



APPROVED

By Olivia Yu at 7:30 am, Apr 02, 2018

February 21, 2018

Reference No. 11135250-7

NMOCD approves of the
delineation and remediation
completed for 1RP-4735.
Approval for backfill granted.

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

Dear Mr. Ericson:

**Re: Remediation Summary Report
2A-20" (1 RP-4735)
ETC Field Services LLC
Site Location: Unit J, Section 32, Township 23-South, Range 37-East
(Lat 32.25972N°, Long -103.18139W°)
Lea County, New Mexico**

GHD Services, Inc. (GHD) is pleased to present this report for the above referenced site. The 2A-20" (hereafter referred to as the "Site") is located within Unit J, Section 32, Township 23 South, Range 37 East, in Lea County, New Mexico (see Figure 1). The property is owned by the New Mexico State Land Office (NMSLO).

A release of an unknown quantity of natural gas and oil was reported to the State of New Mexico Oil Conservation Division (NMOCD) on June 21, 2017 via Form C-141. Corrosion caused an approximate 2-inch by 8-inch hole to develop on a section of the pipeline. Twelve barrels of the fluids were recovered with a vacuum truck. Contaminated soils were excavated and stockpiled on site (see Figure 2). NMOCD release number 1RP-4735 was assigned.

1. Recommended Remediation Action Limit

Based on information available from the New Mexico Office of the State Engineer New Mexico Water Rights Reporting System website, the closest well with a recorded depth to water is approximately 0.5 mile from the Site. The depth to groundwater measured in this well was 103 feet below ground surface (ft bgs).

Based on information available from the United States Geologic Survey (USGS) National Water Information System, the depth to groundwater at the Site is approximately 111 ft bgs. This is based on a water well that is located approximately 2 miles east, southeast of the Site (see Appendix A, Water Well Reports for depth to water). In addition to the USGS identified well, GHD performs groundwater monitoring at a site that is located approximately 0.8 mile to the east. Depth to water at that site is approximately 112 ft bgs.



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.

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 600 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 0, NMOCD established RRALs are 10 mg/kg for benzene, 50 mg/kg for total BTEX, 5,000 mg/kg for total TPH and 600 ppm for chlorides ¹ . | |

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

2. Assessment Activities

The impacted area had initially been excavated to a depth of approximately 6 ft bgs and the soils stockpiled on site. Following the release, GHD's Site assessment activities began with initial background soil sampling and analysis and limited excavation on July 27, 2017. Initial assessment activities were performed by excavating test pits and field screening the soil using the PetroFLAG Hydrocarbon Analysis System and a Hach chloride field kit. Soil samples were collected from the base of the excavation (TP-5) and four test pits (TP-1 through TP-4). Excavation activities were performed by Diamondback Disposal Services, Inc. of Hobbs, New Mexico (Diamondback).

The soil samples were collected by GHD and analyzed by Hall Environmental Analysis Laboratory (HEAL) of Albuquerque, New Mexico. The soil samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B, total petroleum hydrocarbons (TPH) by EPA Method 8015 full range and chloride by EPA Method 300.0 (Table 1).

BTEX was not detected above the laboratory reporting limit (LRL) in any of the samples, total TPH concentrations ranged from below the LRL to 450 mg/kg, and chloride concentrations ranged from below the LRL to 72 mg/kg. The highest detected concentrations were found in the sample collected from TP-5. Laboratory analytical data can be found summarized in Table 1 and Figure 2 and the laboratory report can be found in Appendix B.



None of the samples analyzed contained concentrations exceeding the RRALs for the constituents that were analyzed.

An additional assessment was performed by GHD on October 10, 2017 that included hand auguring at five points (HA-1 through HA-5) closer to the release area. Samples were collected from a depth of 6 inches bgs and submitted to HEAL for BTEX, TPH, and chloride analyses. TPH concentrations in two of the sample locations, HA-2 and HA-3, exceeded the RRAL with concentrations of 11,680 and 20,540 mg/kg, respectively. All other detected concentrations were below the RRALs.

