June 4, 2018 Reference No. 11135250-6

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

Dear Mr. Ericson:

Re: Updated Remediation Summary Report
TD-5 10" (2RP-4273)
ETC Field Services LLC
2RP- 4273
Site Location: Unit B, Sec. 23, T 26-S, R 30-E
(Lat 32.032164N°, Long -103.849038W°)
Eddy County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. The TD-5 10" (hereafter referred to as the "Site") is located within Unit B, Section 23, Township 26 South, Range 30 East, in Eddy County, New Mexico (see Figure 1).

A release of approximately 11.68 barrels (bbls) of oil and water was reported to the State of New Mexico Oil Conservation Division (NMOCD) On June 23, 2017 via Form C-141. Corrosion caused an approximate 0.25-inch hole to develop on a section of the pipeline. None of the fluids were recovered. Contaminated soils were excavated and stockpiled on site (see Figure 2). NMOCD release number 2RP-4273 was assigned.

1. Introduction

The release at this site occurred on land owned by the Bureau of Land Management. Following the release, GHD's Site assessment activities began with initial background soil sampling and analysis and limited excavation on July 24, 2017. Initial assessment activities were performed by excavating test pits and field screening the soil utilizing a photoionization detector and a Hach chloride field kit. Six test pits were excavated and soil samples were collected for laboratory analysis. Excavation activities were performed by Diamond Back of Hobbs, New Mexico. Observation of the excavation and soil sampling was performed by GHD. Soil samples were analyzed by Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico.

Based on information available from the United States Geologic Survey National Water Information System, the depth to groundwater at the Site is approximately 117 ft below ground surface (bgs). This is based on a water well that is located approximately 1 mile southwest 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 0 (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), 5,000 mg/kg for total petroleum hydrocarbons (TPH), and 250 mg/kg for chlorides.

New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (>100 ft bgs)	0
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	**0***
***Because the ranking criteria total score is 20, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for total TPH and 250 ppm for chlorides[1]. 1. NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993	

The impacted areas had initially been excavated to a depth of approximately 6.5 ft bgs and soil samples were collected by ETC Field Services LLC personnel for laboratory analysis. Two samples (West Hole Vertical) and (East Hole Vertical) were collected from the bottom of the western and eastern excavations at a depth of approximately 7 ft bgs and on June 22, 2017 (see Figure 2). The samples were submitted to Cardinal Laboratories in Hobbs, New Mexico and analyzed for BTEX by EPA Method 8021B, TPH by EPA Method 8015M, and chloride by SM4500Cl-B. The analytical results for these samples were:

West Hole Vertical

- Benzene: 0.211 mg/kg
- Total BTEX: 11.47 mg/kg
- TPH: 316.1 mg/kg
- Chloride: 5,440 mg/kg

East Hole Vertical

- Benzene: <0.050 mg/kg
- Total BTEX: 5.56 mg/kg
- TPH: 267.5 mg/kg
- Chloride: 2,760 mg/kg

Excavation activities to assess the horizontal and vertical extent of impacted soil from the release occurred on July 24, 2017 by GHD. Field screening of soil for petroleum hydrocarbons and chloride was performed to assess the horizontal and vertical extent of contaminated soil. Test pits were excavated in the bottom of both excavations.

Soil samples were collected and submitted to HEAL for laboratory analysis. Samples were collected from the base of the excavations and four test pits (see Figure 2) at depths ranging from four to twelve ft bgs. The soil samples were analyzed for BTEX by EPA Method 8260B, TPH by EPA Method 8015 full range and chloride by EPA Method 300.0(Table 1). Laboratory analytical data can be found in Appendix B.

One sample (S-1113520-072417-MG-TP-5-4) contained a chloride concentration of 300 that exceeds the RRAL.

An Initial Assessment Report and Assessment Work Plan prepared by GHD and dated October 19, 2017 was submitted to the NMOCD and BLM. Based on the work plan, additional excavation activities were performed that also included the drilling and sampling of a soil boring.

The excavation activities were performed from October 30, 2017 to January 3, 2018. The area as outlined with the dotted excavation line was excavated to a depth of four ft. bgs. Samples TP-7 through TP-20 were collected at a depth ranging from two to four ft. bgs. Field screening of the soil was performed using the PetroFLAG Hydrocarbon Analysis System and a Hach chloride field kit. Select soil samples were submitted to HEAL for BTEX, total TPH, and chloride analysis. Samples TP-19 and TP-20 were submitted for chloride analysis. The excavation limits are presented on Figure 2.

BTEX constituents were not detected in any of the samples above the LRL and TPH concentrations ranged from below the LRL to 1,220 mg/kg. Chloride concentrations ranged from below the LRL to 3,000 mg/kg. Chloride concentrations exceeded the RRAL in samples TP-7 at 2 ft. bgs, TP-12 at 4 ft. bgs, and TP-15 at 20 ft. bgs.

Based on the depth at which chloride impacted soil exceeding the RRAL was found, GHD drilled and sampled a soil boring to 40 ft. bgs. Soil samples were collected and submitted to HEAL for BTEX and chloride analysis. Samples were collected from 25, 30, 35, and 40 ft. bgs. None of the BTEX constituents were found at concentrations above the LRL and Chloride concentrations ranged from below the LRL to 42 mg/kg.

2. Summary and Recommendations

Soil samples were collected from test pits, during excavation activities, and drilling activities and were submitted for laboratory analysis. Based on the analytical data, the impacted soil has been removed to a depth of four feet bgs. A 20-foot separation between chloride concentrations exceeding the RRAL and soils below the RRAL was established. Based on the laboratory results, GHD recommends the following:

- Place a liner in the bottom of the excavation.
- Backfill the excavations with clean fill material.
- Wheel compact to grade.

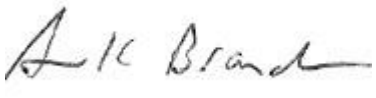
Following completion of the backfilling, revegetation of the site will be performed. Disturbed areas associated with the remediation efforts will be re-seeded. If after one growing season the vegetation has

not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the State Land Office. The proposed seed mix will consist of Bureau of Land Management mix #2 with no love grass.

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 me at (505) 884-0672.

Sincerely,

GHD



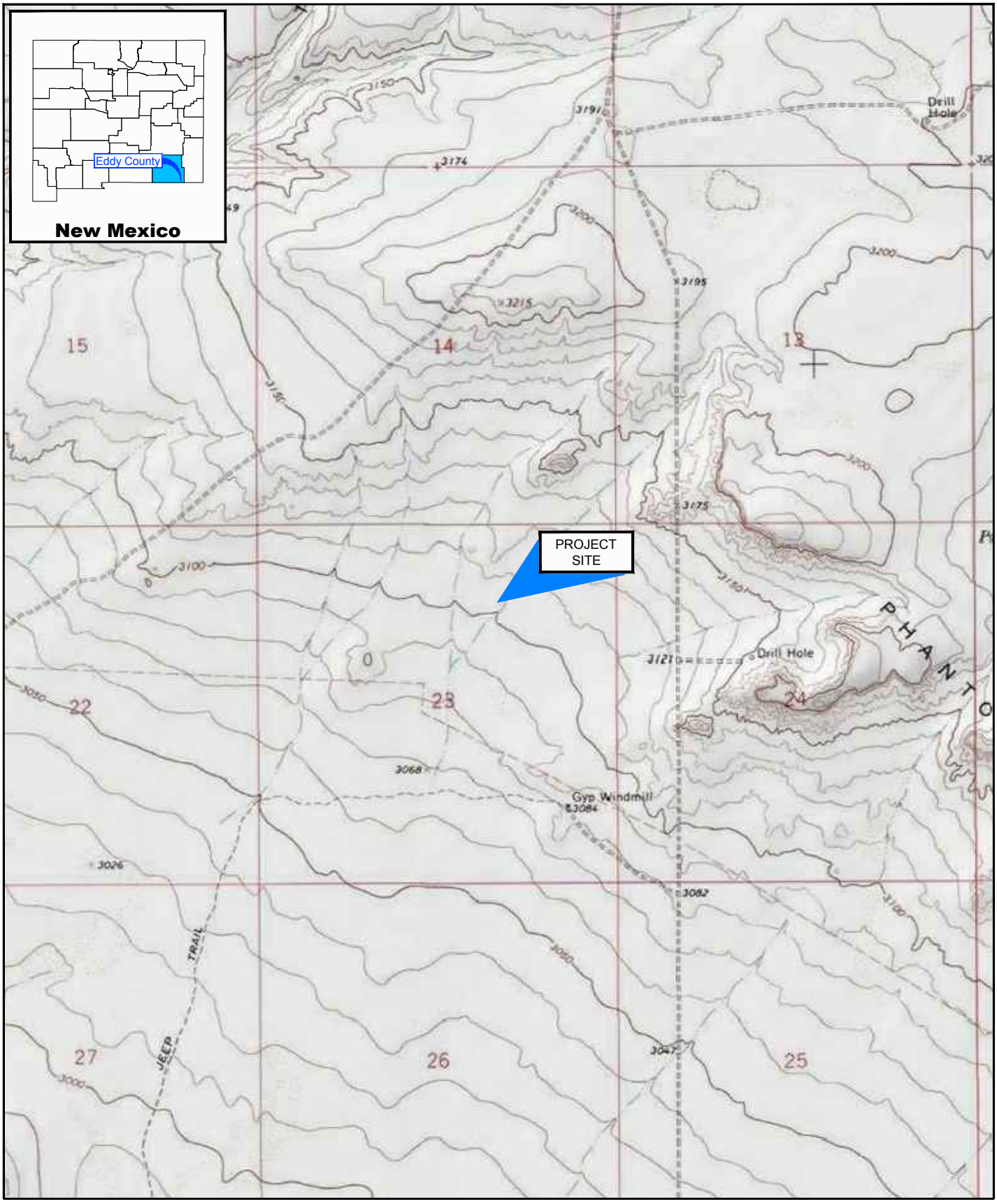
Alan Brandon
Senior Project Manager

Bernard Bockisch
New Mexico Operations Manager

AB/ji/4

Encl.

