0.050	< 0.050	<0.10	<0.225	<5.0	<9.6	<48	<62.6
S-11135250-05-090617-MG-TP-8-6	09/06/2017	6	<30	< 0.024	<0.047	<0.047	<0.095	<0.213	<4.7	<10.0	<51.0	<65.7

Note: Concentrations that are bold exceed the NMOCD Remediation Action Level

* Samples taken by ETC Field Services (BTEX analyzed by 8260 TCLP and reported in milligrams per liter)

NE = Not Established

mg/Kg = milligrams per Kilogram -- = Not Applicable NA = Not Analyzed

Appendices

Appendix A Water Well Report

		<u></u>					epth to			
(A CLW##### in the POD sulfix indicates the POD has been replaced & no longer	(R=POD replaced, O=orphar	0000000		1 20220		4.554				
serves a water right	C=the file	is		re 1=NW 2= re smallest t		4=SE)				
file.)	closed)		largest)	re smallest t		AD83 UTM in r	meters)	(In feet)		
		POD					- 16.0 3.			
		Sub-	QQQ						Wa	ater
POD Number 09966	Code	basin County L LE	6416 4 Sec 1 2 2 02	Tws Rng 17S 37E	X 667627	Y 3588089 🌍	DistanceDept 4499	hWellDepthWa 150	iter Col 70	umi 8
						Aver	age Depth to Wa	ter:	70 feet	
							Minimum Dept	h:	70 feet	
							Maximum Dept	h:	70 feet	
Record Count: 1										
Basin/County Sea	arch:									
Basin: Lea Cou	intý	County: Lea								
UTMNAD83 Radiu	is Search (i	n meters):								
Easting (X): 67	0275	North	ing (Y): 3591	727		Radius: 4500	Motors			

6/22/17 10:55 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater v

Geographic Area: United States

GO

V

Click to hideNews Bulletins

mE-16" pipeline ~ 1.5 miles

Please see news on new formats

Full News

GO

V

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs site no list =

• 322816103114201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 322816103114201 21S.37E.18.442123

Available data for this site

Groundwater: Field measurements

Lea County, New Mexico

Hydrologic Unit Code 13070007 Latitude 32°28'16", Longitude 103°11'42" NAD27

Land-surface elevation 3,513 feet above NAVD88

The depth of the well is 125 feet below land surface.

This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data Tab-separated data Graph of data Reselect period



Breaks in the plot represent a gap of at least one year between field measurements.

Download a presentation-quality graph

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AccessibilityPlug-InsFOIAPrivacyPolicies and NoticesU.S. Department of the Interior|U.S. Geological SurveyTitle:Groundwater for USA:Water LevelsURL:https://nwis.waterdata.usgs.gov/nwis/gwlevels?



Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2017-06-13 10:30:25 EDT 0.57 0.5 nadww01

https://nwis.waterdata.usgs.gov/nwis/gwlevels?site_no=322816103114201&agency_cd=U... 6/13/2017

Appendix B Laboratory Analytical Report

Analytical Report 539987

for

Energy Transfer- Midland

Project Manager: Johnnie Bradford

MF-16

15-NOV-16

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400) Xenco-San Antonio: Texas (T104704534) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

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15-NOV-16



Project Manager: Johnnie Bradford Energy Transfer- Midland 600 N Marienfield Ste 700 Midland, TX 79701

Reference: XENCO Report No(s): 539987 MF-16 Project Address: Eunice NM

Johnnie Bradford:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 539987. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 539987 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Mans

Kelsey Brooks Project Manager

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Sample Cross Reference 539987



Energy Transfer- Midland, Midland, TX

MF-16

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
WstPile	S	11-08-16 07:40		539987-001
FntWal	S	11-08-16 07:34	- 10 ft	539987-002
BtmHol	S	11-08-16 07:37	- 10 ft	539987-003
NsidWal	S	11-08-16 07:49	- 8 ft	539987-004



CASE NARRATIVE



Client Name: Energy Transfer- Midland Project Name: MF-16

Project ID: Work Order Number(s): 539987 Report Date: 15-NOV-16 Date Received: 11/08/2016

Sample receipt non conformances and comments:

Level III Std QC+Forms

Sample receipt non conformances and comments per sample:

None



Johnnie Bradford

Eunice NM

Project Location:

Contact:

Certificate of Analysis Summary 539987 Energy Transfer- Midland, Midland, TX



Project Name: MF-16

Date Received in Lab: Tue Nov-08-16 02:55 pm Report Date: 15-NOV-16

Project Manager: Kelsey Brooks

	Lab Id:	539987-001	101	539987-002	12	539987-003	539987-004	
Andreis Ronnestod	Field Id:	WstPilc	U	FntWal		BtmHol	NsidWal	
noiconhout ciclimite	Depth:			10 U-		-10 ft	-8 Ĥ	
	Matrix:	SOIL		TIOS		SOIL	SOIL	
	Sampled:	Nov-08-16 07:40	07:40	Nov-08-16 07:34	7:34	Nov-08-16 07:37	Nov-08-16 07:49	6
TCLP BTEX by SW 8260B	Extracted:	Nov-11-16 14:00	14:00	Nov-11-16 14:00	4:00	Nov-11-16 14:00	Nov-11-16 17:00	0
SUB: TX104704215	Analyzed:	Nov-11-16 16:39	16:39	Nav-11-16 15:42	5:42	Nov-11-16 16:01	Nov-11-16 17:27	2
	Units/RL:	mg/L	RL	mg/L	RL	mg/L RL	mg/L	RL
Benzene		0.154	0.0100	0.0301	0.0100	0.568 0.0100	0'0 QN	0.00500
Toluene		0.595	0.0100	061-0	0.0100	1.05 0.0100	0.0 UN	0.00500.
Ethylbenzene		0.226	0.0100	0.114	0.0100	0.357 0.0100	0.0 DN	0.00500
m,p-Xylenes		0.346	0.0200	0.180	0.0200	0.643 0.0200	ND 0.	00100
o-Xylene		0.159	0.0100	0.0903	0.0100	0.312 0.0100	ND 0.0	0.00500
TCLP Mercury by SW 7470A	Extracted:	Nov-14-16 09:30	06:30	Nov-14-16 09:30	9:30	Nov-14-16 09:30	Nev-14-16 09:30	0
SUB: TX104704215	Analyzed:	Nov-14-16 16:02	16:02	Nov-14-16 16:03	6:03	Nov-14-16 16:05	Nov-14-16 16:06	96
	Units/RL:	mg/L	RL	mg/L	RL	mg/L RL	mg/L	RL
Mercury		QN	0.000200	ND (ND 0.000200	ND 0.000200	ND 0.000200	0200
TCLP Metals by SW846 6010B	Extracted:	Nov-14-16 09:30	06:30	Nov-14-16 09:30	9:30	Nov-14-16 09:30	Nov-14-16 09:30	0
SUB: TX104704215	Analyzed:	Nov-14-16 21:29	21:29	Nov-14-16 21:32	1:32	Nov-14-16 21:35	Nov-14-16 21:38	88
	Units/RL:	mg/L	RL	mg/L	RL	mg/L RL	mg/L	RL
Arsenic		0.0925	0.0500	0,0899	0.0500	0.0531 0.0500	0 GN	0.0500
Barium		0.881	0.0500	THT	0.0500	1.91 0.0500	1.09 0.	0.0500
Cadmium		DN	0.0250	ND	0.0250	ND 0.0250	0 QN	0.0250
Chromium		QN	0.0500	QN	0.0500	ND 0.0500	0 QN	0.0500
Lead		QN	0.0500	DN	0.0500	ND 0.0500	0 DN	0.0500
Selenium		QN	0.100	QN	0.100	ND 0.100	DN	0.100
Silver		QN	0.100	ND	0.100	ND 0.100	ND	0.100

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations can reast expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Project Manager Kelsey Brooks

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Johnnie Bradford

Eunice NM

Project Location:

Contact:

Certificate of Analysis Summary 539987 Energy Transfer-Midland, Midland, TX



Project Name: MF-16

Date Received in Lab: Tue Nov-08-16 02:55 pm

Report Date: 15-NOV-16 Project Manager: Kelsey Brooks

	Lab Id:	539987-001	539987-002	539987-003	539987-004	
Analysis Romostad	Field Id:	WstPile	FntWal	BtmHol	NsidWal	
man and a section and a section and	Depth:		10 Ĥ	10 ft	8 ft	
	Matrix:	SOIL	SOIL	SOIL	SOIL	
	Sampled:	Nov-08-16 07:40	Nov-08-16 07:34	Nov-08-16 07:37	Nov-08-16 07;49	
Inorganic Anions by EPA 300/300.1	Extracted:	Nov-09-16 11:00	Nov-09-16 11:00	Nov-09-16 11:00	Nov-09-16 11:00	
	Analyzed:	Nov-09-16 14:52	Nov-09-16 15:41	Nov-09-16 15:48	Nov-09-16 15:55	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		18.1 5.00	7.38 5.00	8.48 5.00	7.87 5.00	
TPH by SW 8015B	Extracted:	Nov-08-16 17:00	Nov-08-16 17:00	Nov-08-16 17:00	Nov-08-16-17:00	
	Analyzed:	Nov-09-16 01:20	Nov-09-16 08:14	Nov-09-16 02:09	Nov-09-16 02:33	
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
C6-C10 Gasoline Range Hydrocarbons		5720 150	1900 75.0	7960 150	15.3 15.0	
C10-C28 Diesel Range Hydrocarbons		12300 150	5970 75.0	14200 150	60.3 15.0	
Total TPH		18200 150	7970 75.0	22400 150	75.6 15.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report tepresent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks Project Manager



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit
- MDL Method Detection Limit SDL Sample Detection Limit
- PQL Practical Quantitation Limit MQL Method Quantitation Limit

LOD Limit of Detection

- **DL** Method Detection Limit
- NC Non-Calculable
- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	