Additional excavation was performed by Diamondback in the areas of HA-2 and HA-3. GHD collected two additional soil samples from these areas on December 21, 2018 following the removal of the impacted soil. One sample, BB-1, was collected near HA-2 at a depth of 2.5 ft. bgs and BB-2 was collected near HA-3 at a depth of 3.5 ft. bgs. The samples were submitted to HEAL for TPH and chloride analyses. Both total TPH and chloride concentrations were below the RRALs for both samples.

3. Summary and Recommendations

Based on the assessment and excavation activities, it appears that the horizontal and vertical extent of hydrocarbon and chloride impacted soil has been assessed and the impacted soils removed. The soil sample collected from the base of the excavation at a depth of 6 ft bgs (see Figure 2) was submitted for laboratory analysis. The laboratory analytical results are below the RRALs for the constituents that were analyzed. The two areas containing TPH concentrations above the RRAL were excavated and re-sampled. All detected concentrations were below the RRALs.

Based on the laboratory results, GHD recommends backfilling the excavation with clean fill material and wheel compacting 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 seed will be planted utilizing a drill. The proposed seed mix will consist of Bureau of Land Management mix #2 with no love grass.

The Site will be visited on a quarterly basis to assess the establishment of vegetative growth. Staff personnel performing the site visit will also look for the presence of noxious weeds at the Site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the Site, the New Mexico State Land Office will be contacted to determine the most effective manner to eradicate it.



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

Sincerely,

GHD

A handwritten signature in black ink that reads "Alan Brandon". The signature is written in a cursive, flowing style.