Figures



Source: USGS 7.5 Minute Quad "Phatom Banks and Ross Ranch, New Mexico"

Lat/Long: 32.032164° North, 103.849038° West

0 1000 2000ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

ETC FIELD SERVICES
EDDY COUNTY, NEW MEXICO
TD-5 10"

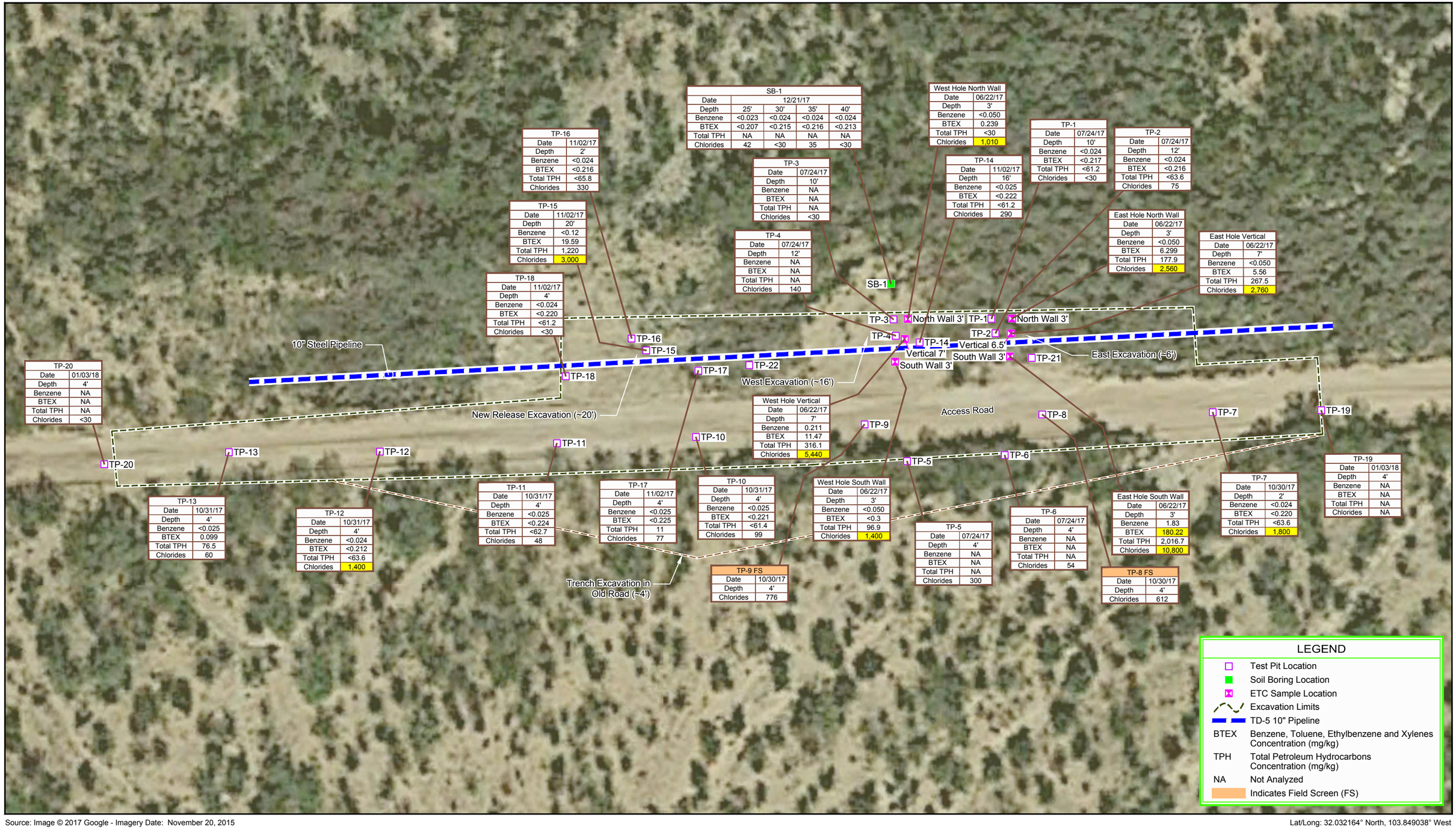
11135250-06

Aug 14, 2017

SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-06(000)GN-DL001.dwg



Source: Image © 2017 Google - Imagery Date: November 20, 2015

Lat/Long: 32.032164° North, 103.849038° West

0 10 20ft

Coordinate System:
NAD 1983 (2011) StatePlane-
New Mexico East (US Feet)

GHD

ETC FIELD SERVICES
EDDY COUNTY, NEW MEXICO
TD-5 10"

SOIL SAMPLE LOCATION

11135250-06

May 25, 2018

FIGURE 2

CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-06(000)GN-DL001.dwg

Tables

Table 1

Soil Analytical Results Summary
ETC Field Services LLC - TD-5 10"
Section 23, Township 26 South, Range 30 East
Eddy County, New Mexico
Soil Analytical Results Summary

Sample ID	Date	Sample Depth (ft.)	Chlorides (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH GRO (C6-C-10) (mg/kg)	TPH DRO (C10-C28) (mg/kg)	TPH EXT DRO (C28-C36) (mg/kg)	Total TPH GRO/DRO (mg/kg)
NMOCD Remediation Action Levels			**600**	**10**	**NE**	**NE**	**NE**	**50**	**NE**	**NE**	**NE**	**5,000**
EXCAVATION AND SOIL BORING SAMPLES												
Spill Area #1 *	6/22/2017	0.5	6,000	<0.050	<0.050	<0.050	<0.15	<0.3	<10	11	22.6	33.2
Spill Area #2*	6/22/2017	0.5	9,860	3.16	53.9	8.31	152	217.37	1,990.0	2,590.0	35.3	4,615.3
Spill Area #3*	6/22/2017	0.5	4,400	<0.050	<0.050	<0.050	<0.15	<0.3	<10	13.9	<10	**13.9**
North Horizontal *	6/22/2017	0.5	32.0	<0.050	0.075	<0.050	0.365	0.44	<10	<10	14.6	14.6
South Horizontal *	6/22/2017	0.5	<16	<0.050	0.48	0.064	1.06	1.6	<10	<10	<10	<30
East Horizontal*	6/22/2017	0.5	3,120	<0.050	<0.050	<0.050	<0.15	<0.3	<10	38.2	<10	38.2
West Horizontal*	6/22/2017	0.5	96.0	<0.050	0.101	<0.050	<0.15	0.101	<10	<10	<10	<30
West Hole Vertical*	6/22/2017	7	5,440	0.211	2.56	0.46	8.24	11.47	90.1	226.0	<10	316.1
West Hole North Wall*	6/22/2017	3	1,010	<0.050	0.073	<0.050	0.166	0.239	<10	<10	<10	<30
West Hole South Wall*	6/22/2017	3	1,400	<0.050	<0.050	<0.050	<0.15	<0.3	15.3	81.6	<10	96.9
East Hole Vertical*	6/22/2017	7	2,760	<0.050	0.553	0.248	4.76	5.56	11.5	125.0	131.0	267.5
East Hole North Wall*	6/22/2017	3	2,560	<0.050	0.872	0.267	5.16	6.299	24.3	134.0	19.6	177.9
East Hole South Wall*	6/22/2017	3	10,800	1.83	37.5	6.89	134	180.22	608.0	1,340.0	68.7	2,016.7
S11135250-072417MG-TP-1-10	7/24/2017	10	<30	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	<9.4	<47	<61.2
S11135250-072417MG-TP-2-12	7/24/2017	12	75	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<9.8	<49	<63.6
S11135250-072417MG-TP-3-10	7/24/2017	10	<30	NA	NA	NA	NA	NA	NA	NA	NA	NA
S11135250-072417MG-TP-4-12	7/24/2017	12	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
S11135250-072417MG-TP-5-4	7/24/2017	4	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
S11135250-072417MG-TP-6-4	7/24/2017	4	54	NA	NA	NA	NA	NA	NA	NA	NA	NA
S11135250-06-103017-MG-TP-7-2	10/30/2017	2	1,800	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.7	<49	<63.6
S11135250-06-103117-MG-TP-10-4	10/31/2017	4	99	<0.025	<0.049	<0.049	<0.098	<0.221	<4.9	<9.5	<47	<61.4
S11135250-06-103117-MG-TP-11-4	10/31/2017	4	48	<0.025	<0.050	<0.050	<0.099	<0.224	<5.0	<9.7	<48	<62.7
S11135250-06-103117-MG-TP-12-4	10/31/2017	4	1,400	<0.024	<0.047	<0.047	<0.094	<0.212	<4.7	<9.9	<49	<63.6
S11135250-06-103117-MG-TP-13-4	10/31/2017	4	60	<0.025	<0.049	<0.049	0.099	0.099	6.5	70.0	<48	76.5
S11135250-06-110217-MG-TP-14-16	11/2/2017	16	290	<0.025	<0.049	<0.049	<0.099	<0.222	<4.9	<9.3	<47	<61.2
S11135250-06-110217-MG-TP-15-20	11/2/2017	20	3,000	<0.12	1.7	0.89	17	19.59	230.0	990.0	<470	1,220.0
S11135250-06-110217-MG-TP-16-2	11/2/2017	2	330	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	<10	<51	<65.8
S11135250-06-110217-MG-TP-17-4	11/2/2017	4	77	<0.025	<0.050	<0.050	<0.10	<0.225	<5.0	11.0	<48	11.0
S11135250-06-110217-MG-TP-18-4	11/2/2017	4	<30	<0.024	<0.049	<0.049	<0.098	<0.220	<4.9	<9.3	<47	<61.2
S11135250-06-122117-MG-SB-1-25	12/21/2017	25	42	<0.023	<0.046	<0.046	<0.092	<0.207	NA	NA	NA	NA
S11135250-06-122117-MG-SB-1-30	12/21/2017	30	<30	<0.024	<0.048	<0.048	<0.095	<0.215	NA	NA	NA	NA
S11135250-06-122117-MG-SB-1-35	12/21/2017	35	35	<0.024	<0.048	<0.048	<0.096	<0.216	NA	NA	NA	NA
S11135250-06-122117-MG-SB-1-40	12/21/2017	40	<30	<0.024	<0.047	<0.047	<0.095	<0.213	NA	NA	NA	NA
S11135250-06-010318-MG-TP-19-4	1/3/2018	4	<30	NA	NA	NA	NA	NA	NA	NA	NA	NA
S11135250-06-010318-MG-TP-20-4	1/3/2018	4	<30	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note: Concentrations in yellow exceed the NMOCD Remediation Action Level