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Project Name: MF-16

Work Orders : 539987, Lab Batch #: 3003551 Sample: 539987-001 / SMP	Bate	Project ID h: 1 Matrix			
Units: mg/kg Date Analyzed: 11/09/16 01:20	SU	RROGATE R	ECOVERY	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	99.8	119	70-135	
o-Terphenyl	55.0	49.9	110	70-135	-
Lab Batch #: 3003551 Sample: 539987-003 / SMP	Batc	h: 1 Matrix	: Soil		
Units: mg/kg Date Analyzed: 11/09/16 02:09	su	RROGATE R	ECOVERY S	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.8	99.9	90	70-135	
o-Terphenyl	51.8	50.0	104	70-135	
Lab Batch #: 3003551 Sample: 539987-004 / SMP	Bate	h: l Matrix	: Soil	12.	
Units: mg/kg Date Analyzed: 11/09/16 02:33	su	RROGATE R	ECOVERY S	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	99.7	120	70-135	
o-Terphenyl	58.3	49.9	117	70-135	
Lab Batch #: 3003551 Sample: 539987-002 / SMP	Bate	h; 1 Matrix	: Soil		
Units: mg/kg Date Analyzed: 11/09/16 08:14	su	RROGATE R	ECOVERY S	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	1
o-Terphenyl	57.2	50.0	114	70-135	

* Surrogate outside of Laboratory QC limits

- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution
- Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Project Name: MF-16

	ders : 53998 #: 3003724	Sample: 539987-002 / SMP	Bate	Project ID h: 1 Matrix			
Units:	mg/L	Date Analyzed: 11/11/16 15:42	su	RROGATE R	ECOVERY	STUDY	
	TCLP B	TEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromoflue	promethane		0.0503	0.0500	101	75-131	
1,2-Dichloro	ethane-D4		0.0471	0.0500	94	63-144	
Toluene-D8			0.0476	0.0500	95	80-117	
Lab Batch	#: 3003724	Sample: 539987-003 / SMP	Bate	h: 1 Matrix	: Soil		
Units:	mg/L	Date Analyzed: 11/11/16 16:01	su	RROGATE R	ECOVERY S	STUDY	
	TCLP B	TEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromoflue	promethane		0.0495	0.0500	99	75-131	
1,2-Dichloro	ethane-D4		0.0465	0.0500	93	63-144	
Toluene-D8			0.0472	0.0500	94	80-117	
Lab Batch	#: 3003724	Sample: 539987-001 / SMP	Batc	h: l Matrix	: Soil		
Units:	mg/L	Date Analyzed: 11/11/16 16:39	su	RROGATE R	ECOVERY S	STUDY	
	TCLP B	TEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluc	oromethane		0.0519	0.0500	104	75-131	
1,2-Dichloro	ethane-D4		0.0481	0.0500	96	63-144	
Toluene-D8			0.0472	0.0500	94	80-117	
Lab Batch	#: 3003724	Sample: 539987-004 / SMP	Batc	h: l Matrix	: Soil		
Units:	mg/L	Date Analyzed: 11/11/16 17:27	SU	RROGATE R	ECOVERY S	STUDY	
		FEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluo	romethane		0.0510	0.0500	102	75-131	
1,2-Dichloro	ethane-D4		0.0484	0.0500	97	63-144	
Toluene-D8	Care of a contract of the second		0.0458	0.0500	92	80-117	

- Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Project Name: MF-16

Work Ord Lab Batch #:		Sample: 715881-1-BLK / B	LK Batc	Project ID h: 1 Matrix			
Units:	mg/kg	Date Analyzed: 11/08/16 20:52	st	RROGATE R	ECOVERY	STUDY	
	TPF	I by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctan	e		128	100	128	70-135	
o-Terphenyl			64.4	50.0	129	70-135	1
Lab Batch #:	3003724	Sample: 716005-1-BLK / B	LK Bate	h: 1 Matrix	: Water		
Units:	mg/L	Date Analyzed: 11/11/16 12:26	SU	RROGATE R	ECOVERY S	STUDY	
	TCLP B	TEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluore	methane		0.0517	0.0500	103	75-131	
1,2-Dichloroet	hane-D4		0.0478	0.0500	96	63-144	
Toluene-D8			0.0452	0.0500	90	80-117	
Lab Batch #:	3003551	Sample: 715881-1-BKS / BI	KS Batel	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 11/08/16 21:16	su	RROGATE R	ECOVERY S	STUDY	_
1	TPH	l by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane			129	100	129	70-135	-
o-Terphenyl			64.0	50.0	128	70-135	
.ab Batch #:	3003724	Sample: 716005-1-BKS / BH	KS Batel	1: 1 Matrix	: Water		
Jnits:	mg/L	Date Analyzed: 11/11/16 09:50	su	RROGATE R	ECOVERY S	STUDY	
		TEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Ďibromofluoro	methane		0.0510	0.0500	102	75-131	
1,2-Dichloroeth	nane-D4		0.0538	0.0500	108	63-144	
Toluene-D8			0.0487	0.0500	97	80-117	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

- *** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / BAll results are based on MDL and validated for QC purposes.



Project Name: MF-16

Work Orders : 539987, Lab Batch #: 3003551 Sample: 715881-1-BSD / BSI	D Batcl	Project ID h: 1 Matrix			
Units: mg/kg Date Analyzed: 11/08/16 21:40		RROGATE R		STUDY	_
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	11
o-Terphenyl	64.8	50.0	130	70-135	-
Lab Batch #: 3003724 Sample: 716005-1-BSD / BSI	D Batel	h: 1 Matrix	: Water		
Units: mg/L Date Analyzed: 11/11/16 10:17	SU	RROGATE R	ECOVERY S	STUDY	_
TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0491	0.0500	98	75-131	
1,2-Dichloroethane-D4	0.0461	0.0500	92	63-144	-
Toluene-D8	0.0487	0.0500	97	80-117	
Lab Batch #: 3003551 Sample: 539784-001 S / MS	Batel	h: l Matrix	: Soil		
Units: mg/kg Date Analyzed: 11/08/16 22:53	su	RROGATE R	ECOVERY S	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	128	99,9	128	70-135	
o-Terphenyl	60.8	50.0	122	70-135	
Lab Batch #: 3003724 Sample: 539915-001 S / MS	Batel	h: I Matrix	: Soil		
Units: mg/L Date Analyzed: 11/11/16 14:04	SU	RROGATE R	ECOVERY S	STUDY	
TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0510	0.0500	102	75-131	
1,2-Dichloroethane-D4	0.0563	0.0500	113	63-144	1.0
Toluene-D8	0.0484	0.0500	97	80-117	

* Surrogate outside of Laboratory QC limits

- ** Surrogates outside limits; data and surrogates confirmed by reanalysis
- *** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.



Project Name: MF-16

Work Orders : 539987, Lab Batch #: 3003551 Sample: 539784-001 SD / M	SD Batel	Project ID h: 1 Matrix			
Units: mg/kg Date Analyzed: 11/08/16 23:17	SU	RROGATE R	ECOVERY S	STUDY	
TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	70-135	
o-Terphenyl	60.6	50.0	121	70-135	
Lab Batch #: 3003724 Sample: 539915-001 SD / M	SD Batel	h: I Matrix	: Soil		
Units: mg/L Date Analyzed: 11/11/16 14:25	SU	RROGATE R	ECOVERY	STUDY	
TCLP BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0501	0.0500	100	75-131	
1,2-Dichloroethane-D4	0.0492	0.0500	98	63-144	
Toluene-D8	0.0490	0.0500	98	80-117	

Surrogate outside of Laboratory QC limits
 ** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B All results are based on MDL and validated for QC purposes.

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BS / BSD Recoveries





Project Name: MF-16

Date Prepared: 11/09/2016 Project ID: Batch #: 1 Matrix: Solid Matrix: Solid BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	Sample: 715909-1-BKS	Work Order #: 539987 Analyst: MNR Lab Batch ID: 3003608 Units: mg/kg
BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUI		
I	Sample: 715909-1-BKS	Lab Batch ID: 3003608
Project ID:		Work Order #: 539987

Flag %RPD 20 BI ANK /BI ANK SPIKE / BI ANK SPIKE DI PI ICATE BECOVERY STIIDY Date Analyzed: 11/11/2016 90-110 %oR Matrix: Water % 0 16 %.R Duplicate Result [F] 242 250 E %R 797 Date Prepared: 11/11/2016 Result [C] 242 Batch #: 1 250 [B] <5.00 V Sample: 716005-1-BKS Lab Batch ID: 3003724 JTR mg/L Analytes Chloride Analyst: Units:

TCLP BTEX by SW 8260B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00500	0.500	0.469	94	0.500	0.453	16	3	66-142	20	
Toluene	<0.00500	0.500	0.466	93	0.500	0.444	89	5	59-139	20	
Ethylbenzene	<0.00500	0.500	0.466	93	0.500	0.459	92	2	75-125	20	-
m,p-Xylenes	<0.0100	1.00	0.910	16	1.00	0.883	88	3.	75-125	20	
o-Xylene	<0.00500	0.500	0.457	16	0.500	0.462	92	-	75-125	20	

Relative Percent Difference RPD = 200*((C-F)/(C+F)) Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

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BS / BSD Recoveries



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C.	Sounder's

TCLP Mercury by SW 7470A Blank Spike Blank Blank Blank Spike Blank Spike Blank	Work Order #: 539987 Analyst: DEP Lab Batch ID: 3003836	539987 5 3836 Sample: 716061-1-BKS		ate Prepared: Batch #:	Date Prepared: 11/14/2016 Batch #: 1	16			Proj Date Al	Project ID: ate Analyzed: 11/14/ Matrix: Water	Project ID: Date Analyzed: 11/14/2016 Matrix: Water		
	TCLP	Mercury by SW 7470A	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Cont Lim %R	PD PD

Date Prepared: 11/14/2016 0.00196 Batch #: 1 0.00200 <0.000200 Sample: 716077-1-BKS Lab Batch ID: 3003887 DEP Mercury Analyst:

Date Analyzed: 11/14/2016 Matrix: Water

20

80-120

2

100

0.00200

0.00200

98

	Units: mg/L		BLAN	K/BLANK	SPIKE / 1	BLANK S	BLANK / BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	LICATE	RECOV	ERY STUI	X	
$\begin{array}{[l l l l l l l l l l l l l l l l l l l $	TCLP Metals by SW846 6010B Analytes	Blank Sample Result [A]		Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R G	RPD %	Control Limits %R	Control Limits %RPD	Flag
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Arsenic	<0,0100	1.00	1.00	100	1.00	1.02	102	2	80-120	20	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Barium	<0.0100	1.00	00.1	001	00'1	1.01	101	1	80-120	20	
a <0.0100 1.00 0.966 97 1.00 0.968 97 0 80-120 <0.0100	Cadmium	<0.00500	1.00	0.985	66	1.00	0.984	86	0	80-120	20	
<0.0100 1.00 1.02 1.02 1.02 1.02 0 80-120 80-120 <0.0200	Chromium	<0.0100	1.00	0,966	16	1.00	896.0	26	0	80-120	20	
<0.0200 1.00 0.984 98 1.00 0.995 100 1 80-120 <0.0200	Lead	<0.0100	1.00	1.02	102	1.00	1.02	102	0	80-120	20	
<0.0200 0.500 0.503 101 0.500 0.499 100 1 80-120	Selenium	<0.0200	1.00	0.984	86	1.00	0.995	100	4	80-120	20	
	Silver	<0.0200	0.500	0.503	101	0.500	0.499	100	1	80-120	20	

Relative Percent Difference RPD = 200*(C-F)/(C+F) Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes

Final 1.000



BS / BSD Recoveries





		8/2016	p	Y STUDY	Control Control Limits Limits Flag
The second s	L'rojecu ID:	Date Analyzed: 11/08/2016	Matrix: Solid	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY	RPD
-u	III	Date		LICATE	Blk. Spk Dup.
				PIKE DUP	Blank Spike
				STANK S	Spike Added
		91		SPIKE / H	Blank Spike
		Date Prepared: 11/08/2016	# 1	K/BLANK	Blank Spike
		te Prepare	Batch #:	BLAN	Spike Added
		Da	BKS		Blank Sample Result
			Sample: 715881-1-BKS		8015B
	WOLK Urder #: 35998/	ARM	Lab Batch ID: 3003551	mg/kg	TPH by SW 8015B
The local sector	WOLK OF	Analyst:	Lab Batch	Units:	

Relative Percent Difference RPD = 200*[(C-F)/(C+F)] Blank Spike Recovery [D] = 100*(C)/[B] Blank Spike Duplicate Recovery [G] = 100*(F)/[E] All results are based on MDL and Validated for QC Purposes



Form 3 - MS / MSD Recoveries





#: 539987	3003608	ed: 11/09/2016	nits: mg/kg
Work Order # :	Lab Batch ID:	Date Analyzed	Reporting Units

Batch #: QC-Sample ID: 539986-001 S Date Prepared: 11/09/2016

Matrix: Soil -

Project ID:

Analyst: MNR

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

100 2 90-110 x: Soil TE RECOVERY STUDY Snited Control	Inorga	Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R		Spike Spike [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
3003608 QC-Sample ID: 540004-004 S Batch #: 1 Matrix: Soil 11/09/2016 Date Prepared: 11/09/2016 Analyst: MNR mg/kg MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY • • • Sniked Initicate Sniked Control	Chloride		308	250	548	96	250	559	100	2	011-06	20	
11/09/2016 Date Prepared: 11/09/2016 Analyst: MNR mg/kg MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY • • • • • • • • • • • • • • • • • • •	Lab Batch ID:	3003608	QC- Sample ID:	540004	-004 S	Bat	ch #:	1 Matri	x: Soil				
mg/kg MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	Date Analyzed:	11/09/2016	Date Prepared:	11/09/2	016	Ans	alyst: N	ANR					
Parent Sniked Samule Sniked Dunlicate Sniked Control	Reporting Units:	mg/kg		N	ATRIX SPIKI	S/MAT	IIX SPI	KE DUPLICA	TE RECO	OVERY :	YOUTS		
			Parent		Spiked Sample	Sniked		Duplicate	Spiked		Control	Control	1

Increase	nie Anione her DDA 200/2001	Parent		Spiked Sample	Spiked		Duplicate	Spiked		Control	Control	
	Analytes	Sample Result [A]	Spike Added [B]	Result Sample [C] %R	Sample %R [D]	Spike Added [E]	5	Dup. %R [G]	RPD %	Limits %R	Limits %RPD	Hag
Chloride		1870	1250	3080	67	1250	3050	94	1	90-110	20	
Lab Batch ID:	3003724	QC- Sample ID: 539915-001 S	539915	001 S	Bat	Batch #:	I Matrix: Soil	c: Soil				
Date Analyzed:	11/11/2016	Date Prepared: 11/11/2016	11/11/20	016	Ans	Analyst: JTR	TR					
Reporting Units:	mg/L		W	ATRIX SPIK	E/MAT	IIAS XIX	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	TE REC	OVERY	STUDY		
T	TCLP BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Result Sample [C] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag

20 20 20 20 20 75-125 75-125 75-125 59-139 66-142 3 2 -e i 16 88 68 16 16 0.456 0.443 0.456 0.454 0.884 0.500 0.500 0.500 0.500 1,00 92 80 16 34 93 0.463 0.469 0.459 0.890 0.454 0.500 0.500 0.500 0.500 1.00 <0.00500 <0.00500 <0.00500 <0.00500 <0.0100 Ethylbenzene m,p-Xylenes o-Xylene Benzene Toluene

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected. J = Present Below Reporting Limit, B = Present in Blank. NR = Not Requested. I = Interference. NA = Not Applicable N = See Narrative. EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Final 1.000

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Form 3 - MS / MSD Recoveries

Project Name: MF-16



539987	3003836	11/14/2016	mg/L
Work Order #:	Lab Batch ID:	Date Analyzed:	Reporting Units:

Batch #:

Matrix: Soil Project ID: ÷

> QC-Sample ID: 539905-001 S Date Prepared: 11/14/2016

Analyst: DEP

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TCI	TCLP Mercury by SW 7470A	Parent Sample	Spike	Spiked Sample Result	Spiked	Snike	Duplicate Sniked Sample	Spiked Dun.	RPD	Control Limits	Control	Flao
	Analytes	Result [A]	Added [B]	CI %R Added Result [F] [D] [E]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R		
Mercury		<0.000200 0.00200	0.00200	0.00215	108 0.00200	0.00200	0.00212	106	-	75-125	20	
Lab Batch ID:	3003836	QC-Sample ID: 540191-001 S	540191	-001 S	Bat	Batch #:	1 Matrix: Soil	c: Soil				
Date Analyzed:	11/14/2016	Date Prepared: 11/14/2016	11/14/2	016	Ans	Analyst: DEP	EP					
Reporting Units:	mg/L		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	E/MATH	IIAS XIS	KE DUPLICA	TE RECO	OVERY	STUDY		
1.Cul	TCI B Manan h. SW 7170 A	Parent		Sniked Sample Sniked	Sniked		Dunlicate Sniked	Sniked		Control Control	Control	

TC	TCLP Mercury by SW 7470A Analytes	rarent Sample Result [A]	Spike Added [B]	Spiked Sample Spiked Duplicate Spiked Result Sample Spike Spiked Spiked ICI %aR Added Result [F] %R IDI [E] [B] [G] %R	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R G	RPD %	Control Limits %R	Control Control Limits Limits %RPD	Flag
Mercury		<0.000200 0.00200	0.00200	0.00213	107	107 0.00200	0.00212	106	0	75-125	20	
Lab Batch ID:	3003887	QC- Sample ID: 540125-001 S	: 540125	-001 S	Bat	ch #:	Batch #: 1 Matrix: Solid	c: Solid				
Date Analyzed:	11/14/2016	Date Prepared: 11/14/2016	E 11/14/2	016	Ans	Analyst: DEP	EP					
Reporting Units:	mg/L		N	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY	Z/MATH	UX SPIF	E DUPLICA	TE RECO	OVERY (STUDY		
		Daront						0.000				

TCLP Metals by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.0500	5.00	5.15	103	5.00	5.09	102	P	80-120	20	
Barium	3.10	5.00	8.07	66	5.00	8.11	100	0	80-120	20	
Cadmium	<0.0250	5.00	4.97	66	5.00	5.00	100	1	80-120	20	
Chromium	<0.0500	5.00	4.75	95	5.00	4.77.	95	0	80-120	20	
Lead	<0.0500	5.00	5.03	101	5.00	5.06	101	1	80-120	20	
Selenium	<0.100	5.00	5.14	103	5.00	5.16	103	0	80-120	20	
Silver	<0.100	2.50	2.54	102	2.50	2.55	102	0	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*((C-F)/(C+F))

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, J = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spliked.

Final 1.000



Form 3 - MS / MSD Recoveries





Vork Order # : 539	Lab Batch ID: 300	Date Analyzed: 11/	Reporting Units: mg
539987	3003551	11/08/2016	mg/kg

001 S Batch #: 1

Project ID: 1 Matrix: Soil

> QC- Sample ID: 539784-001 S Date Prepared: 11/08/2016

Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Spii Result Sam [C] %	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	666	914	16	666	937	94	7	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	666	983	98	666	1010	101	m	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E.