Alan Brandon
Senior Project Manager

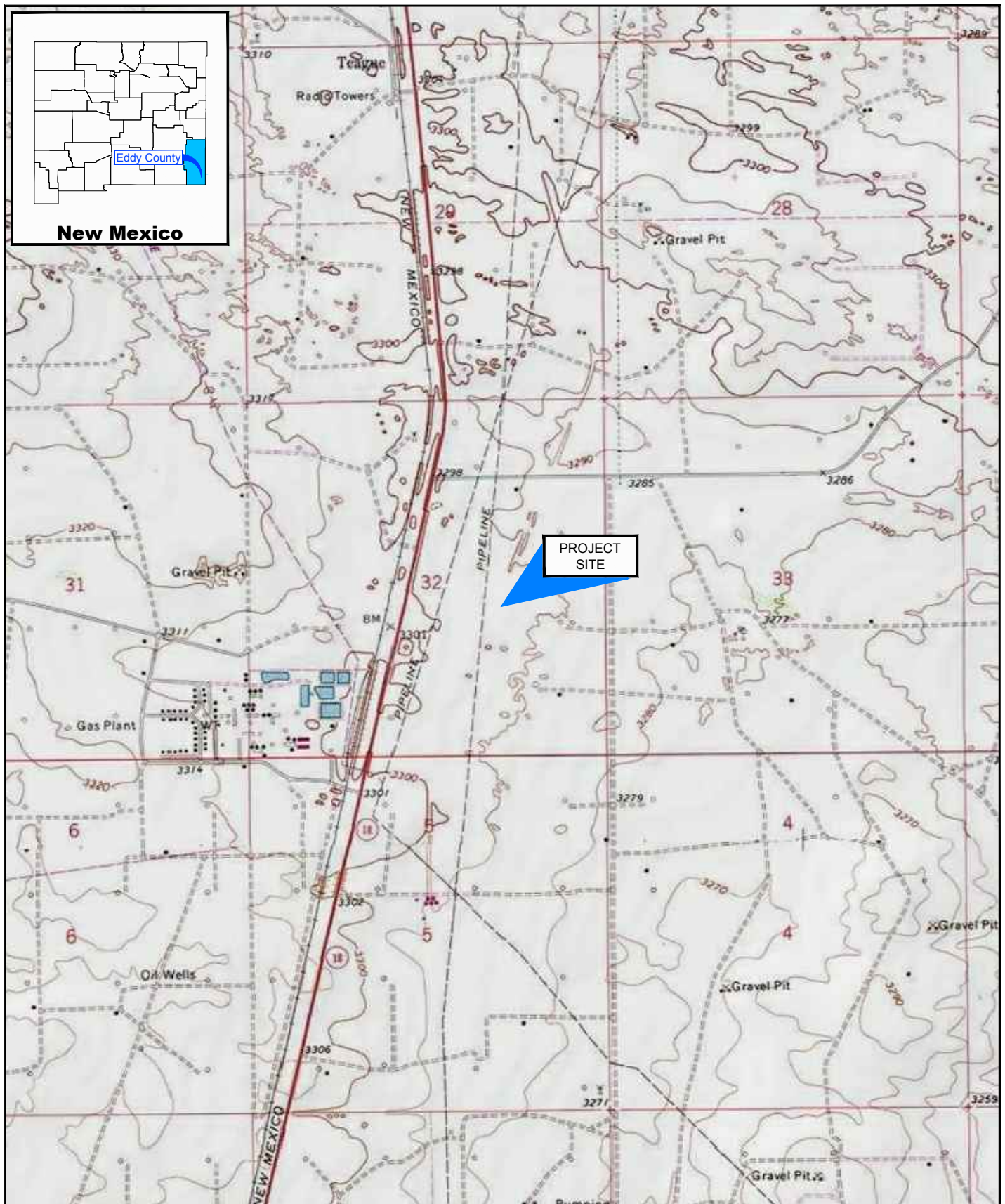
AB/pd/01

A handwritten signature in blue ink that reads "Bernard Bockisch". The signature is written in a cursive, flowing style.

Bernard Bockisch
New Mexico Operations Manager

Attachments: Figure 1
Figure 2
Table 1 – Soil Analytical Results Summary
Appendix A – Water Well Reports
Appendix B – Certified Laboratory Report

Figures



Source: USGS 7.5 Minute Quad "Rattlesnake Canyon and Jal NW, New Mexico"