* Samples taken by ETC Field Services and Analyzed by Cardinal Laboratories of Hobbs, NM
NE = Not Established
mg/Kg = milligrams per Kilogram
-- = Not Applicable
NA = Not Analyzed

Appendices

Appendix A
Water Well Report

TD-5 10" ~ 1 mile SW

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: United States | GO

Click to hideNews Bulletins

Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 320125103514701

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

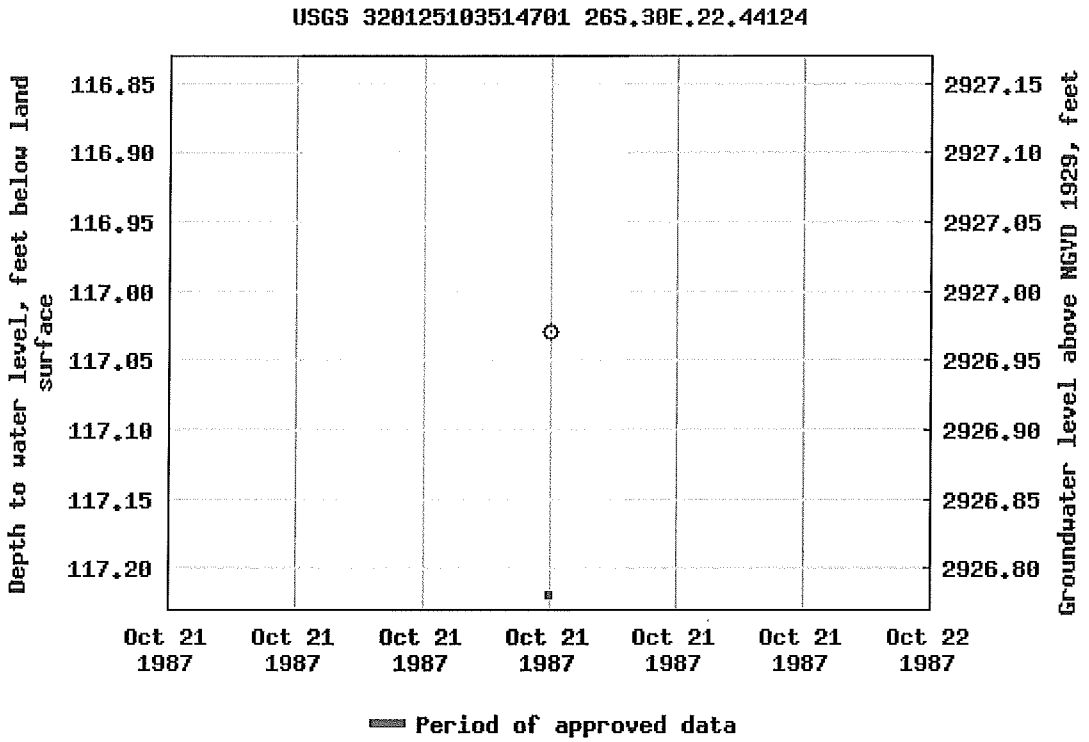
USGS 320125103514701 26S.30E.22.44124

Available data for this site Groundwater: Field measurements | GO

Eddy County, New Mexico
Hydrologic Unit Code 13070001
Latitude 32°01'25", Longitude 103°51'47" NAD27
Land-surface elevation 3,044 feet above NGVD29

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

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Accessibility Plug-Ins FOIA Privacy Policies and Notices

U.S. Department of the Interior | U.S. Geological Survey

Title: Groundwater for USA: Water Levels
URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: USGS Water Data Support Team
Page Last Modified: 2017-06-30 08:49:40 EDT
0.57 0.48 nadww01

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twp	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02165		C	ED				24	26S	30E	610036	3544121*	1410	440	180	260

Average Depth to Water: **180 feet**

Minimum Depth: **180 feet**

Maximum Depth: **180 feet**

Record Count: 1

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 608694.11 Northing (Y): 3544555.67 Radius: 2000

***UTM location was derived from PLSS - see Help**

8/16/17 8:48 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Appendix B
Laboratory Analytical Report

CARDINAL Laboratories

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

June 29, 2017

DEAN ERICSON

ENERGY TRANSFER

P. O. BOX 1226

JAL, NM 88252

RE: TD -5

Enclosed are the results of analyses for samples received by the laboratory on 06/23/17 12:40.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	10 IN HORIZONTALS (1.4M N. OF STAT	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: NORTH HORIZONTAL 6" (H701650-01)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	**0.075**	0.050	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	**0.365**	0.150	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	**0.440**	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	06/27/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	<10.0	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	**14.6**	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *95.5 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *100 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	10 IN HORIZONTALS (1.4M N. OF STAT	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SOUTH HORIZONTAL 6'' (H701650-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	**0.480**	0.050	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	**0.064**	0.050	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	**1.06**	0.150	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	**1.60**	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	06/27/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	<10.0	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *86.5 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *90.0 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	10 IN HORIZONTALS (1.4M N. OF STAT	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: EAST HORIZONTAL 6'' (H701650-03)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	1.87	93.4	2.00	0.375	
Toluene*	<0.050	0.050	06/27/2017	ND	1.73	86.4	2.00	1.75	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	1.85	92.7	2.00	0.741	
Total Xylenes*	<0.150	0.150	06/27/2017	ND	5.53	92.2	6.00	0.209	
Total BTEX	<0.300	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.9 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**3120**	16.0	06/27/2017	ND	480	120	400	10.5	QM-07

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**38.2**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *86.5 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *90.8 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	10 IN HORIZONTALS (1.4M N. OF STAT	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: WEST HORIZONTAL 6'' (H701650-04)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	1.87	93.4	2.00	0.375	
Toluene*	**0.101**	0.050	06/27/2017	ND	1.73	86.4	2.00	1.75	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	1.85	92.7	2.00	0.741	
Total Xylenes*	<0.150	0.150	06/27/2017	ND	5.53	92.2	6.00	0.209	
Total BTEX	<0.300	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.7 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	06/27/2017	ND	480	120	400	10.5	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	<10.0	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *83.6 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *85.6 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	ETC	**BILL TO**	
Project Manager:	Dean Erickson	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	TP-5 10" (1.4 miles north of	State: Zip:	
Project Location:	Horizontals (Skeet line Rd	Phone #:	
Sampler Name:	Tyler Brown	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST												
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH Ext	BTEX	Cl										
H701650																										
1	North Horizontal 6"	C	1			X							6/22/17	9:30pm	1	1	1									
2	South 6"	C	1			X																				
3	East 6"	C	1			X																				
4	West 6"	C	1			X																				

Relinquished By:	Date: 6/23/17	Received By:	
	Time: 1:40		
Relinquished By:	Date: 6-23-17	Received By:	Tamara Oldaker
	Time: 12:40		
Delivered By: (Circle One)		Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	2.9°	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	T.O. #15

Phone Result:	☐ Yes	☐ No	Add'l Phone #:
Fax Result:	☐ Yes	☐ No	Add'l Fax #:
REMARKS:			

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

June 29, 2017

DEAN ERICSON

ENERGY TRANSFER

P. O. BOX 1226

JAL, NM 88252

RE: TD -5

Enclosed are the results of analyses for samples received by the laboratory on 06/23/17 12:30.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	SPILL AREA (1.4M N. OF STATELINE R	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: #1 6" (H701649-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	<0.050	0.050	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	<0.150	0.150	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	<0.300	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6000**	16.0	06/27/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**10.6**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	**22.6**	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *95.6 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *99.9 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	SPILL AREA (1.4M N. OF STATELINE R	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: #2 6" (H701649-02)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**3.16**	1.00	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	**53.9**	1.00	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	**8.31**	1.00	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	**152**	3.00	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	**217**	6.00	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**9860**	16.0	06/27/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**1990**	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**2590**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	**35.3**	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *156 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *110 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	SPILL AREA (1.4M N. OF STATELINE R	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: #3 6" (H701649-03)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	<0.050	0.050	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	<0.150	0.150	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	<0.300	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4400**	16.0	06/27/2017	ND	432	108	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**13.9**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *103 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *107 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	ETC	**BILL TO**	
Project Manager:	Deana Erickson	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	TO-5 10" (1.4 miles north of	State: Zip:	
Project Location:	Spill Area (State Line Rd	Phone #:	
Sampler Name:	Tyler R. Brisco	Fax #:	