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Final 1.000

Page 19 of 21

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BORAT

Setting the Standard since 1990 Stafford,Texas (281-240-4200) Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

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		www.xenco.com	co.com			ž	# atom option	Ħ		×	Xenco Job #	(\mathbf{n})	S1	Ŋ	
								Ana	ytical Info	mation					Matrix Codes
	Project	Information				: 									
Project Name/Nu NJF-16	mber;														W = Water S = Soil/Sed/Solid
Project Location:													<u> </u>		GW =Ground Water
Eunice NM															DW = Drinking Water P = Product
Involce To:															SW = Surface water
Same as ab	iove						tals					•			SL = Sludge OW =Ocean/Sea Water
							Ме								WI = Wipe
PO Number: NO	ne					,	<u> </u>						• • •		O = OII WW≕ Waste Water
Collection		-	NUT	ber of pres	erved bottle										A = Air
		*	H/Zn ate	03 04	H SO4	!E		•••••							
Date			HCI NaC	⊢	Nat	ион	ļ	-			-				Field Comments
11/8/2016	7:40	s 1					×	×							
11/8/2016	7:34	s 1				~	×	×	<u>~</u>						
11/8/2016	7:37	s 1					×	×	<u>×</u>						
11/8/2016	7:49	s 1				 	×	×	<u>~</u>						
	A 2000	Data Deli	verable inform	nation						Notes:	6.87.6	104548			
	Level	II Std QC		[] []	el IV (Fuil Di		v data)								
	X Level	111 Std QC+ F	oms		P Level IV										
E	Levei	3 (CLP Form	8)	[]	'/ RG -411										
	TRRP	Checkilst													
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DOCUMENTED B	ELOW EACH 1	TIME SAMPLE	S CHANGE P	OSSESSION,	INCLUDING	COURIER DI	LIVERY						A Revenue	186 S. C. Martin	
2041 9	1 BUL	Mell-	 }	2 2	quisnea By			2/8/1	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	55 Re	Celved	ey:			
	Received By 3	1		4 Rellin	quished By			Date Ti	10:	4 Re	ceived t	By:	Į	Temp:	IR ID:R-8
Date Time:	Received By			Custo	ody Seal #		Prese	ived wh	ere appli	able		au tro		Cort	Corrected Temp: 4.900
the control of Xenco	o. A minimum o	ny to Aetico, ha charge of \$75 v	vill be applied t	o each project	s. n assigns si I. Xenco's liab	ility will be fin	s and cons sited to the	cost of s	ervice, Xen Imples, Anj	r samples	received i	tor the c by Xenco	ost of samp but not and	alyzed will	nall not assume any responsibility for be invoiced at \$5 per sample. These
	Project Name/Nu MF-16 Project Leation Euroice To: Same as ab Date 11/8/2016 11/8/2016 11/8/2016 11/8/2016 11/8/2016	Project Naman/Number: MF-16 Project Location: Eunice NM Involee To: Same as above Date Time A 11/8/2016 7:34 11/8/2016 7:34 11/8/2016 7:37 11/8/2016 7:37 11/8/2016 7:37 11/8/2016 7:49 ULevel Level Level Level Level Received By COCUMENTED BELOW EACH Received By Cocumentation client compare	Project NamaNumber: Project NamaNumber: Project Location: Eunice NM Invoice To: Same as above Po Number: NORe Collection Date Time Matrix bottos 11/8/2016 7:37 S 1 11/8/2016 7:49 S 1 11/8/2016 7:	Project Information Project Information: MiF-16 None Number: None Data Deliverable Infom Level II Std QC + Forms Level II Std QC + Forms Samp Samp Samp Samp Samp Samp Samp Samp	Project Information Project Leanton: Eunice NM Imme Number of present Leanton: Collection: Number of present Leanton: O Number: NONE O Number: NONE O Number: NONE Online of 7.34 \$ 1 Number of present colspan="2">Online 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XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: Energy Transfer- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 11/08/2016 02:55:00 PM Temperature Measuring device used : R8 Work Order #: 539987 Sample Receipt Checklist Comments #1 *Temperature of cooler(s)? 4.9 #2 *Shipping container in good condition? N/A #3 *Samples received on ice? Yes #4 *Custody Seal present on shipping container/ cooler? N/A #5 *Custody Seals intact on shipping container/ cooler? N/A #6 Custody Seals intact on sample bottles? N/A #7 *Custody Seals Signed and dated? N/A #8 *Chain of Custody present? Yes #9 Sample instructions complete on Chain of Custody? Yes #10 Any missing/extra samples? No #11 Chain of Custody signed when relinquished/ received? Yes #12 Chain of Custody agrees with sample label(s)? Yes #13 Container label(s) legible and intact? Yes #14 Sample matrix/ properties agree with Chain of Custody? Yes #15 Samples in proper container/ bottle? Yes #16 Samples properly preserved? Yes #17 Sample container(s) intact? Yes #18 Sufficient sample amount for indicated test(s)? Yes #19 All samples received within hold time? Yes #20 Subcontract of sample(s)? Houston Yes #21 VOC samples have zero headspace (less than 1/4 inch bubble)? N/A #22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for N/A samples for the analysis of HEM or HEM-SGT which are verified by the analysts. #23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH? N/A

* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

FRAMER essica.

Jessica Kramer

Date: 11/08/2016

Checklist reviewed by:

Amo roam Kelsey Brooks

Date: 11/09/2016



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

July 14, 2017

Bernie Bockish GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110 TEL: (505) 884-0672 FAX

RE: MF 16

OrderNo.: 1707310

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/7/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109
Date Reported: 7/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Project: MF 16

Client Sample ID: 11135250-05-070617-MGTP-1-Collection Date: 7/6/2017 10:50:00 AM Presived Date: 7/7/2017 10:25:00 AM

Lab ID: 1707310-001	Matrix:		Received 1	Received Date: 7/7/2017 10:25:00 AM					
Analyses	Result	PQL Qu	QL Qual Units		DF Date Analyzed				
EPA METHOD 8015M/D: DIESEL RA			Analyst	том					
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/12/2017 1:00:35 PM	32747			
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/12/2017 1:00:35 PM	32747			
Surr: DNOP	93.8	70-130	%Rec	1	7/12/2017 1:00:35 PM	32747			
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/12/2017 1:56:49 PM	32740			
Surr: BFB	92.3	54-150	%Rec	1	7/12/2017 1:56:49 PM	32740			
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	DJF			
Benzene	ND	0.025	mg/Kg	1	7/12/2017 5:54:58 PM	32740			
Toluene	ND	0.049	mg/Kg	1	7/12/2017 5:54:58 PM	32740			
Ethylbenzene	ND	0.049	mg/Kg	1	7/12/2017 5:54:58 PM	32740			
Xylenes, Total	ND	0.098	mg/Kg	1	7/12/2017 5:54:58 PM	32740			
Surr: 1,2-Dichloroethane-d4	109	70-130	%Rec	1	7/12/2017 5:54:58 PM	32740			
Surr: 4-Bromofluorobenzene	87.5	70-130	%Rec	1	7/12/2017 5:54:58 PM	32740			
Surr: Dibromofluoromethane	107	70-130	%Rec	1	7/12/2017 5:54:58 PM	32740			
Surr: Toluene-d8	98.8	70-130	%Rec	1	7/12/2017 5:54:58 PM	32740			

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

Oualifiers:

*

- Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 1 of 10 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Date Reported: 7/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Project: MF 16

Client Sample ID: 11135250-05-070617-MGTP-5-Collection Date: 7/6/2017 11:15:00 AM

Lab ID: 1707310-002	Matrix:		Received 1	Received Date: 7/7/2017 10:25:00 AM					
Analyses	Result	PQL Qu	QL Qual Units		DF Date Analyzed				
EPA METHOD 8015M/D: DIESEL RA		Analyst: TOM							
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	7/12/2017 2:07:13 PM	32747			
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	7/12/2017 2:07:13 PM	32747			
Surr: DNOP	92.4	70-130	%Rec	1	7/12/2017 2:07:13 PM	32747			
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/12/2017 2:21:03 PM	32740			
Surr: BFB	96.7	54-150	%Rec	1	7/12/2017 2:21:03 PM	32740			
EPA METHOD 8260B: VOLATILES \$	SHORT LIST				Analyst	DJF			
Benzene	ND	0.024	mg/Kg	1	7/12/2017 7:22:02 PM	32740			
Toluene	ND	0.049	mg/Kg	1	7/12/2017 7:22:02 PM	32740			
Ethylbenzene	ND	0.049	mg/Kg	1	7/12/2017 7:22:02 PM	32740			
Xylenes, Total	ND	0.098	mg/Kg	1	7/12/2017 7:22:02 PM	32740			
Surr: 1,2-Dichloroethane-d4	106	70-130	%Rec	1	7/12/2017 7:22:02 PM	32740			
Surr: 4-Bromofluorobenzene	89.9	70-130	%Rec	1	7/12/2017 7:22:02 PM	32740			
Surr: Dibromofluoromethane	108	70-130	%Rec	1	7/12/2017 7:22:02 PM	32740			
Surr: Toluene-d8	98.1	70-130	%Rec	1	7/12/2017 7:22:02 PM	32740			

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

- * 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Date Reported: 7/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Project: MF 16

Client Sample ID: 11135250-05-070617-MGTP-2-Collection Date: 7/6/2017 11:30:00 AM of read Datas 7/7/2017 10.25.00 AM n.

Lab ID: 1707310-003	Matrix:		Received 1	eived Date: 7/7/2017 10:25:00 AM					
Analyses	Result	PQL Qu	QL Qual Units		DF Date Analyzed				
EPA METHOD 8015M/D: DIESEL RA			Analyst	том					
Diesel Range Organics (DRO)	ND	9.5	mg/Kg	1	7/12/2017 2:29:30 PM	32747			
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/12/2017 2:29:30 PM	32747			
Surr: DNOP	92.1	70-130	%Rec	1	7/12/2017 2:29:30 PM	32747			
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/12/2017 3:33:58 PM	32740			
Surr: BFB	102	54-150	%Rec	1	7/12/2017 3:33:58 PM	32740			
EPA METHOD 8260B: VOLATILES S	HORT LIST				Analyst	DJF			
Benzene	ND	0.025	mg/Kg	1	7/12/2017 7:51:00 PM	32740			
Toluene	ND	0.049	mg/Kg	1	7/12/2017 7:51:00 PM	32740			
Ethylbenzene	ND	0.049	mg/Kg	1	7/12/2017 7:51:00 PM	32740			
Xylenes, Total	ND	0.099	mg/Kg	1	7/12/2017 7:51:00 PM	32740			
Surr: 1,2-Dichloroethane-d4	105	70-130	%Rec	1	7/12/2017 7:51:00 PM	32740			
Surr: 4-Bromofluorobenzene	91.1	70-130	%Rec	1	7/12/2017 7:51:00 PM	32740			
Surr: Dibromofluoromethane	104	70-130	%Rec	1	7/12/2017 7:51:00 PM	32740			
Surr: Toluene-d8	99.5	70-130	%Rec	1	7/12/2017 7:51:00 PM	32740			