Lat/Long: 32.25972° North, 103.18139° West

0 1000 2000ft

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



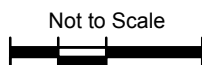
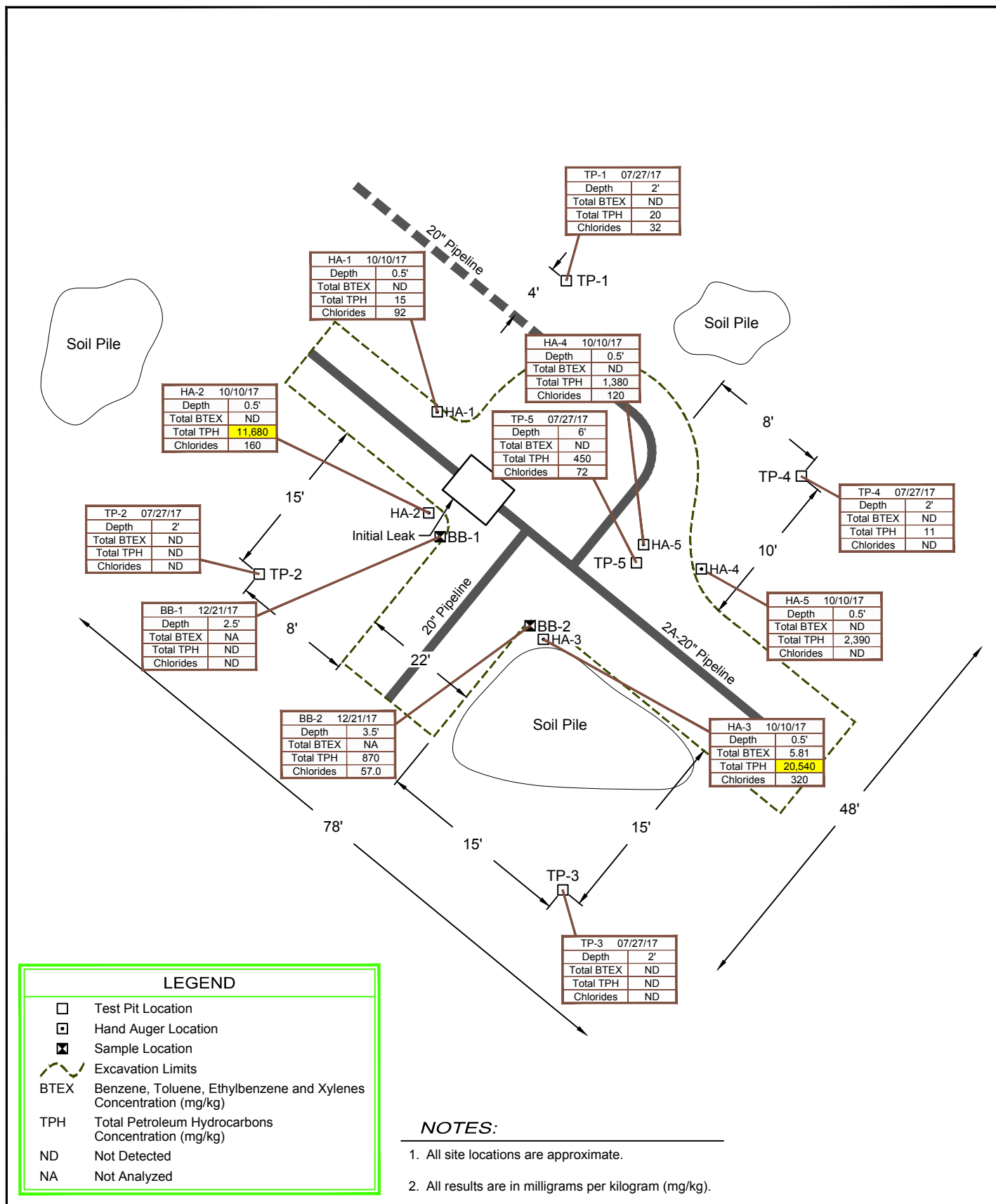
ETC FIELD SERVICES
LEA COUNTY, NEW MEXICO
2A-20"

SITE LOCATION MAP

11135250-07

Aug 23, 2017

FIGURE 1



ETC FIELD SERVICES
LEA COUNTY, NEW MEXICO
2A-20"

11135250-07
Feb 7, 2018

SOIL SAMPLE LOCATION

FIGURE 2

Tables

Table 1

ETC Field Services LLC - 2A-20"
 Section 32, Township 23 South, Range 37 East
 Lea County, New Mexico
 Soil Analytical Results Summary