FOR LAB USE ONLY				MATRIX							PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	TPH Ext	BTEX	Cl	
H201449																		
1	#1 6"	C	1			X							6/22/17	9:20pm	1	1	1	
2	#2 6"																	
3	#3 6"																	

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 6/23/17 Time:	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: 6-23-17 Time: 12:30	Received By: Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	2.9°C	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) TP #15

REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

CARDINAL Laboratories

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

June 29, 2017

DEAN ERICSON

ENERGY TRANSFER

P. O. BOX 1226

JAL, NM 88252

RE: TD -5

Enclosed are the results of analyses for samples received by the laboratory on 06/23/17 12:30.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	WEST HOLE (1.4M N. OF STATELINE RI	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: VERTICAL 7' (H701647-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	**0.211**	0.050	06/28/2017	ND	2.23	111	2.00	3.81	
Toluene*	**2.56**	0.050	06/28/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	**0.460**	0.050	06/28/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	**8.24**	0.150	06/28/2017	ND	6.32	105	6.00	2.46	
Total BTEX	**11.5**	0.300	06/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**5440**	16.0	06/26/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**90.1**	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**226**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *102 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *102 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	WEST HOLE (1.4M N. OF STATELINE RI	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: NORTH WALL 3' (H701647-02)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/28/2017	ND	2.23	111	2.00	3.81	
Toluene*	**0.073**	0.050	06/28/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	<0.050	0.050	06/28/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	**0.166**	0.150	06/28/2017	ND	6.32	105	6.00	2.46	
Total BTEX	<0.300	0.300	06/28/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *100 %* *72-148*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1010**	16.0	06/26/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	<10.0	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *95.7 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *100 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENERGY TRANSFER
DEAN ERICSON
P. O. BOX 1226
JAL NM, 88252
Fax To:

Received:	06/23/2017	Sampling Date:	06/22/2017
Reported:	06/29/2017	Sampling Type:	Soil
Project Name:	TD -5	Sampling Condition:	Cool & Intact
Project Number:	WEST HOLE (1.4M N. OF STATELINE RI	Sample Received By:	Tamara Oldaker
Project Location:	NONE GIVEN		

Sample ID: SOUTH WALL 3' (H701647-03)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2017	ND	2.23	111	2.00	3.81	
Toluene*	<0.050	0.050	06/27/2017	ND	2.05	102	2.00	2.84	
Ethylbenzene*	<0.050	0.050	06/27/2017	ND	2.15	108	2.00	3.32	
Total Xylenes*	<0.150	0.150	06/27/2017	ND	6.32	105	6.00	2.46	
Total BTEX	<0.300	0.300	06/27/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *72-148*

Chloride, SM4500Cl-B mg/kg Analyzed By: CK

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1400**	16.0	06/26/2017	ND	416	104	400	3.77	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	**15.3**	10.0	06/26/2017	ND	207	104	200	1.79	
DRO >C10-C28	**81.6**	10.0	06/26/2017	ND	214	107	200	2.19	
EXT DRO >C28-C36	<10.0	10.0	06/26/2017	ND					

Surrogate: 1-Chlorooctane *97.8 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *99.3 %* *34.7-157*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	ETC
Project Manager:	Drew Ellsow
Address:	
City:	State: Zip:
Phone #:	Fax #:
Project #:	Project Owner:
Project Name:	TP-5 (1.4 miles North of
Project Location:	Westhole (State Line Rd
Sampler Name:	Tyler Brown

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State: Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

TPH ext
Cl
BTEX

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	TPH ext	Cl	BTEX
H101647																	
1	Vertical 7'	C	1			X							6/22/17	9:15 pm	1	1	1
2	North wall 3'																
3	South wall 3'																

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 6/23/17	Received By:	
	Time:		
Relinquished By:	Date: 6-23-17	Received By:	Tamara Oldaker
	Time: 12:30		
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials) T.O. HS
Sampler - UPS - Bus - Other:	2.9°C		

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

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

August 15, 2017

Bernie Bockish

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

RE: 11135250 TD-5 OrderNo.: 1707D31

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/26/2017 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued August 02, 2017.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. 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. All samples are reported as received unless otherwise indicated.

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

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-2-12
Project: 11135250 TD-5
Collection Date: 7/24/2017 11:00:00 AM
Lab ID: 1707D31-001 **Matrix:** SOIL **Received Date:** 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	75	30		mg/Kg	20	7/28/2017 3:11:53 PM	33064
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/31/2017 5:08:51 PM	33074
Surr: BFB	86.9	70-130		%Rec	1	7/31/2017 5:08:51 PM	33074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	7/31/2017 6:40:04 PM	33062
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	7/31/2017 6:40:04 PM	33062
Surr: DNOP	88.3	70-130		%Rec	1	7/31/2017 6:40:04 PM	33062
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	7/31/2017 5:08:51 PM	33074
Toluene	ND	0.048		mg/Kg	1	7/31/2017 5:08:51 PM	33074
Ethylbenzene	ND	0.048		mg/Kg	1	7/31/2017 5:08:51 PM	33074
Xylenes, Total	ND	0.096		mg/Kg	1	7/31/2017 5:08:51 PM	33074
Surr: 1,2-Dichloroethane-d4	80.6	70-130		%Rec	1	7/31/2017 5:08:51 PM	33074
Surr: 4-Bromofluorobenzene	86.3	70-130		%Rec	1	7/31/2017 5:08:51 PM	33074
Surr: Dibromofluoromethane	82.7	70-130		%Rec	1	7/31/2017 5:08:51 PM	33074
Surr: Toluene-d8	90.3	70-130		%Rec	1	7/31/2017 5:08:51 PM	33074

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-1-10
Project: 11135250 TD-5
Collection Date: 7/24/2017 11:15:00 AM
Lab ID: 1707D31-002
Matrix: SOIL
Received Date: 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/28/2017 3:24:18 PM	33064
EPA METHOD 8015D MOD: GASOLINE RANGE						Analyst: **AG**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	7/31/2017 5:38:21 PM	33074
Surr: BFB	84.4	70-130		%Rec	1	7/31/2017 5:38:21 PM	33074
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.4		mg/Kg	1	7/31/2017 7:08:51 PM	33062
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	7/31/2017 7:08:51 PM	33062
Surr: DNOP	84.4	70-130		%Rec	1	7/31/2017 7:08:51 PM	33062
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **AG**	
Benzene	ND	0.024		mg/Kg	1	7/31/2017 5:38:21 PM	33074
Toluene	ND	0.048		mg/Kg	1	7/31/2017 5:38:21 PM	33074
Ethylbenzene	ND	0.048		mg/Kg	1	7/31/2017 5:38:21 PM	33074
Xylenes, Total	ND	0.097		mg/Kg	1	7/31/2017 5:38:21 PM	33074
Surr: 1,2-Dichloroethane-d4	81.7	70-130		%Rec	1	7/31/2017 5:38:21 PM	33074
Surr: 4-Bromofluorobenzene	84.1	70-130		%Rec	1	7/31/2017 5:38:21 PM	33074
Surr: Dibromofluoromethane	80.6	70-130		%Rec	1	7/31/2017 5:38:21 PM	33074
Surr: Toluene-d8	89.6	70-130		%Rec	1	7/31/2017 5:38:21 PM	33074

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-6-4
Project: 11135250 TD-5
Collection Date: 7/24/2017 11:30:00 AM
Lab ID: 1707D31-003
Matrix: SOIL
Received Date: 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	54	30		mg/Kg	20	7/28/2017 3:36:42 PM	33064

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-5-4
Project: 11135250 TD-5
Collection Date: 7/24/2017 11:45:00 AM
Lab ID: 1707D31-004
Matrix: SOIL
Received Date: 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	300	30		mg/Kg	20	7/28/2017 3:49:07 PM	33064

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-4-12
Project: 11135250 TD-5
Collection Date: 7/24/2017 12:20:00 PM
Lab ID: 1707D31-005
Matrix: SOIL
Received Date: 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	140	30		mg/Kg	20	7/28/2017 4:01:32 PM	33064

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Client Sample ID: S11135250-072417MG-TP-3-10
Project: 11135250 TD-5
Collection Date: 7/24/2017 12:35:00 PM
Lab ID: 1707D31-006
Matrix: SOIL
Received Date: 7/26/2017 9:50:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **JRR**	
Chloride	ND	30		mg/Kg	20	7/28/2017 4:13:56 PM	33064

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707D31**

15-Aug-17

Client: GHD

Project: 11135250 TD-5

Sample ID	**MB-33064**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**33064**	RunNo:	**44581**					
Prep Date:	**7/28/2017**	Analysis Date:	**7/28/2017**	SeqNo:	**1410134**	Units:	**mg/Kg**			

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

Sample ID	**LCS-33064**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**33064**	RunNo:	**44581**					
Prep Date:	**7/28/2017**	Analysis Date:	**7/28/2017**	SeqNo:	**1410135**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.8	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707D31**

15-Aug-17

Client: GHD

Project: 11135250 TD-5

Sample ID	**LCS-33062**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**33062**		RunNo:	**44604**				
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410369**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	95.0	73.2	114			
Surr: DNOP	4.6		5.000		91.5	70	130			

Sample ID	**MB-33062**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**33062**		RunNo:	**44604**				
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410370**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.7		10.00		87.4	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707D31**

15-Aug-17

Client: GHD

Project: 11135250 TD-5

Sample ID **mb-33074**	SampType: **MBLK**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **PBS**	Batch ID: **33074**	RunNo: **44623**
Prep Date: **7/28/2017**	Analysis Date: **7/31/2017**	SeqNo: **1410839** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 1,2-Dichloroethane-d4	0.40		0.5000		79.4	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		85.3	70	130			
Surr: Dibromofluoromethane	0.41		0.5000		81.6	70	130			
Surr: Toluene-d8	0.46		0.5000		92.2	70	130			