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

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н
- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 3 of 10 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Date Reported: 7/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Project: MF 16

Client Sample ID: 11135250-05-070617-MGTP-3-Collection Date: 7/6/2017 11:45:00 AM

Received Date: 7/7/2017 10:25:00 AM							
alyzed I	Batch						
Analyst:	том						
2:51:56 PM	32747						
2:51:56 PM	32747						
2:51:56 PM	32747						
Analyst: I	NSB						
3:58:16 PM	32740						
3:58:16 PM	32740						
Analyst: I	DJF						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
8:19:50 PM	32740						
	7 3:58:16 PM Analyst: 7 8:19:50 PM 7 8:19:50 PM 7 8:19:50 PM 7 8:19:50 PM 7 8:19:50 PM 7 8:19:50 PM 7 8:19:50 PM						

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

- * Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix
- Н
- Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- Analyte detected below quantitation limits Page 4 of 10 J
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Date Reported: 7/14/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD

Project: MF 16

Client Sample ID: 11135250-05-070617-MGTP-4-Collection Date: 7/6/2017 12:00:00 PM

Lab ID: 1707310-005	Matrix:		Received Date: 7/7/2017 10:25:00 AM						
Analyses	Result	PQL Qu	al Units	DF	Batch				
EPA METHOD 8015M/D: DIESEL RA			Analyst	: ТОМ					
Diesel Range Organics (DRO)	ND	9.4	mg/Kg	1	7/12/2017 3:14:14 PM	32747			
Motor Oil Range Organics (MRO)	ND	47	mg/Kg	1	7/12/2017 3:14:14 PM	32747			
Surr: DNOP	91.1	70-130	%Rec	1	7/12/2017 3:14:14 PM	32747			
EPA METHOD 8015D: GASOLINE R	ANGE				Analyst	: NSB			
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	7/12/2017 4:22:33 PM	32740			
Surr: BFB	102	54-150	%Rec	1	7/12/2017 4:22:33 PM	32740			
EPA METHOD 8260B: VOLATILES \$	SHORT LIST				Analyst	DJF			
Benzene	ND	0.024	mg/Kg	1	7/12/2017 8:48:37 PM	32740			
Toluene	ND	0.049	mg/Kg	1	7/12/2017 8:48:37 PM	32740			
Ethylbenzene	ND	0.049	mg/Kg	1	7/12/2017 8:48:37 PM	32740			
Xylenes, Total	ND	0.097	mg/Kg	1	7/12/2017 8:48:37 PM	32740			
Surr: 1,2-Dichloroethane-d4	109	70-130	%Rec	1	7/12/2017 8:48:37 PM	32740			
Surr: 4-Bromofluorobenzene	90.1	70-130	%Rec	1	7/12/2017 8:48:37 PM	32740			
Surr: Dibromofluoromethane	109	70-130	%Rec	1	7/12/2017 8:48:37 PM	32740			
Surr: Toluene-d8	102	70-130	%Rec	1	7/12/2017 8:48:37 PM	32740			

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

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

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: Project:	GHD MF 16											
Sample ID	LCS-32747	SampT	ype: LC	S	Test	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID:	LCSS	Batch	ID: 32	747	R	RunNo: 4	4147					
Prep Date:	7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	393409	Units: mg/k	٤g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
-	Organics (DRO)	46	10	50.00	0	92.5	73.2	114				
Surr: DNOP		4.6		5.000		93.0	70	130				
Sample ID	MB-32747	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID:	PBS	Batch	ID: 32	747	R	RunNo: 4	4147					
Prep Date:	7/11/2017	Analysis Da	ate: 7/	12/2017	S	SeqNo: 1	393410	Units: mg/K	٢g			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
•	Organics (DRO)	ND	10									
Motor Oil Rang Surr: DNOP	ge Organics (MRO)	ND 9.5	50	10.00		95.4	70	130				
Sull. DNOP		9.5		10.00		90.4	70	130				
Sample ID	1707310-001AMS	SampT	6	TestCode: EPA Method 8015M/D: Diesel Range Organics								
Client ID:	11135250-05-0706	617 Batch	ID: 32	747	R	RunNo: 4	4147					
Prep Date:	7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394365	Units: mg/K	٢g			
Analyte		Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Surr: DNOP	Organics (DRO)	46	10	50.40	0	91.6	55.8	122				
Sull: DNOP		4.4		5.040		87.6	70	130				
Sample ID	1707310-001AMS	D SampT	уре: МS	SD	Test	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID:	11135250-05-0706	617 Batch	ID: 32	747	RunNo: 44147							
Prep Date:	7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394366	Units: mg/K	٢g			
Analyte		Result			SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
-	Organics (DRO)	49	10	50.45	0	96.8	55.8	122	5.67	20		
Surr: DNOP		4.6		5.045		91.9	70	130	0	0		
Sample ID	MB-32779	SampT	ype: ME	BLK	Test	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID:	PBS	Batch	ID: 32	779	R	RunNo: 4	4187					
Prep Date:	7/13/2017	Analysis D	ate: 7/	13/2017	S	SeqNo: 1	394824	Units: %Re	C			
Analyte		Result	PQL	SPK value	SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Surr: DNOP		12		10.00		117	70	130				
Sample ID	LCS-32779	SampT	ype: LC	S	Test	tCode: El	PA Method	8015M/D: Die	esel Rang	e Organics		
Client ID:	LCSS	Batch	ID: 32	779	R	RunNo: 44187						
Prep Date:	7/13/2017	Analysis D	ate: 7/	13/2017	S	SeqNo: 1	394828	Units: %Re	C			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
								5				

- * 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 6 of 10

Client: Project:	GHD MF 16										
Sample ID LCS	nple ID LCS-32779 SampType: LCS				TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCS	SS	Batch	n ID: 32	779	F	unNo: 4	4187				
Prep Date: 7/	13/2017	Analysis D	ate: 7/	/13/2017	S	eqNo: 1	394828	Units: %Re	c		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP		5.7		5.000		114	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 7 of 10

Client: Project:	GHD MF 16										
Sample ID	MB-32740	SampTy	pe: ME	BLK	Test	TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch I	D: 32	740	R	unNo: 4	4163				
Prep Date:	7/11/2017	Analysis Dat	te: 7/	12/2017	S	eqNo: 1	394414	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang Surr: BFB	je Organics (GRO)	ND 970	5.0	1000		96.9	54	150			
Sample ID	LCS-32740	SampTy	pe: LC	S	Test	Code: El	PA Method	8015D: Gasc	line Rang	е	
Client ID:	LCSS	Batch I	D: 32	740	R	unNo: 4	4163				
Prep Date:	7/11/2017	Analysis Dat	te: 7/	12/2017	S	eqNo: 1	394415	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
-	je Organics (GRO)	26	5.0	25.00	0	103	76.4	125			
Surr: BFB		1100		1000		109	54	150			
Sample ID	1707310-002AMS	SampTy	pe: MS	6	Test	Code: El	PA Method	8015D: Gasc	line Rang	е	
Client ID:	11135250-05-0700	617 Batch I	D: 32	740	RunNo: 44163						
Prep Date:	7/11/2017	Analysis Dat	te: 7/	12/2017	S	eqNo: 1	394421	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	e Organics (GRO)	29	4.8	23.95	0	122	77.8	128			
Surr: BFB		1000		957.9		109	54	150			
Sample ID	1707310-002AMS	D SampTy	pe: MS	SD	Test	Code: El	PA Method	8015D: Gasc	line Rang	e	
Client ID:	11135250-05-070	617 Batch I	D: 32	740	R	unNo: 4	4163				
Prep Date:	7/11/2017	Analysis Dat	te: 7/	12/2017	S	eqNo: 1	394422	Units: mg/k	íg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	je Organics (GRO)	30	4.9	24.34	0	123	77.8	128	2.72	20	
Surr: BFB		1100		973.7		114	54	150	0	0	

- * 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 8 of 10

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1707310
	14-Jul-17

Client:GHDProject:MF 16

Sample ID mb-32740	SampT	ype: ME	BLK	TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBS	Batch	n ID: 32	740	RunNo: 44176							
Prep Date: 7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394707	Units: mg/k	ζg			
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	0.54		0.5000		108	70	130				
Surr: 4-Bromofluorobenzene	0.44		0.5000		87.9	70	130				
Surr: Dibromofluoromethane	0.52		0.5000		104	70	130				
Surr: Toluene-d8	0.50		0.5000		100	70	130				
Sample ID Ics-32740	SampT	ype: LC	s	Tes	tCode: E	PA Method	8260B: Volat	tiles Short	List		
Client ID: LCSS	Batch	n ID: 32	740	F	RunNo: 4	4176					
Prep Date: 7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394708	Units: mg/K	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.025	1.000	0	108	70	130				
Toluene	0.91	0.050	1.000	0	91.3	70	130				
Surr: 1,2-Dichloroethane-d4	0.57		0.5000		115	70	130				
Surr: 4-Bromofluorobenzene	0.44		0.5000		87.4	70	130				
Surr: Dibromofluoromethane	0.54		0.5000		107	70	130				
Surr: Toluene-d8	0.51		0.5000		101	70	130				
Sample ID 1707310-001am	s SampT	уре: М	6	Tes	tCode: E	PA Method	8260B: Volat	tiles Short	List		
Client ID: 11135250-05-07	0617 Batch	n ID: 32	740	RunNo: 44176							
Prep Date: 7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394710	Units: mg/k	٢g			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzene	1.1	0.024	0.9569	0	112	61.9	146				
Toluene	0.96	0.048	0.9569	0	100	70	130				
Surr: 1,2-Dichloroethane-d4	0.48		0.4785		101	70	130				
Surr: 4-Bromofluorobenzene	0.43		0.4785		90.0	70	130				
Surr: Dibromofluoromethane	0.47		0.4785		98.7	70	130				
Surr: Toluene-d8	0.49		0.4785		103	70	130				
		ype: M	SD	Tes	tCode: E	PA Method	8260B: Volat	tiles Short	List		
Sample ID 1707310-001am	sd SampT					4176					
Sample ID 1707310-001am Client ID: 11135250-05-07		n ID: 32	740	F	RunNo: 4	4170					
		n ID: 32			SeqNo: 1		Units: mg/K	ίg			
Client ID: 11135250-05-07	0617 Batch	n ID: 32	12/2017				Units: mg/k HighLimit	(g %RPD	RPDLimit	Qual	
Client ID: 11135250-05-07 Prep Date: 7/11/2017	0617 Batcl Analysis D	n ID: 32 Date: 7 /	12/2017	S	SeqNo: 1	394711	C C	•	RPDLimit 20	Qual	