| Sample ID | Date | Sample Depth | Chlorides | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | TPH | TPH | TPH | Total TPH |
|---------------------------------------|------------|--------------|------------|-----------|-----------|--------------|-----------|------------|--------------|---------------|---------------|--------------|
| | | (ft.) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) | GRO (C6-C10) | DRO (C10-C28) | MRO (C28-C36) | GRO/DRO/MRO |
| | | | | | | | | | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) |
| NMOC Remediation Action Levels | | | 600 | 10 | NE | NE | NE | 50 | NE | NE | NE | 5,000 |
| SOIL SAMPLES | | | | | | | | | | | | |
| S11135250-07-072717-MG-TP-1-2 | 7/27/2017 | 2 | 32 | <0.024 | <0.047 | <0.047 | <0.095 | <0.213 | <4.7 | 20 | <49 | 20 |
| S11135250-07-072717-MG-TP-2-2 | 7/27/2017 | 2 | <30 | <0.023 | <0.047 | <0.047 | <0.093 | <0.210 | <4.7 | <9.8 | <49 | <63.5 |
| S11135250-07-072717-MG-TP-3-2 | 7/27/2017 | 2 | <30 | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | <9.5 | <48 | <62.3 |
| S11135250-07-072717-MG-TP-4-2 | 7/27/2017 | 2 | <30 | <0.024 | <0.048 | <0.048 | <0.095 | <0.215 | <4.8 | 11 | <51 | 11 |
| S11135250-07-072717-MG-TP-5-6 | 7/27/2017 | 6 | 72 | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 160 | 290 | 450 |
| S-11135250-07-101017-MG-HA-1 | 10/10/2017 | 0.5 | 92 | <0.024 | <0.049 | <0.049 | <0.097 | <0.219 | <4.9 | 15 | <50 | 15 |
| S-11135250-07-101017-MG-HA-2 | 10/10/2017 | 0.5 | 160 | <0.023 | <0.046 | <0.046 | <0.093 | <0.208 | 80.0 | 8,400 | 3,200 | 11,680 |
| S-11135250-07-101017-MG-HA-3 | 10/10/2017 | 0.5 | 320 | <0.050 | 0.11 | 0.9 | 4.8 | 5.81 | 140.0 | 13,000 | 7,400 | 20,540 |
| S-11135250-07-101017-MG-HA-4 | 10/10/2017 | 0.5 | 120 | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 790 | 590 | 1,380 |
| S-11135250-07-101017-MG-HA-5 | 10/10/2017 | 0.5 | <30 | <0.024 | <0.048 | <0.048 | <0.097 | <0.217 | <4.8 | 1,400 | 990 | 2,390 |
| 11135250-07-122117-BB-1 | 12/21/2017 | 2.5 | <30 | NA | NA | NA | NA | NA | <4.9 | <10 | <50 | <64.9 |
| 11135250-07-122117-BB-2 | 12/21/2017 | 3.5 | 57.0 | NA | NA | NA | NA | NA | <4.8 | 470 | 400 | 870 |

Note: Concentrations in yellow exceed the NMOC Remediation Action Level

NE = Not Established

mg/Kg = milligrams per Kilogram

NA = Not Analyzed

Appendix A

Water Well Reports



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

[Please see news on new formats](#)

- [Full News](#)

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 321345103111001

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 321345103111001 24S.37E.08.14232

Available data for this site

Groundwater: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°13'45", Longitude 103°11'10" NAD27

Land-surface elevation 3,286 feet above NAVD88

The depth of the well is 185 feet below land surface.

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

Output formats

[Table of data](#)

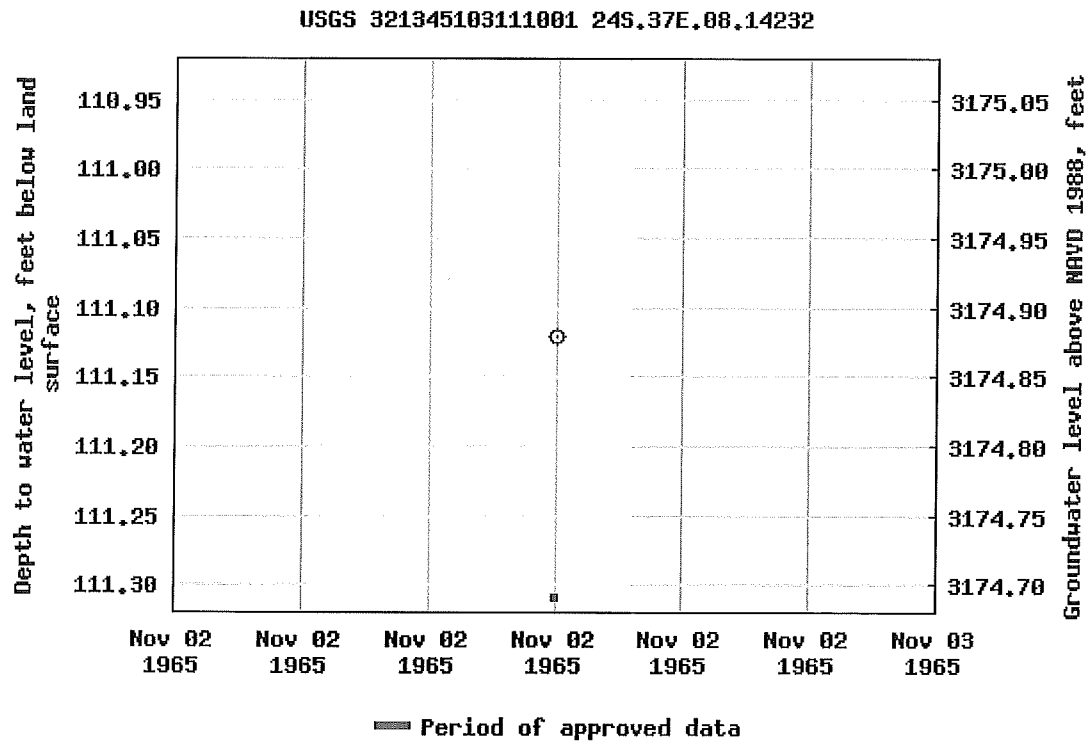
[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)