Sample ID **lcs-33074**	SampType: **LCS**	TestCode: **EPA Method 8260B: Volatiles Short List**
Client ID: **LCSS**	Batch ID: **33074**	RunNo: **44623**
Prep Date: **7/28/2017**	Analysis Date: **7/31/2017**	SeqNo: **1410840** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	105	70	130			
Toluene	1.1	0.050	1.000	0	111	70	130			
Ethylbenzene	1.0	0.050	1.000	0	101	70	130			
Xylenes, Total	2.9	0.10	3.000	0	96.1	70	130			
Surr: 1,2-Dichloroethane-d4	0.41		0.5000		81.3	70	130			
Surr: 4-Bromofluorobenzene	0.43		0.5000		86.7	70	130			
Surr: Dibromofluoromethane	0.41		0.5000		82.8	70	130			
Surr: Toluene-d8	0.45		0.5000		90.5	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1707D31**

15-Aug-17

Client: GHD

Project: 11135250 TD-5

Sample ID	**mb-33074**	SampType:	**MBLK**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**33074**		RunNo:	**44623**					
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410804**	Units:	**mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		ND	5.0								
Surr: BFB		430		500.0		86.9	70	130			

Sample ID	**lcs-33074**	SampType:	**LCS**		TestCode:	**EPA Method 8015D Mod: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**33074**		RunNo:	**44623**					
Prep Date:	**7/28/2017**	Analysis Date:	**7/31/2017**		SeqNo:	**1410805**	Units:	**mg/Kg**			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)		30	5.0	25.00	0	120	70	130			
Surr: BFB		460		500.0		92.7	70	130			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1707D31 | RcptNo: 1

Received By: **Richie Eriacho** 7/26/2017 9:50:00 AM

Completed By: **Anne Thorne** 7/26/2017 12:03:47 PM

Reviewed By: ENM 7/26/17

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.3	Good	Yes			

Chain-of-Custody Record

Client: GHD Services, Inc

Mailing Address: 6121 Indian School Rd Ste 200 NE Albuquerque, NM 87110

Phone #: 505 884 0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: 11135250 TD-5

Project #: 11135250

Project Manager: Bernard Bockisch

Sampler: Michael Gant

On Ice: ☒ Yes ☐ No

Sample Temperature: 3-3-1-0 = 2-3

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1707D31	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (300)				Air Bubbles (Y or N)
7/24	1100	S	S-11135250-072417-MG-TP-2-12	4oz Jar	ICE	-001	X		X									X				
7/24	1115	S	S-11135250-072417-MG-TP-1-16			-002	X		X									X				
7/24	1130	S	S-11135250-072417-MG-TP-6-4			-003												X				
7/24	1145	S	S-11135250-072417-MG-TP-5-4			-004												X				
7/24	1220	S	S-11135250-072417-MG-TP-4-12			-005												X				
7/24	1235	S	S-11135250-072417-MG-TP-3-16			-006												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/25	1450			7/25/17	1450
7/26/17	190			7/26/17	0950

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

November 17, 2017

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

RE: TD5 OrderNo.: 1711617

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 10 sample(s) on 11/10/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD5

Lab Order: 1711617

Lab ID: 1711617-001 **Collection Date:** 10/30/2017 1:40:00 PM
Client Sample ID: S-11135250-06-103017-MG-TP-7-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1800	75		mg/Kg	50	11/15/2017 10:09:06 PM	34980
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2017 10:10:09 AM	34989
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2017 10:10:09 AM	34989
Surr: DNOP	105	70-130		%Rec	1	11/15/2017 10:10:09 AM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9	H	mg/Kg	1	11/14/2017 10:11:38 AM	34953
Surr: BFB	95.6	15-316	H	%Rec	1	11/14/2017 10:11:38 AM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024	H	mg/Kg	1	11/14/2017 10:11:38 AM	34953
Toluene	ND	0.049	H	mg/Kg	1	11/14/2017 10:11:38 AM	34953
Ethylbenzene	ND	0.049	H	mg/Kg	1	11/14/2017 10:11:38 AM	34953
Xylenes, Total	ND	0.098	H	mg/Kg	1	11/14/2017 10:11:38 AM	34953
Surr: 4-Bromofluorobenzene	94.3	80-120	H	%Rec	1	11/14/2017 10:11:38 AM	34953

Lab ID: 1711617-002 **Collection Date:** 10/31/2017 10:50:00 AM
Client Sample ID: S-11135250-06-103117-MG-TP-10-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	99	30		mg/Kg	20	11/15/2017 1:38:02 AM	34980
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.5		mg/Kg	1	11/15/2017 11:25:38 AM	34989
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2017 11:25:38 AM	34989
Surr: DNOP	107	70-130		%Rec	1	11/15/2017 11:25:38 AM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/14/2017 1:20:09 PM	34953
Surr: BFB	94.3	15-316		%Rec	1	11/14/2017 1:20:09 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/14/2017 1:20:09 PM	34953
Toluene	ND	0.049		mg/Kg	1	11/14/2017 1:20:09 PM	34953
Ethylbenzene	ND	0.049		mg/Kg	1	11/14/2017 1:20:09 PM	34953
Xylenes, Total	ND	0.098		mg/Kg	1	11/14/2017 1:20:09 PM	34953
Surr: 4-Bromofluorobenzene	94.5	80-120		%Rec	1	11/14/2017 1:20:09 PM	34953

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD5

Lab Order: 1711617

Lab ID: 1711617-003 **Collection Date:** 10/31/2017 11:55:00 AM
Client Sample ID: S-11135250-06-103117-MG-TP-11-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	48	30		mg/Kg	20	11/15/2017 2:15:15 AM	34980
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	11/15/2017 11:50:07 AM	34989
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2017 11:50:07 AM	34989
Surr: DNOP	97.6	70-130		%Rec	1	11/15/2017 11:50:07 AM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/14/2017 1:43:32 PM	34953
Surr: BFB	94.0	15-316		%Rec	1	11/14/2017 1:43:32 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/14/2017 1:43:32 PM	34953
Toluene	ND	0.050		mg/Kg	1	11/14/2017 1:43:32 PM	34953
Ethylbenzene	ND	0.050		mg/Kg	1	11/14/2017 1:43:32 PM	34953
Xylenes, Total	ND	0.099		mg/Kg	1	11/14/2017 1:43:32 PM	34953
Surr: 4-Bromofluorobenzene	93.9	80-120		%Rec	1	11/14/2017 1:43:32 PM	34953

Lab ID: 1711617-004 **Collection Date:** 10/31/2017 12:35:00 PM
Client Sample ID: S-11135250-06-103117-MG-TP-12-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	1400	75		mg/Kg	50	11/15/2017 10:21:31 PM	34980
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	11/15/2017 12:14:33 PM	34989
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	11/15/2017 12:14:33 PM	34989
Surr: DNOP	95.9	70-130		%Rec	1	11/15/2017 12:14:33 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	11/14/2017 2:06:54 PM	34953
Surr: BFB	92.7	15-316		%Rec	1	11/14/2017 2:06:54 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/14/2017 2:06:54 PM	34953
Toluene	ND	0.047		mg/Kg	1	11/14/2017 2:06:54 PM	34953
Ethylbenzene	ND	0.047		mg/Kg	1	11/14/2017 2:06:54 PM	34953
Xylenes, Total	ND	0.094		mg/Kg	1	11/14/2017 2:06:54 PM	34953
Surr: 4-Bromofluorobenzene	93.7	80-120		%Rec	1	11/14/2017 2:06:54 PM	34953

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD5

Lab Order: 1711617

Lab ID: 1711617-005 **Collection Date:** 10/31/2017 2:10:00 PM
Client Sample ID: S-11135250-06-103117-MG-TP-13-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	60	30		mg/Kg	20	11/15/2017 8:29:50 PM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	70	9.6		mg/Kg	1	11/15/2017 12:39:05 PM	34989
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2017 12:39:05 PM	34989
Surr: DNOP	106	70-130		%Rec	1	11/15/2017 12:39:05 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	6.5	4.9		mg/Kg	1	11/14/2017 2:30:20 PM	34953
Surr: BFB	138	15-316		%Rec	1	11/14/2017 2:30:20 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/14/2017 2:30:20 PM	34953
Toluene	ND	0.049		mg/Kg	1	11/14/2017 2:30:20 PM	34953
Ethylbenzene	ND	0.049		mg/Kg	1	11/14/2017 2:30:20 PM	34953
Xylenes, Total	0.099	0.099		mg/Kg	1	11/14/2017 2:30:20 PM	34953
Surr: 4-Bromofluorobenzene	96.9	80-120		%Rec	1	11/14/2017 2:30:20 PM	34953

Lab ID: 1711617-006 **Collection Date:** 11/2/2017 10:55:00 AM
Client Sample ID: S-11135250-06-110217-MG-TP-14-16 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	290	30		mg/Kg	20	11/15/2017 8:42:14 PM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/15/2017 1:03:30 PM	34989
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2017 1:03:30 PM	34989
Surr: DNOP	103	70-130		%Rec	1	11/15/2017 1:03:30 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/14/2017 11:40:32 AM	34953
Surr: BFB	115	15-316		%Rec	1	11/14/2017 11:40:32 AM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/14/2017 11:40:32 AM	34953
Toluene	ND	0.049		mg/Kg	1	11/14/2017 11:40:32 AM	34953
Ethylbenzene	ND	0.049		mg/Kg	1	11/14/2017 11:40:32 AM	34953
Xylenes, Total	ND	0.099		mg/Kg	1	11/14/2017 11:40:32 AM	34953
Surr: 4-Bromofluorobenzene	116	80-120		%Rec	1	11/14/2017 11:40:32 AM	34953