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 9 of 10

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client: GHD Project: MF 16

roject:	IVI

Sample ID 1707310-001ams	d SampT	ype: M \$	SD	Test	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: 11135250-05-070	617 Batch	ID: 32	740	R	RunNo: 4	4176				
Prep Date: 7/11/2017	Analysis D	ate: 7/	12/2017	S	SeqNo: 1	394711	Units: mg/K	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 1,2-Dichloroethane-d4	0.52		0.4907		106	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.44		0.4907		90.4	70	130	0	0	
Surr: Dibromofluoromethane	0.51		0.4907		105	70	130	0	0	
Surr: Toluene-d8	0.49		0.4907		100	70	130	0	0	

- * 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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 10 of 10

ENVIRONMENTAL ANALYSIS LABORATORY	Hall Environmental Albu TEL: 505-345-3975 Website: www.hau	4901 Hawkir querque, NM 8 FAX: 505-345-	ns NE 37109 San 4107	Sample Log-In Check List				
Client Name: GHD	Work Order Number:	1707310		RcptNo: 1				
Received By: Erin Melendrez	7/7/2017 10:25:00 AM		ULAL A	7				
Completed By: Ashley Gallegos	7/7/2017 3:55:26 PM		A					
Reviewed By:	7/10/17		. 0					
Chain of Custody								
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗔	Not Present				
2. Is Chain of Custody complete?		Yes 🔽	No 🗌	Not Present				
3. How was the sample delivered?		<u>Courier</u>						
<u>Log In</u>								
4. Was an attempt made to cool the samp	les?	Yes 🔽	No 🗌					
5. Were all samples received at a tempera	ture of >0° C to 6.0°C	Yes 🗹	No 🗌					
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌					
7. Sufficient sample volume for indicated te	est(s)?	Yes 🗹	No 🗀					
8. Are samples (except VOA and ONG) pro	perly preserved?	Yes 🔽	No 🗌					
9. Was preservative added to bottles?		Yes 🗌	No 🗹					
10.VOA vials have zero headspace?		Yes	No 🗌	No VOA Vials 🔽				
11. Were any sample containers received be	roken?	Yes 🗌	No 🗹	# of procession				
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🔽	No 🗌	# of preserved bottles checked for pH: (<2 or >12 un	less noted)			
13. Are matrices correctly identified on Chair		Yes 🔽	No 🗌	Adjusted?				
14. Is it clear what analyses were requested	?	Yes 🗹	No 🗌		—			
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🗌	Checked by:				

Special Handling (if applicable)

_

Feison	Notified:			Date			*
By Who	m: 🏻			• Via:	eMail	Phone 🗍 Fax	In Person
Regardi	ng:		an a				
Client In	structions:						
. Additional ren	narks:			• • • • • • • • • • • • • • • • • • • •			······································
	nation						
. Cooler Inforr							
Cooler Inforr	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By	

77

Chain-of-	Chain-of-Custody Record	Turm-Around Time.					Ř		1	3	100		ġ
Client GHD Scruces Inc	vices, Inc	□ Standard □ Rush		Π	T	E Z	HALL ENVIRONMENTAL	Z	RI .		W N	E	Z S
		1		1		WW	www.hallenvironmental.com	viron	mental	moo	2	2	ž
Mailing Address: 613	Mailing Address: 6121 Indian School Rd Ste 200	ALCER, MELLE		64	U1 Hav	kins 1	4901 Hawkins NE - Albuquergue, NM 87109	nonq	erdue.	MN	37109		
NE Albuquera	Albuquerque, N.M. 87110	Project #:		all.	Tel. 505-345-3975	345-3	976	Fax	Fax 505-345-4107	5-41	20		
Phone #: 505, 884 0762	34 0762						Ала	lysis	Analysis Request	st	;		
email or Fax#: Bech	email or Fax#: Be creard Bockisch @ and ear	Project Manager:		-	(0)	-		(*(-		-	
DA/OC Package:	C 1 evel 4 (Eull Validation)	Bernard Bockisch	sch		HW / C		(SW	05'*0	s,gga		(?'	(
-		Sampler: Michael 60	Baint 832-374-	_	-	-	IS 022	"NO ⁵ 'E	2808		205	290	
C EDD (Type)		Tempera	-0.1(ce) =5.D	_	-		-		_	-) ?	(8)	
Date Time Matrix	trix Sample Request ID	Container Preservative Type and # Type	HEAL No.	atex + MT	8015B H91	EDB (Metho)168) a'HA9 9M 8 ARD9	O,∃) ≳noinA	bitze9 1806	40V) 808S8	Chlorid C	XEIS	səlddu8 ii/
715 1030 5	Silverse of the new The Alle Silver	42501 Sar TCE		1.1	×		-	-	+	-	X	t	1
7/5 1100 5		1	Anna (10)	L	*	Ц	1		-	-	X	X	
715 1140 5			V	$\left \right $	X						×	X	
2 15 1220 5	5-14525404-00577-46-18-516	40	n Separate		X		+	1	1		×	X	
74- 1240 S			report see employed	1	X					\vdash	k	¥	
7/6 1050 S			-001		X					-		X	
2/6 1115 S	- HERSISSO 05-070617-MIL TP-546		-002		×					-		X	
716 N30 S	F-WESSE-05. 6706 M. METP. 2-10		-003		X	Ξ.				-		X	
716 1145 5	6-WY KO OS-OTOGIT-METERIA		-004		×	E				-		X	
7/6 1200 5		-18/12 0	92		×							×	
	5	per Michael Gravit					-			+			
Tmer	Relinquighed by	Received .	Date Time	Remarks:	-					-		-	
Time:	Relinguished by	Received a	CL I I I III										
10/17/190	101	NUCA	LULL										

Andy Freeman

From: Sent: To: Subject: Attachments: Brandon, Alan K. <Alan.Brandon@ghd.com> Friday, July 07, 2017 11:34 AM Andy Freeman Trunk-MC and MF-16 COC Trunk MC and MF-16 COC.pdf

Andy,

These samples should be arriving today or already have. Can you please split the reporting between the 2 sites as noted on the attached?

Thanks

CONFIDENTIALITY NOTICE: This email, including any attachments, is confidential and may be privileged. If you are not the intended recipient please notify the sender immediately, and please delete it; you should not copy it or use it for any purpose or disclose its contents to any other person. GHD and its affiliates reserve the right to monitor and modify all email communications through their networks.



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

September 18, 2017 Bernie Bockisch GHD 6121 Indian School Road, NE #200 Albuquerque, NM 87110

TEL: (505) 884-0672 FAX

RE: MF 16

OrderNo.: 1709690

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 3 sample(s) on 9/12/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analy	tical	Report	
Anar	lucar	Keport	