2A-20" ~2 miles S, SE

Jan 4 ~ 0.8 mile east, NE
DTW ~ 112



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

[Download a presentation-quality graph](#)

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[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 09:02:33 EDT

0.57 0.49 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 | Q | Q | Q | Sec | Tws | Rng | X | Y | Distance | DepthWell | DepthWater | Water Column |
|-----------------------|------|---------------|--------|---|---|---|----|-----|-----|-----|--------|----------|----------|-----------|------------|--------------|
| <u>CP 00347 POD1</u> | | CP | LE | 3 | 2 | 3 | 33 | 23S | 37E | | 672276 | 3570517* | 604 | 103 | | |
| <u>CP 00350 POD1</u> | | CP | LE | 3 | 2 | 2 | 32 | 23S | 37E | | 671458 | 3571309* | 780 | 7 | | |
| <u>CP 01431 POD10</u> | | CP | LE | 3 | 3 | 4 | 32 | 23S | 37E | | 671011 | 3570036 | 842 | 189 | 103 | 86 |
| <u>CP 01431 POD9</u> | | CP | LE | 2 | 4 | 3 | 32 | 23S | 37E | | 670866 | 3570255 | 861 | 189 | 111 | 78 |
| <u>CP 00354 POD1</u> | | CP | LE | 3 | 1 | 2 | 32 | 23S | 37E | | 671056 | 3571302* | 965 | 125 | | |
| <u>CP 00037 POD3</u> | | CP | LE | | 4 | 3 | 32 | 23S | 37E | | 670775 | 3570189* | 970 | 179 | 106 | 73 |
| <u>CP 00037 POD5</u> | | CP | LE | | 4 | 3 | 32 | 23S | 37E | | 670775 | 3570189* | 970 | 153 | | |
| <u>CP 00037 POD5</u> | R | CP | LE | | 4 | 3 | 32 | 23S | 37E | | 670775 | 3570189* | 970 | 153 | | |

Average Depth to Water: **106 feet**

Minimum Depth: **103 feet**

Maximum Depth: **111 feet**

Record Count:8

Basin/County Search:

Basin: Capitan

County: Lea

UTMNAD83 Radius Search (in meters):

Easting (X): 671672.49

Northing (Y): 3570558.96

Radius: 1000

*UTM location was derived from PLSS - see Help

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

8/16/17 9:45 AM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

Appendix B

Certified Laboratory Report



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

August 05, 2017

Bernie Bockish

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: 2A-20

OrderNo.: 1707E88

Dear Bernie Bockish:

Hall Environmental Analysis Laboratory received 5 sample(s) on 7/28/2017 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 1707E88