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD5

Lab Order: 1711617

Lab ID: 1711617-007 **Collection Date:** 11/2/2017 2:10:00 PM
Client Sample ID: S-11135250-06-110217-MG-TP-15-20 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	3000	150		mg/Kg	100	11/17/2017 5:26:55 AM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	990	94		mg/Kg	10	11/15/2017 3:06:08 PM	34989
Motor Oil Range Organics (MRO)	ND	470		mg/Kg	10	11/15/2017 3:06:08 PM	34989
Surr: DNOP	0	70-130	S	%Rec	10	11/15/2017 3:06:08 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	230	24		mg/Kg	5	11/14/2017 10:09:02 AM	34953
Surr: BFB	355	15-316	S	%Rec	5	11/14/2017 10:09:02 AM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.12		mg/Kg	5	11/14/2017 10:09:02 AM	34953
Toluene	1.7	0.24		mg/Kg	5	11/14/2017 10:09:02 AM	34953
Ethylbenzene	0.89	0.24		mg/Kg	5	11/14/2017 10:09:02 AM	34953
Xylenes, Total	17	0.48		mg/Kg	5	11/14/2017 10:09:02 AM	34953
Surr: 4-Bromofluorobenzene	132	80-120	S	%Rec	5	11/14/2017 10:09:02 AM	34953

Lab ID: 1711617-008 **Collection Date:** 11/2/2017 11:15:00 AM
Client Sample ID: S-11135250-06-110217-MG-TP-16-2 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	330	30		mg/Kg	20	11/15/2017 9:31:53 PM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/15/2017 1:52:44 PM	34989
Motor Oil Range Organics (MRO)	ND	51		mg/Kg	1	11/15/2017 1:52:44 PM	34989
Surr: DNOP	104	70-130		%Rec	1	11/15/2017 1:52:44 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	11/14/2017 12:04:19 PM	34953
Surr: BFB	114	15-316		%Rec	1	11/14/2017 12:04:19 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/14/2017 12:04:19 PM	34953
Toluene	ND	0.048		mg/Kg	1	11/14/2017 12:04:19 PM	34953
Ethylbenzene	ND	0.048		mg/Kg	1	11/14/2017 12:04:19 PM	34953
Xylenes, Total	ND	0.096		mg/Kg	1	11/14/2017 12:04:19 PM	34953
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	11/14/2017 12:04:19 PM	34953

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD5

Lab Order: 1711617

Lab ID: 1711617-009 **Collection Date:** 11/2/2017 2:18:00 PM
Client Sample ID: S-11135250-06-110217-MG-TP-17-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	77	30		mg/Kg	20	11/15/2017 9:44:18 PM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	11	9.7		mg/Kg	1	11/15/2017 2:17:10 PM	34989
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	11/15/2017 2:17:10 PM	34989
Surr: DNOP	104	70-130		%Rec	1	11/15/2017 2:17:10 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/14/2017 12:28:04 PM	34953
Surr: BFB	115	15-316		%Rec	1	11/14/2017 12:28:04 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.025		mg/Kg	1	11/14/2017 12:28:04 PM	34953
Toluene	ND	0.050		mg/Kg	1	11/14/2017 12:28:04 PM	34953
Ethylbenzene	ND	0.050		mg/Kg	1	11/14/2017 12:28:04 PM	34953
Xylenes, Total	ND	0.10		mg/Kg	1	11/14/2017 12:28:04 PM	34953
Surr: 4-Bromofluorobenzene	115	80-120		%Rec	1	11/14/2017 12:28:04 PM	34953

Lab ID: 1711617-010 **Collection Date:** 11/2/2017 2:20:00 PM
Client Sample ID: S-11135250-06-110217-MG-TP-18-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	11/15/2017 9:56:42 PM	35019
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	11/15/2017 2:41:32 PM	34989
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	11/15/2017 2:41:32 PM	34989
Surr: DNOP	100	70-130		%Rec	1	11/15/2017 2:41:32 PM	34989
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	11/14/2017 12:51:50 PM	34953
Surr: BFB	115	15-316		%Rec	1	11/14/2017 12:51:50 PM	34953
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	11/14/2017 12:51:50 PM	34953
Toluene	ND	0.049		mg/Kg	1	11/14/2017 12:51:50 PM	34953
Ethylbenzene	ND	0.049		mg/Kg	1	11/14/2017 12:51:50 PM	34953
Xylenes, Total	ND	0.098		mg/Kg	1	11/14/2017 12:51:50 PM	34953
Surr: 4-Bromofluorobenzene	114	80-120		%Rec	1	11/14/2017 12:51:50 PM	34953

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711617**

17-Nov-17

Client: GHD

Project: TD5

Sample ID	**MB-34980**	SampType:	**mblk**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**34980**		RunNo:	**47103**				
Prep Date:	**11/14/2017**	Analysis Date:	**11/14/2017**		SeqNo:	**1503854**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-34980**	SampType:	**lcs**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**34980**		RunNo:	**47103**				
Prep Date:	**11/14/2017**	Analysis Date:	**11/14/2017**		SeqNo:	**1503855**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	92.2	90	110			

Sample ID	**MB-35019**	SampType:	**mblk**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**35019**		RunNo:	**47174**				
Prep Date:	**11/15/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504916**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-35019**	SampType:	**lcs**		TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**35019**		RunNo:	**47174**				
Prep Date:	**11/15/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504917**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	91.3	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711617**

17-Nov-17

Client: GHD

Project: TD5

Sample ID	**1711617-001AMS**	SampType:	**MS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**S-11135250-06-1030**	Batch ID:	**34989**		RunNo:	**47145**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504203**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	73	9.8	48.97	6.067	137	55.8	122			S	
Surr: DNOP	4.9		4.897		100	70	130				

Sample ID	**1711617-001AMSD**	SampType:	**MSD**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**S-11135250-06-1030**	Batch ID:	**34989**		RunNo:	**47145**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504204**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	56	9.9	49.55	6.067	100	55.8	122	26.7	20	R	
Surr: DNOP	4.9		4.955		99.6	70	130	0	0		

Sample ID	**LCS-34989**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID:	**34989**		RunNo:	**47145**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504208**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	50	10	50.00	0	101	73.2	114				
Surr: DNOP	4.8		5.000		95.7	70	130				

Sample ID	**MB-34989**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**					
Client ID:	**PBS**	Batch ID:	**34989**		RunNo:	**47145**					
Prep Date:	**11/14/2017**	Analysis Date:	**11/15/2017**		SeqNo:	**1504209**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	11		10.00		105	70	130				

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711617**

17-Nov-17

Client: GHD

Project: TD5

Sample ID	**MB-34953**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**PBS**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503518**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	980		1000		97.6	15	316			

Sample ID	**LCS-34953**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**					
Client ID:	**LCSS**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503519**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	103	75.9	131			
Surr: BFB	1100		1000		109	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1711617**

17-Nov-17

Client: GHD

Project: TD5

Sample ID	**MB-34953**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503543**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.99		1.000		98.6	80	120			

Sample ID	**LCS-34953**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503544**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.92	0.025	1.000	0	92.1	77.3	128			
Toluene	0.94	0.050	1.000	0	93.8	79.2	125			
Ethylbenzene	0.95	0.050	1.000	0	95.4	80.7	127			
Xylenes, Total	2.9	0.10	3.000	0	96.6	81.6	129			
Surr: 4-Bromofluorobenzene	0.99		1.000		98.5	80	120			

Sample ID	**1711617-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**S-11135250-06-1030**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503546**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9747	0	102	80.9	132			H
Toluene	1.0	0.049	0.9747	0.006654	105	79.8	136			H
Ethylbenzene	1.1	0.049	0.9747	0	110	79.4	140			H
Xylenes, Total	3.2	0.097	2.924	0	110	78.5	142			H
Surr: 4-Bromofluorobenzene	0.91		0.9747		93.2	80	120			H

Sample ID	**1711617-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**S-11135250-06-1030**	Batch ID:	**34953**	RunNo:	**47109**					
Prep Date:	**11/13/2017**	Analysis Date:	**11/14/2017**	SeqNo:	**1503547**	Units:	**mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.024	0.9766	0	106	80.9	132	3.83	20	H
Toluene	1.1	0.049	0.9766	0.006654	110	79.8	136	5.00	20	H
Ethylbenzene	1.1	0.049	0.9766	0	113	79.4	140	3.12	20	H
Xylenes, Total	3.4	0.098	2.930	0	115	78.5	142	4.21	20	H
Surr: 4-Bromofluorobenzene	0.92		0.9766		94.1	80	120	0	0	H

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1711617 | RcptNo: 1

Received By: **Dennis Suazo** 11/10/2017 10:00:00 AM

Completed By: **Isaiah Ortiz** 11/10/2017 11:50:16 AM IG

Reviewed By: 11/10/17

Chain of Custody

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

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

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

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.6	Good	Yes			

Chain-of-Custody Record

Client: GHD Services, Inc.