Lab Order: 1709690

Date Reported: 9/18/2017

CLIENT:GHDProject:MF 16				Lab O	rder: 17096	90
Lab ID: 1709690-001			Collection D	ate: 9/6	/2017 10:20:00 AM	M
Client Sample ID: S-11135250-05-090	617-MG-TP-6	5-14'	Mat	rix: SO	IL	
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Ana	lyst: MRA
Chloride	ND	30	mg/Kg	20	9/15/2017 5:39:24 I	-
EPA METHOD 8015M/D: DIESEL RANG		5			Ana	lyst: TOM
Diesel Range Organics (DRO)	32	9.3	mg/Kg	1	9/15/2017 4:25:14 I	-
Motor Oil Range Organics (MRO)	49	47	mg/Kg	1	9/15/2017 4:25:14	
Surr: DNOP	85.2	70-130	%Rec	1	9/15/2017 4:25:14	
EPA METHOD 8015D: GASOLINE RAN	GE				Ana	lyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	9/15/2017 9:49:51	•
Surr: BFB	106	54-150	%Rec	1	9/15/2017 9:49:51 I	
EPA METHOD 8021B: VOLATILES					Ana	lyst: NSB
Benzene	ND	0.024	mg/Kg	1	9/15/2017 9:49:51 l	
Toluene	ND	0.024	mg/Kg	1	9/15/2017 9:49:51	
Ethylbenzene	ND	0.049	mg/Kg	1	9/15/2017 9:49:51	
Xylenes, Total	ND	0.098	mg/Kg	1	9/15/2017 9:49:51 I	
Surr: 4-Bromofluorobenzene	116	66.6-132	%Rec	1	9/15/2017 9:49:51 I	PM 33871
Lab ID: 1709690-002			Collection D	ate: 9/6	/2017 10:30:00 AN	M
Client Sample ID: S-11135250-05-090	617-MG-TP-7	7-14'	Mat	rix: SO	IL	
Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					Ana	lyst: MRA
EPA METHOD 300.0: ANIONS Chloride	ND	30	mg/Kg	20	Ana 9/15/2017 6:16:38 I	llyst: MRA PM 33876
Chloride			mg/Kg	20	9/15/2017 6:16:38	PM 33876
Chloride EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6		-	9/15/2017 6:16:38 I Ana	PM 33876 Ilyst: TOM
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO)	E ORGANICS	9 .6	mg/Kg	1	9/15/2017 6:16:38 I Ana 9/15/2017 4:53:25 I	PM 33876 Ilyst: TOM PM 33875
Chloride EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS	6		-	9/15/2017 6:16:38 I Ana	PM 33876 Ilyst: TOM PM 33875 PM 33875
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	E ORGANICS ND ND 86.3	9.6 48	mg/Kg mg/Kg	1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25	PM 33876 Ilyst: TOM PM 33875 PM 33875 PM 33875
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG	E ORGANICS ND ND 86.3 GE	9.6 48 70-130	mg/Kg mg/Kg %Rec	1 1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25 Ana	PM 33876 Nyst: TOM PM 33875 PM 33875 PM 33875 PM 33875 Nyst: NSB
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	E ORGANICS ND ND 86.3	9.6 48	mg/Kg mg/Kg	1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25	PM 33876 Ilyst: TOM PM 33875 PM 33875 PM 33875 Ilyst: NSB PM 33871
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO)	E ORGANICS ND ND 86.3 GE ND	9.6 48 70-130 5.0	mg/Kg mg/Kg %Rec mg/Kg	1 1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25 Ana 9/15/2017 10:13:10 9/15/2017 10:13:10	PM 33876 Ilyst: TOM PM 33875 PM 33871 PM 33871
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	E ORGANICS ND ND 86.3 GE ND 97.0	9.6 48 70-130 5.0 54-150	mg/Kg mg/Kg %Rec mg/Kg %Rec	1 1 1 1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25 Ana 9/15/2017 10:13:10 9/15/2017 10:13:10 Ana	PM 33876 lyst: TOM PM 33875 PM 33875 PM 33875 lyst: NSB PM 33871 PM 33871 PM 33871 lyst: NSB
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	E ORGANICS ND ND 86.3 GE ND 97.0 ND	9.6 48 70-130 5.0 54-150 0.025	mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg	1 1 1 1 1	9/15/2017 6:16:38 A Ana 9/15/2017 4:53:25 A 9/15/2017 4:53:25 A 9/15/2017 4:53:25 A Ana 9/15/2017 10:13:10 9/15/2017 10:13:10 Ana 9/15/2017 10:13:10	PM 33876 Ilyst: TOM PM 33875 PM 33875 PM 33875 PM 33875 Ilyst: NSB PM 33871 PM 33871 PM 33871 PM 33871 PM 33871
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	E ORGANICS ND ND 86.3 GE ND 97.0	9.6 48 70-130 5.0 54-150	mg/Kg mg/Kg %Rec mg/Kg mg/Kg mg/Kg	1 1 1 1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25 Ana 9/15/2017 10:13:10 9/15/2017 10:13:10 Ana	M 33876 Ilyst: TOM PM 33875 PM 33875 PM 33875 PM 33875 Ilyst: NSB PM 33871 PM 33871 Ilyst: NSB PM 33871 Ilyst: NSB PM 33871 Ilyst: NSB PM 33871
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	E ORGANICS ND ND 86.3 GE ND 97.0 ND ND	9.6 48 70-130 5.0 54-150 0.025 0.050	mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg	1 1 1 1 1 1	9/15/2017 6:16:38 Ana 9/15/2017 4:53:25 9/15/2017 4:53:25 9/15/2017 4:53:25 Ana 9/15/2017 10:13:10 9/15/2017 10:13:10 9/15/2017 10:13:10 9/15/2017 10:13:10	PM 33876 Ilyst: TOM PM 33875 PM 33875 PM 33875 PM 33875 Ilyst: NSB PM 33871 PM 33871 Ilyst: NSB PM 33871 Ilyst: NSB PM 33871 PM 33871 PM 33871

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

- Qualifiers: * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report	Analy	tical	Rep	ort
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Lab Order: 1709690

Date Reported: 9/18/2017

	GHD AF 16				Lab O	rder: 1709	9690	
Lab ID:	1709690-003			Collection D	ate: 9/6	/2017 11:05:00 /	AM	
Client Sample ID:	S-11135250-05-090	617-MG-TP-8	-6'	Ma	trix: SO	IL		
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Bat	ch ID
EPA METHOD 300	0.0: ANIONS					A	nalyst:	MRA
Chloride		ND	30	mg/Kg	20	9/15/2017 6:29:0	3 PM	33876
EPA METHOD 801	5M/D: DIESEL RANG	GE ORGANICS	5			A	nalyst:	том
Diesel Range Orga	nics (DRO)	ND	10	mg/Kg	1	9/15/2017 5:21:4	3 PM	33875
Motor Oil Range Or	ganics (MRO)	ND	51	mg/Kg	1	9/15/2017 5:21:4	3 PM	33875
Surr: DNOP		75.5	70-130	%Rec	1	9/15/2017 5:21:4	3 PM	33875
EPA METHOD 801	5D: GASOLINE RAN	GE				A	nalyst:	NSB
Gasoline Range Or	ganics (GRO)	ND	4.7	mg/Kg	1	9/15/2017 10:36:	29 PM	33871
Surr: BFB		100	54-150	%Rec	1	9/15/2017 10:36:	29 PM	33871
EPA METHOD 802	1B: VOLATILES					A	nalyst:	NSB
Benzene		ND	0.024	mg/Kg	1	9/15/2017 10:36:	29 PM	33871
Toluene		ND	0.047	mg/Kg	1	9/15/2017 10:36:	29 PM	33871
Ethylbenzene		ND	0.047	mg/Kg	1	9/15/2017 10:36:	29 PM	33871
Xylenes, Total		ND	0.095	mg/Kg	1	9/15/2017 10:36:	29 PM	33871
Surr: 4-Bromoflue	orobenzene	110	66.6-132	%Rec	1	9/15/2017 10:36:	29 PM	33871

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

Qualifiers:

*

- Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix D
- Н Holding times for preparation or analysis exceeded

Hall Environmental Analysis Laboratory, Inc.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank
- Е Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 6
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

Page 3 of 6

Client:GHDProject:MF 16

Sample ID MB-33876	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 33876	RunNo: 45653		
Prep Date: 9/14/2017	Analysis Date: 9/15/2017	SeqNo: 1450182	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit Qual
Chloride	ND 1.5			
Sample ID LCS-33876	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Sample ID LCS-33876 Client ID: LCSS	SampType: I cs Batch ID: 33876	TestCode: EPA Method RunNo: 45653	300.0: Anions	
			300.0: Anions Units: mg/Kg	
Client ID: LCSS	Batch ID: 33876 Analysis Date: 9/15/2017	RunNo: 45653		RPDLimit Qual

- * Value exceeds Maximum Contaminant Level.
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- PQL Practical Quanitative Limit
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- B Analyte detected in the associated Method Blank
- E Value above quantitation range
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- P Sample pH Not In Range
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GHD

Project: MF 16										
Sample ID LCS-33875	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015M/D: Di	esel Rang	e Organics	
Client ID: LCSS	Batch	n ID: 33	875	R	RunNo: 4	5643				
Prep Date: 9/14/2017	Analysis D	ate: 9/	15/2017	S	SeqNo: 1	448863	Units: mg/H	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	51	10	50.00	0	101	73.2	114			
Surr: DNOP	4.7		5.000		94.6	70	130			
Surr: DNOP Sample ID MB-33875		уре: МЕ		Tes			130 8015M/D: Di	esel Rang	e Organics	
	SampT	ype: ME	BLK			PA Method		esel Rango	e Organics	
Sample ID MB-33875	SampT	n ID: 33	3LK 875	R	tCode: El	PA Method 5643		U	e Organics	
Sample ID MB-33875 Client ID: PBS	SampT Batch	n ID: 33	BLK 875 15/2017	R	tCode: El RunNo: 4	PA Method 5643	8015M/D: Di	U	e Organics	Qual
Sample ID MB-33875 Client ID: PBS Prep Date: 9/14/2017	SampT Batch Analysis D	n ID: 33 9ate: 9/	BLK 875 15/2017	R S	tCode: El RunNo: 4 SeqNo: 1	PA Method 5643 448864	8015M/D: Di Units: mg/F	(g	U	Qual
Sample ID MB-33875 Client ID: PBS Prep Date: 9/14/2017 Analyte	SampT Batch Analysis D Result	n ID: 33 Pate: 9 /	BLK 875 15/2017	R S	tCode: El RunNo: 4 SeqNo: 1	PA Method 5643 448864	8015M/D: Di Units: mg/F	(g	U	Qual

Qualifiers:

Client:

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- Page 4 of 6

QC SUMMARY REPORT Hall Environmental Analysis Laboratory, Inc.

Client:	GHD										
Project:	MF 16										
Sample ID	MB-33871	SampT	ype: ME	BLK	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Client ID:	PBS	Batch	ID: 33	871	R	unNo: 4	5651				
Prep Date:	9/14/2017	Analysis D	ate: 9/	15/2017	S	SeqNo: 14	449668	Units: mg/k	ίg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Ranç Surr: BFB	e Organics (GRO)	ND 1100	5.0	1000		105	54	150			
Sample ID	LCS-33871	SampT	ype: LC	S	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Client ID:	LCSS	Batch	ID: 33	871	R	unNo: 4	5651				
Prep Date:	9/14/2017	Analysis D	ate: 9/	15/2017	S	SeqNo: 14	449669	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	28	5.0	25.00	0	114	76.4	125			
Surr: BFB		1100		1000		114	54	150			
Sample ID	1709690-002AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e	
Client ID:	S-11135250-05-09	906 Batch	ID: 33	871	R	unNo: 4	5651				
Prep Date:	9/14/2017	Analysis D	ate: 9/	15/2017	S	SeqNo: 14	449674	Units: mg/k	ζg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Ranç	je Organics (GRO)	33	4.8	23.99	0	137	77.8	128			S
Surr: BFB		1100		959.7		118	54	150			
Sample ID	1709690-002AMS	D SampT	ype: MS	SD	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e	
Client ID:	S-11135250-05-09	06 Batch	ID: 33	871	R	unNo: 4	5651				
Prep Date:	9/14/2017	Analysis D	ate: 9/	15/2017	S	SeqNo: 14	449675	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	je Organics (GRO)	32	4.6	22.96	0	138	77.8	128	3.83	20	S
Surr: BFB		1100		918.3		117	54	150	0	0	

Qualifiers:

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1709690
	10 0 17

Client: Project:	GHD MF 16										
		0			T			0004D V-1			
Sample ID			ype: ME		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS		atch ID: 33871 RunNo: 45651								
Prep Date:	9/14/2017	Analysis E	0ate: 9/	15/2017		SeqNo: 14	449704	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 Xylenes, Total		ND ND	0.050 0.10								
-	nofluorobenzene	1.2	0.10	1.000		117	66.6	132			
	LCS-33871		ype: LC					8021B: Volat	tiles		
	LCSS		n ID: 33			RunNo: 4					
Prep Date:	9/14/2017	Analysis E	0ate: 9/	15/2017	S	SeqNo: 14	449705	Units: mg/k	٢g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	114	80	120			
Toluene		1.1	0.050	1.000	0	111	80	120			
Ethylbenzene		1.1	0.050	1.000	0	114	80	120			
VI TII		0 F	0 4 0	0 000			00	400			
y		3.5	0.10	3.000	0	116	80	120			
y	nofluorobenzene	3.5 1.2	0.10	3.000 1.000	0	116 118	80 66.6	120			
	nofluorobenzene 1709690-001AMS	1.2	0.10 ype: MS	1.000		118	66.6		tiles		
Surr: 4-Brom		1.2 SampT		1.000	Tes	118	66.6 PA Method	132	tiles		
Surr: 4-Brom Sample ID Client ID:	1709690-001AMS	1.2 SampT	ype: MS 1 ID: 33	1.000 S 871	Tes	118 tCode: El	66.6 PA Method 5651	132			
Surr: 4-Brom Sample ID Client ID: Prep Date:	1709690-001AMS S-11135250-05-09	1.2 Samp1 906 Batcl	ype: MS 1 ID: 33	1.000 5 871 15/2017	Tes	118 tCode: Ef RunNo: 4	66.6 PA Method 5651	132 8021B: Volat Units: mg/F		RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID:	1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis E	ype: MS 1D: 33 Date: 9/	1.000 5 871 15/2017	Tes F S	118 tCode: EF RunNo: 4 SeqNo: 14	66.6 PA Method 5651 449711	132 8021B: Vola	ζg	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte	1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis D Result	Type: M\$ n ID: 33 Date: 9/ PQL	1.000 5 871 15/2017 SPK value	Tes F SPK Ref Val	118 tCode: EF RunNo: 4 SeqNo: 14 %REC	66.6 PA Method 5651 449711 LowLimit	132 8021B: Volar Units: mg/H HighLimit	ζg	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene	1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis D Result 1.1	⁻ ype: MS n ID: 33 Date: 9/ PQL 0.023	1.000 3 871 15/2017 SPK value 0.9242	Tes F SPK Ref Val 0	118 tCode: EF RunNo: 4 SeqNo: 14 %REC 119	66.6 PA Method 5651 449711 LowLimit 80.9	132 8021B: Volar Units: mg/k HighLimit 132	ζg	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene	1709690-001AMS S-11135250-05-09	1.2 SampT 306 Batcl Analysis D Result 1.1 1.1	Type: MS n ID: 33 Date: 9/ PQL 0.023 0.046	1.000 8 871 15/2017 SPK value 0.9242 0.9242	Tes F SPK Ref Val 0 0.01268	118 tCode: Ef RunNo: 4 SeqNo: 1 %REC 119 116	66.6 PA Method 5651 449711 LowLimit 80.9 79.8	132 8021B: Volat Units: mg/k HighLimit 132 136	ζg	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total	1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis E Result 1.1 1.1 1.1	⁻ ype: M \$ n ID: 33 Date: 9/ PQL 0.023 0.046 0.046	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242	Tes F SPK Ref Val 0 0.01268 0	118 tCode: EF RunNo: 4 SeqNo: 1 %REC 119 116 121	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.8 79.4	132 8021B: Volat Units: mg/k HighLimit 132 136 140	ζg	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom	1709690-001AMS S-11135250-05-09 9/14/2017	1.2 SampT 906 Batcl Analysis D Result 1.1 1.1 1.1 3.4 1.1	⁻ ype: M \$ n ID: 33 Date: 9/ PQL 0.023 0.046 0.046	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242 2.773 0.9242	Tes F SPK Ref Val 0 0.01268 0 0 0	118 tCode: EF &unNo: 4 &REC 119 116 121 124 115	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.4 78.5 66.6	132 8021B: Volat Units: mg/k HighLimit 132 136 140 142	(g %RPD	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID	1709690-001AMS S-11135250-05-05 9/14/2017	1.2 SampT 206 Batcl Analysis D Result 1.1 1.1 1.1 3.4 1.1 3.4 1.1	ype: MS n ID: 33 Date: 9/ PQL 0.023 0.046 0.046 0.092	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242 2.773 0.9242 30.9242	Tes F SPK Ref Val 0 0.01268 0 0 0 Tes	118 tCode: EF &unNo: 4 &REC 119 116 121 124 115	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.4 78.5 66.6 PA Method	132 8021B: Volat Units: mg/k HighLimit 132 136 140 142 132	(g %RPD	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID	1709690-001AMS S-11135250-05-09 9/14/2017 nofluorobenzene 1709690-001AMS S-11135250-05-09	1.2 SampT 206 Batcl Analysis D Result 1.1 1.1 1.1 3.4 1.1 3.4 1.1	ype: MS Date: 9/ PQL 0.023 0.046 0.046 0.046 0.092 ype: MS Date: 334	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242 2.773 0.9242 30.9242 50 871	Tes F SPK Ref Val 0 0.01268 0 0 0 Tes F	118 tCode: EF SeqNo: 4 %REC 119 116 121 124 115 tCode: EF	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.8 79.4 78.5 66.6 PA Method 5651	132 8021B: Volat Units: mg/k HighLimit 132 136 140 142 132	Kg %RPD tiles	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID:	1709690-001AMS S-11135250-05-09 9/14/2017 nofluorobenzene 1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis D Result 1.1 1.1 1.1 3.4 1.1 3.4 1.1 3.4 1.1 906 Batcl	ype: MS Date: 9/ PQL 0.023 0.046 0.046 0.046 0.092 ype: MS Date: 334	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242 2.773 0.9242 2.773 0.9242 50 871 15/2017	Tes F SPK Ref Val 0 0.01268 0 0 0 Tes F	118 tCode: EF &unNo: 49 SeqNo: 14 %REC 119 116 121 124 115 tCode: EF &unNo: 49 SeqNo: 14	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.8 79.4 78.5 66.6 PA Method 5651	132 8021B: Volat Units: mg/k HighLimit 132 136 140 142 132 8021B: Volat	Kg %RPD tiles	RPDLimit	Qual
Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte Benzene Toluene Ethylbenzene Xylenes, Total Surr: 4-Brom Sample ID Client ID: Prep Date: Analyte	1709690-001AMS S-11135250-05-09 9/14/2017 nofluorobenzene 1709690-001AMS S-11135250-05-09	1.2 SampT 906 Batcl Analysis D Result 1.1 1.1 1.1 3.4 1.1 3.4 1.1 906 Batcl Analysis D	Type: MS n ID: 33 Date: 9/ PQL 0.023 0.046 0.046 0.046 0.092 Type: MS Type: MS 0.1D: 33 Date: 9/	1.000 871 15/2017 SPK value 0.9242 0.9242 0.9242 2.773 0.9242 2.773 0.9242 50 871 15/2017	Tes F SPK Ref Val 0 0.01268 0 0 0 Tes F S	118 tCode: EF &unNo: 49 SeqNo: 14 %REC 119 116 121 124 115 tCode: EF &unNo: 49 SeqNo: 14	66.6 PA Method 5651 449711 LowLimit 80.9 79.8 79.4 78.5 66.6 PA Method 5651 449712	132 8021B: Volat Units: mg/k HighLimit 132 136 140 142 132 8021B: Volat Units: mg/k	Kg %RPD tiles		
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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
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Page 6 of 6

HALL ENVIRONMENTAL ANALYSIS LABORATORY		4901 Hawkins uerque, NM 871 4X: 505-345-41	NE 109 Samp 107	Sample Log-In Check List		
Client Name: GHD	Work Order Number: 1	1709690		RcptNo: 1		
······································	/12/2017 10:15:00 AM /13/2017 1:54:49 PM		UNA AZ	-		
Reviewed By: SRC 09/14/17			2 (- Q			
Chain of Custody						
1. Custody seals intact on sample bottles?		Yes 🗌	No 🗌	Not Present 🗹		
2. Is Chain of Custody complete?		Yes 🗹	No 🗌	Not Present		
3. How was the sample delivered?		<u>Courier</u>				
<u>Log In</u>						
4. Was an attempt made to cool the samples?		Yes 🗹	No 🗆	NA 🗌		
5. Were all samples received at a temperature of	f ≥0° C to 6.0°C	Yes 🗹	No 🗌			
6. Sample(s) in proper container(s)?		Yes 🗹	No 🗌			
7. Sufficient sample volume for indicated test(s)	?	Yes 🗹	No 🗌			
8, Are samples (except VOA and ONG) properly	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 broker	1?	Yes	No 🗹	# of preserved bottles checked		
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)		Yes 🗹	No 🗌 🗌	for pH: (<2 or >12 unless noted)		
13. Are matrices correctly identified on Chain of C	Custody?	Yes 🗹	No 🗌	Adjusted?		
14. Is it clear what analyses were requested?		Yes 🗹	No 🗔			
15. Were all holding times able to be met? (If no, notify customer for authorization.)		Yes 🗹	No 🛄	Checked by:		
<u>Special Handling (if applicable)</u>						
16. Was client notified of all discrepancies with th	is order?	Yes 🗌	No 🗌	NA 🗹		
Person Notified:	Date			· ·		
By Whom:	Via:] eMail 📋 P	Phone 🗌 Fax	🗌 In Person		
Regarding:				in na sea a se		
Client Instructions:			nänäentä audune, minääänterterteisi			
17. Additional remarks:						
18. <u>Cooler Information</u> Cooler No Temp °C Condition Sea 1 5.1 Good Yes	al Intact Seal No S	eal Date	Signed By			

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HALL ENVIRONMENTAL	ANALYSIS LABORATORY		60				0	1)	or b		Ch]dr			-			vient, resert.
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