Date Reported: 8/5/2017

CLIENT: GHD
Project: 2A-20

Lab Order: 1707E88

Lab ID: 1707E88-001

Collection Date: 7/27/2017 10:40:00 AM

Client Sample ID: S1113525007-072717MGTP1-2'

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|----|---------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 32 | 30 | | mg/Kg | 20 | 8/3/2017 2:38:18 PM | 33153 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 20 | 9.8 | | mg/Kg | 1 | 8/2/2017 2:07:40 PM | 33114 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 8/2/2017 2:07:40 PM | 33114 |
| Surr: DNOP | 79.0 | 70-130 | | %Rec | 1 | 8/2/2017 2:07:40 PM | 33114 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Surr: BFB | 90.7 | 54-150 | | %Rec | 1 | 8/2/2017 4:58:02 PM | 33109 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.095 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 8/2/2017 4:58:02 PM | 33109 |
| Surr: 4-Bromofluorobenzene | 111 | 66.6-132 | | %Rec | 1 | 8/2/2017 4:58:02 PM | 33109 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1707E88

Date Reported: 8/5/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** GHD
Project: 2A-20**Lab Order:** 1707E88**Lab ID:** 1707E88-002**Collection Date:** 7/27/2017 10:50:00 AM**Client Sample ID:** S1113525007-072717MGTP2-2'**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 | 8/3/2017 3:15:32 PM | 33153 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.8 | | mg/Kg | 1 | 8/2/2017 1:24:00 PM | 33114 |
| Motor Oil Range Organics (MRO) | ND | 49 | | mg/Kg | 1 | 8/2/2017 1:24:00 PM | 33114 |
| Surr: DNOP | 70.1 | 70-130 | | %Rec | 1 | 8/2/2017 1:24:00 PM | 33114 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.7 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Surr: BFB | 89.0 | 54-150 | | %Rec | 1 | 8/2/2017 5:22:07 PM | 33109 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.093 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Toluene | ND | 0.047 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Ethylbenzene | ND | 0.047 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 8/2/2017 5:22:07 PM | 33109 |
| Surr: 4-Bromofluorobenzene | 104 | 66.6-132 | | %Rec | 1 | 8/2/2017 5:22:07 PM | 33109 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1707E88

Date Reported: 8/5/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A-20

Lab Order: 1707E88

Lab ID: 1707E88-003

Collection Date: 7/27/2017 11:30:00 AM

Client Sample ID: S1113525007-072717MGTP3-2'

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 | 8/3/2017 3:52:45 PM | 33153 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 9.5 | | mg/Kg | 1 | 8/2/2017 1:45:20 PM | 33114 |
| Motor Oil Range Organics (MRO) | ND | 48 | | mg/Kg | 1 | 8/2/2017 1:45:20 PM | 33114 |
| Surr: DNOP | 97.4 | 70-130 | | %Rec | 1 | 8/2/2017 1:45:20 PM | 33114 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Surr: BFB | 90.6 | 54-150 | | %Rec | 1 | 8/2/2017 5:46:14 PM | 33109 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.097 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 8/2/2017 5:46:14 PM | 33109 |
| Surr: 4-Bromofluorobenzene | 109 | 66.6-132 | | %Rec | 1 | 8/2/2017 5:46:14 PM | 33109 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1707E88

Date Reported: 8/5/2017

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** GHD
Project: 2A-20**Lab Order:** 1707E88**Lab ID:** 1707E88-004**Collection Date:** 7/27/2017 12:10:00 PM**Client Sample ID:** S1113525007-072717MGTP5-6'**Matrix:** SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|----|----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 72 | 30 | | mg/Kg | 20 | 8/3/2017 4:05:10 PM | 33153 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 160 | 10 | | mg/Kg | 1 | 8/2/2017 12:37:34 PM | 33114 |
| Motor Oil Range Organics (MRO) | 290 | 50 | | mg/Kg | 1 | 8/2/2017 12:37:34 PM | 33114 |
| Surr: DNOP | 96.6 | 70-130 | | %Rec | 1 | 8/2/2017 12:37:34 PM | 33114 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Surr: BFB | 89.6 | 54-150 | | %Rec | 1 | 8/2/2017 6:10:18 PM | 33109 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.097 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 8/2/2017 6:10:18 PM | 33109 |
| Surr: 4-Bromofluorobenzene | 108 | 66.6-132 | | %Rec | 1 | 8/2/2017 6:10:18 PM | 33109 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1707E88