Mailing Address: 6121 Indian School Rd Ste 200 NE Albuquerque, NM 87110

Phone #: 505 884 0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: TDS

Project #: 11135250-06

Project Manager: Bernard Bockisch

Sampler: Michael Gant

On Ice: ☑ Yes ☐ No

Sample Temperature: 2.5+0.1(CF)=2.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1711617	BTEX + ~~MTBE~~ + ~~TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride 300				Air Bubbles (Y or N)
10/30/17	1340	S	S-11135250-06-103017-MG-TP-7-2'	4oz Soil Jar	ICE	-001	X		X									X				
10/31/17	1050		S-11135250-06-103117-MG-TP-10-4'			-002	X		X									X				
10/31/17	1155		S-11135250-06-103117-MG-TP-11-4'			-003	X		X									X				
10/31/17	1235		S-11135250-06-103117-MG-TP-12-4'			-004	X		X									X				
10/31/17	1410		S-11135250-06-103117-MG-TP-13-4'			-005	X		X									X				
11/2/17	1055		S-11135250-06-110217-MG-TP-14-16'			-006	X		X									X				
11/2/17	1410		S-11135250-06-110217-MG-TP-15-20'			-007	X		X									X				
11/2/17	1115		S-11135250-06-110217-MG-TP-16-2'			-008	X		X									X				
11/2/17	1418		S-11135250-06-110217-MG-TP-17-4'			-009	X		X									X				
11/2/17	1420		S-11135250-06-110217-MG-TP-18-4'			-010	X		X									X				
			~~S-11135250-06~~																			
			~~S-11135250-06~~																			

Date	Time	Relinquished by:	Received by:	Date	Time
11/8/17	830			11/9/17	0830
11/9/17	1900			11/10/17	1000

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

courier 11/10/17 DPS

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

January 15, 2018

Bernie Bockisch

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

RE: TD 5 OrderNo.: 1712E28

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD 5

Lab Order: 1712E28

Lab ID: 1712E28-001 **Collection Date:** 12/21/2017 3:50:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-25 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	42	30		mg/Kg	20	1/11/2018 9:52:56 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Toluene	ND	0.046		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Ethylbenzene	ND	0.046		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Xylenes, Total	ND	0.092		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/28/2017 12:40:52 PM	35713

Lab ID: 1712E28-002 **Collection Date:** 12/21/2017 3:55:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-30 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/11/2018 10:05:21 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Toluene	ND	0.048		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Ethylbenzene	ND	0.048		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Xylenes, Total	ND	0.095		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	12/29/2017 2:44:16 AM	35713

Lab ID: 1712E28-003 **Collection Date:** 12/21/2017 4:00:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-35 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	35	30		mg/Kg	20	1/11/2018 10:17:46 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Toluene	ND	0.048		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Ethylbenzene	ND	0.048		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Xylenes, Total	ND	0.096		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	12/29/2017 3:07:28 AM	35713

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD 5

Lab Order: 1712E28

Lab ID: 1712E28-004
Collection Date: 12/21/2017 4:05:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-40
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/11/2018 10:30:11 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Toluene	ND	0.047		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Ethylbenzene	ND	0.047		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Xylenes, Total	ND	0.095		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	12/29/2017 3:30:40 AM	35713

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E28**

15-Jan-18

Client: GHD

Project: TD 5

Sample ID	**MB-35914**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**35914**	RunNo:	**48339**					
Prep Date:	**1/8/2018**	Analysis Date:	**1/9/2018**	SeqNo:	**1552593**	Units:	**mg/Kg**			

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

Sample ID	**LCS-35914**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**35914**	RunNo:	**48339**					
Prep Date:	**1/8/2018**	Analysis Date:	**1/9/2018**	SeqNo:	**1552594**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E28**

15-Jan-18

Client: GHD

Project: TD 5

Sample ID	**MB-35713**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**PBS**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541267** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID	**LCS-35713**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**LCSS**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541268** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.2	77.3	128			
Toluene	0.87	0.050	1.000	0	86.6	79.2	125			
Ethylbenzene	0.86	0.050	1.000	0	85.6	80.7	127			
Xylenes, Total	2.6	0.10	3.000	0	87.7	81.6	129			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	80	120			

Sample ID	**1712E28-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**S-1113525006-12211**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541272** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9766	0	91.7	80.9	132			
Toluene	0.93	0.049	0.9766	0.008732	94.7	79.8	136			
Ethylbenzene	0.95	0.049	0.9766	0	97.3	79.4	140			
Xylenes, Total	2.9	0.098	2.930	0	98.7	78.5	142			
Surr: 4-Bromofluorobenzene	0.92		0.9766		94.5	80	120			

Sample ID	**1712E28-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**S-1113525006-12211**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9653	0	92.9	80.9	132	0.135	20	
Toluene	0.93	0.048	0.9653	0.008732	95.3	79.8	136	0.540	20	
Ethylbenzene	0.94	0.048	0.9653	0	97.5	79.4	140	1.00	20	
Xylenes, Total	2.9	0.097	2.896	0	99.3	78.5	142	0.576	20	
Surr: 4-Bromofluorobenzene	0.91		0.9653		94.5	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1712E28 | RcptNo: 1

Received By: **Andy Freeman** 12/23/2017 8:30:00 AM

Completed By: **Michelle Garcia** 12/26/2017 10:46:00 AM

Reviewed By: DDS/mg 12/26/17

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: GHD services

Mailing Address: 6121 Indian School Road Suite 200 NE, Albuquerque, NM 87110

Phone #: (505) 884-0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: TDS

Project #: 111352S0-06

Project Manager: Bernard Bockisch

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7 +0.1 = 1.8° C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712E28	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		chloride 300.0			Air Bubbles (Y or N)
12/21	1550	S	S-111352S006-122117-JP-SB-1-25	4oz Soil Jar	ICE	001	✓												✓			
12/21	1555	S	S-111352S0-06-122117-JP-SB-1-30	"	"	002	✓												✓			
12/21	1600	S	S-111352S0-06-122117-JP-SB-1-35	"	"	003	✓												✓			
12/21	1605	S	S-111352S0-06-122117-JP-SB-1-40	"	"	004	✓												✓			

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/22/17	0900			12/22/17	0900
12/22/17	1900			12/23/17	0830

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

January 15, 2018

Bernie Bockisch

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

RE: TD 5 OrderNo.: 1712E28

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 4 sample(s) on 12/23/2017 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data 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,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD 5

Lab Order: 1712E28

Lab ID: 1712E28-001 **Collection Date:** 12/21/2017 3:50:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-25 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	42	30		mg/Kg	20	1/11/2018 9:52:56 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.023		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Toluene	ND	0.046		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Ethylbenzene	ND	0.046		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Xylenes, Total	ND	0.092		mg/Kg	1	12/28/2017 12:40:52 PM	35713
Surr: 4-Bromofluorobenzene	100	80-120		%Rec	1	12/28/2017 12:40:52 PM	35713

Lab ID: 1712E28-002 **Collection Date:** 12/21/2017 3:55:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-30 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/11/2018 10:05:21 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Toluene	ND	0.048		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Ethylbenzene	ND	0.048		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Xylenes, Total	ND	0.095		mg/Kg	1	12/29/2017 2:44:16 AM	35713
Surr: 4-Bromofluorobenzene	89.6	80-120		%Rec	1	12/29/2017 2:44:16 AM	35713

Lab ID: 1712E28-003 **Collection Date:** 12/21/2017 4:00:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-35 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	35	30		mg/Kg	20	1/11/2018 10:17:46 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Toluene	ND	0.048		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Ethylbenzene	ND	0.048		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Xylenes, Total	ND	0.096		mg/Kg	1	12/29/2017 3:07:28 AM	35713
Surr: 4-Bromofluorobenzene	90.2	80-120		%Rec	1	12/29/2017 3:07:28 AM	35713

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: TD 5

Lab Order: 1712E28

Lab ID: 1712E28-004
Collection Date: 12/21/2017 4:05:00 PM
Client Sample ID: S-1113525006-122117-JP-SB-1-40
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/11/2018 10:30:11 AM	35914
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Toluene	ND	0.047		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Ethylbenzene	ND	0.047		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Xylenes, Total	ND	0.095		mg/Kg	1	12/29/2017 3:30:40 AM	35713
Surr: 4-Bromofluorobenzene	89.1	80-120		%Rec	1	12/29/2017 3:30:40 AM	35713

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E28**

15-Jan-18

Client: GHD

Project: TD 5

Sample ID	**MB-35914**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**35914**	RunNo:	**48339**					
Prep Date:	**1/8/2018**	Analysis Date:	**1/9/2018**	SeqNo:	**1552593**	Units:	**mg/Kg**			

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

Sample ID	**LCS-35914**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**35914**	RunNo:	**48339**					
Prep Date:	**1/8/2018**	Analysis Date:	**1/9/2018**	SeqNo:	**1552594**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.7	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1712E28**

15-Jan-18

Client: GHD

Project: TD 5

Sample ID	**MB-35713**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**PBS**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541267** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		96.4	80	120			

Sample ID	**LCS-35713**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**LCSS**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541268** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.85	0.025	1.000	0	85.2	77.3	128			
Toluene	0.87	0.050	1.000	0	86.6	79.2	125			
Ethylbenzene	0.86	0.050	1.000	0	85.6	80.7	127			
Xylenes, Total	2.6	0.10	3.000	0	87.7	81.6	129			
Surr: 4-Bromofluorobenzene	0.96		1.000		96.2	80	120			

Sample ID	**1712E28-001AMS**	SampType:	**MS**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**S-1113525006-12211**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541272** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9766	0	91.7	80.9	132			
Toluene	0.93	0.049	0.9766	0.008732	94.7	79.8	136			
Ethylbenzene	0.95	0.049	0.9766	0	97.3	79.4	140			
Xylenes, Total	2.9	0.098	2.930	0	98.7	78.5	142			
Surr: 4-Bromofluorobenzene	0.92		0.9766		94.5	80	120			

Sample ID	**1712E28-001AMSD**	SampType:	**MSD**	TestCode:	**EPA Method 8021B: Volatiles**
Client ID:	**S-1113525006-12211**	Batch ID:	**35713**	RunNo:	**48084**
Prep Date:	**12/26/2017**	Analysis Date:	**12/28/2017**	SeqNo:	**1541273** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.024	0.9653	0	92.9	80.9	132	0.135	20	
Toluene	0.93	0.048	0.9653	0.008732	95.3	79.8	136	0.540	20	
Ethylbenzene	0.94	0.048	0.9653	0	97.5	79.4	140	1.00	20	
Xylenes, Total	2.9	0.097	2.896	0	99.3	78.5	142	0.576	20	
Surr: 4-Bromofluorobenzene	0.91		0.9653		94.5	80	120	0	0	

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1712E28 | RcptNo: 1

Received By: **Andy Freeman** 12/23/2017 8:30:00 AM

Completed By: **Michelle Garcia** 12/26/2017 10:46:00 AM

Reviewed By: DDS/mg 12/26/17

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

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

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

Chain-of-Custody Record

Client: GHD services

Mailing Address: 6121 Indian School Road Suite 200 NE, Albuquerque, NM 87110

Phone #: (505) 884-0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____

Project Name: TDS

Project #: 111352S0-06

Project Manager: Bernard Bockisch

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7 +0.1 = 1.8° C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1712E28	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		chloride 300.0			Air Bubbles (Y or N)
12/21	1550	S	S-111352S006-122117-JP-SB-1-25	4oz Soil Jar	ICE	001	✓												✓			
12/21	1555	S	S-111352S0-06-122117-JP-SB-1-30	"	"	002	✓												✓			
12/21	1600	S	S-111352S0-06-122117-JP-SB-1-35	"	"	003	✓												✓			
12/21	1605	S	S-111352S0-06-122117-JP-SB-1-40	"	"	004	✓												✓			

Date:	Time:	Relinquished by:	Received by:	Date	Time
12/22/17	0900			12/22/17	0900
12/22/17	1900			12/23/17	0830

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 15, 2018

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

RE: TD-5 OrderNo.: 1801312

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/6/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1801312**
Date Reported: **1/15/2018**

CLIENT: GHD
Project: TD-5

Lab Order: 1801312

Lab ID: 1801312-001 **Collection Date:** 1/3/2018 12:00:00 PM
Client Sample ID: S-11135250-06-010318-MG-TP-19-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/15/2018 1:12:41 AM	36012

Lab ID: 1801312-002 **Collection Date:** 1/3/2018 1:50:00 PM
Client Sample ID: S-11135250-06-010318-MG-TP-20-4 **Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **MRA**	
Chloride	ND	30		mg/Kg	20	1/15/2018 1:25:06 AM	36012

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1801312**

15-Jan-18

Client: GHD

Project: TD-5

Sample ID	**MB-36012**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**36012**	RunNo:	**48434**					
Prep Date:	**1/14/2018**	Analysis Date:	**1/14/2018**	SeqNo:	**1556984**	Units:	**mg/Kg**			

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

Sample ID	**LCS-36012**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**36012**	RunNo:	**48434**					
Prep Date:	**1/14/2018**	Analysis Date:	**1/14/2018**	SeqNo:	**1556985**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.1	90	110			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1801312 | RcptNo: 1

Received By: **Anne Thorne** 1/6/2018 10:30:00 AM

Completed By: **Dennis Suazo** 1/8/2018 9:31:26 AM

Reviewed By: JMD 1/8/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

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

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

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Not Present			

Chain-of-Custody Record

Client: GHD

Mailing Address: 6121 Indian School Rd, Suite 200 NE Albuquerque, NM 87110

Phone #: 505 884 0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: TD-5

Project #: 1135250-06

Project Manager: Bernard. Bockisch

Sampler: JB Michael Gant

On Ice: ☒ Yes ☐ No

Sample Temperature: 7.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		Chloride 300			Air Bubbles (Y or N)
01/03/18	1200	S	S-1135250-06-010318-MG-TP-4	4 oz Soil Jar	ICE	1801312-001													X			
01/03/18	1350	S	S-1135250-06-010318-MG-TP-5	4 oz Soil Jar	ICE	002													X			

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/5/18	1330			1/5/18	1330
1/5/18	1900			01/06/18	1030

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

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

March 05, 2018

Bernie Bockisch

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

RE: Trunk MC14 OrderNo.: 1802D77

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 1 sample(s) on 2/27/2018 for the analyses presented in the following report.

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

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

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1802D77**
Date Reported: **3/5/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: Trunk MC14
Lab Order: 1802D77

Lab ID: 1802D77-001
Collection Date: 2/20/2018 2:20:00 PM
Client Sample ID: S-11135250-06-022018-JP-TP-1-20
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS						Analyst: **CJS**	
Chloride	ND	30		mg/Kg	20	3/2/2018 4:48:18 PM	36801
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **TOM**	
Diesel Range Organics (DRO)	ND	9.3		mg/Kg	1	2/28/2018 5:37:13 PM	36756
Motor Oil Range Organics (MRO)	ND	47		mg/Kg	1	2/28/2018 5:37:13 PM	36756
Surr: DNOP	108	70-130		%Rec	1	2/28/2018 5:37:13 PM	36756
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	2/28/2018 2:09:25 PM	36745
Surr: BFB	95.9	15-316		%Rec	1	2/28/2018 2:09:25 PM	36745
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**	
Benzene	ND	0.024		mg/Kg	1	2/28/2018 2:09:25 PM	36745
Toluene	ND	0.047		mg/Kg	1	2/28/2018 2:09:25 PM	36745
Ethylbenzene	ND	0.047		mg/Kg	1	2/28/2018 2:09:25 PM	36745
Xylenes, Total	ND	0.094		mg/Kg	1	2/28/2018 2:09:25 PM	36745
Surr: 4-Bromofluorobenzene	91.6	80-120		%Rec	1	2/28/2018 2:09:25 PM	36745

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

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D77**

05-Mar-18

Client: GHD

Project: Trunk MC14

Sample ID	**MB-36801**	SampType:	**mblk**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**PBS**	Batch ID:	**36801**	RunNo:	**49514**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600237**	Units:	**mg/Kg**			

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

Sample ID	**LCS-36801**	SampType:	**lcs**	TestCode:	**EPA Method 300.0: Anions**					
Client ID:	**LCSS**	Batch ID:	**36801**	RunNo:	**49514**					
Prep Date:	**3/2/2018**	Analysis Date:	**3/2/2018**	SeqNo:	**1600238**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	90.6	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D77**

05-Mar-18

Client: GHD

Project: Trunk MC14

Sample ID	**LCS-36756**	SampType:	**LCS**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**LCSS**	Batch ID:	**36756**		RunNo:	**49444**				
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**		SeqNo:	**1597085**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.7	70	130			
Surr: DNOP	4.1		5.000		81.5	70	130			

Sample ID	**MB-36756**	SampType:	**MBLK**		TestCode:	**EPA Method 8015M/D: Diesel Range Organics**				
Client ID:	**PBS**	Batch ID:	**36756**		RunNo:	**49444**				
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**		SeqNo:	**1597086**	Units:	**mg/Kg**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		88.7	70	130			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D77**

05-Mar-18

Client: GHD

Project: Trunk MC14

Sample ID	**MB-36745**	SampType:	**MBLK**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**PBS**	Batch ID:	**36745**	RunNo:	**49465**
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**	SeqNo:	**1597509** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	960		1000		96.0	15	316			

Sample ID	**LCS-36745**	SampType:	**LCS**	TestCode:	**EPA Method 8015D: Gasoline Range**
Client ID:	**LCSS**	Batch ID:	**36745**	RunNo:	**49465**
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**	SeqNo:	**1597511** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	28	5.0	25.00	0	112	75.9	131			
Surr: BFB	1200		1000		115	15	316			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1802D77**

05-Mar-18

Client: GHD

Project: Trunk MC14

Sample ID	**MB-36745**	SampType:	**MBLK**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**PBS**	Batch ID:	**36745**	RunNo:	**49465**					
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**	SeqNo:	**1597547**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.96		1.000		95.6	80	120			

Sample ID	**LCS-36745**	SampType:	**LCS**	TestCode:	**EPA Method 8021B: Volatiles**					
Client ID:	**LCSS**	Batch ID:	**36745**	RunNo:	**49465**					
Prep Date:	**2/27/2018**	Analysis Date:	**2/28/2018**	SeqNo:	**1597548**	Units:	**mg/Kg**			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	105	77.3	128			
Toluene	1.1	0.050	1.000	0	105	79.2	125			
Ethylbenzene	1.0	0.050	1.000	0	102	80.7	127			
Xylenes, Total	3.2	0.10	3.000	0	106	81.6	129			
Surr: 4-Bromofluorobenzene	0.97		1.000		97.2	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: GHD | Work Order Number: 1802D77 | RcptNo: 1

Received By: Dennis Suazo 2/27/2018 9:15:00 AM

Completed By: Isaiah Ortiz 2/27/2018 10:00:51 AM

Reviewed By: VDS 2/27/18

UP: INW 2/27/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

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

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.6	Good	Yes			

Chain-of-Custody Record

Client: GHD

Mailing Address: 6121 Indian School Rd NE Suite 200 Albuquerque NM 87110

Phone #: 505 884 0672

email or Fax#: Bernard.Bockisch@ghd.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time: 5 day
☐ Standard ☐ Rush _____

Project Name: Trunk MC-14

Project #: ~~DRAFT~~ 11135250-06

Project Manager: Bernard Bockisch

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1802D77	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)		Chloride 300			Air Bubbles (Y or N)
2-20-18	1420	S	S-11135250-06-022018-TP-TP-1-20	4oz gl-s Jar	ICE	-001			X										X			

Date: Time: Relinquished by: Received by: Date Time 2/26/18 0800

Date: 2/26/18 Time: 1900 Relinquished by: Received by: Date Time 2/27/18 0915

Remarks: Per Alan add BTEX by 8021

pg 3/5

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.