Date Reported: 8/5/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A-20

Lab Order: 1707E88

Lab ID: 1707E88-005

Collection Date: 7/27/2017 12:35:00 PM

Client Sample ID: S1113525007-072717MGTP4-2'

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 | 8/3/2017 4:17:34 PM | 33153 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 11 | 10 | | mg/Kg | 1 | 8/2/2017 1:23:16 PM | 33114 |
| Motor Oil Range Organics (MRO) | ND | 51 | | mg/Kg | 1 | 8/2/2017 1:23:16 PM | 33114 |
| Surr: DNOP | 97.2 | 70-130 | | %Rec | 1 | 8/2/2017 1:23:16 PM | 33114 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Surr: BFB | 87.7 | 54-150 | | %Rec | 1 | 8/2/2017 6:34:24 PM | 33109 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Methyl tert-butyl ether (MTBE) | ND | 0.095 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Xylenes, Total | ND | 0.095 | | mg/Kg | 1 | 8/2/2017 6:34:24 PM | 33109 |
| Surr: 4-Bromofluorobenzene | 109 | 66.6-132 | | %Rec | 1 | 8/2/2017 6:34:24 PM | 33109 |

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 Quantitative 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#: 1707E88

07-Aug-17

Client: GHD
Project: 2A-20

| | | | | | | | | | | |
|------------|----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | MB-33153 | SampType: | MBLK | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | PBS | Batch ID: | 33153 | RunNo: | 44718 | | | | | |
| Prep Date: | 8/3/2017 | Analysis Date: | 8/3/2017 | SeqNo: | 1414230 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | ND | 1.5 | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|----------------|-----------|-------------|--------------------------|----------|-----------|------|----------|------|
| Sample ID | LCS-33153 | SampType: | LCS | TestCode: | EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | Batch ID: | 33153 | RunNo: | 44718 | | | | | |
| Prep Date: | 8/3/2017 | Analysis Date: | 8/3/2017 | SeqNo: | 1414231 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 95.7 | 90 | 110 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707E88

07-Aug-17

Client: GHD
Project: 2A-20

| | | | | | | | | | | |
|-----------------------------|-----------|-----|-------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | LCS-33114 | | SampType: LCS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | | Batch ID: 33114 | | RunNo: 44660 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1411984 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 43 | 10 | 50.00 | 0 | 86.8 | 73.2 | 114 | | | |
| Surr: DNOP | 3.7 | | 5.000 | | 73.3 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|----------|-----|-------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | MB-33114 | | SampType: MBLK | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | | Batch ID: 33114 | | RunNo: 44660 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1411985 | | 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 | 8.3 | | 10.00 | | 82.7 | 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 Quantitative 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#: 1707E88

07-Aug-17

Client: GHD
Project: 2A-20

| | | | | | | | | | | |
|-------------------------------|----------|-----|-------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | MB-33109 | | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413152 | | 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 | 920 | | 1000 | | 91.8 | 54 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|-----------|-----|-------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | LCS-33109 | | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413153 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 23 | 5.0 | 25.00 | 0 | 91.7 | 76.4 | 125 | | | |
| Surr: BFB | 1000 | | 1000 | | 105 | 54 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|-------------------|-----|-------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | 1707E88-002AMS | | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | S1113525007-07271 | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413156 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 4.9 | 24.41 | 0 | 110 | 77.8 | 128 | | | |
| Surr: BFB | 1000 | | 976.6 | | 106 | 54 | 150 | | | |

| | | | | | | | | | | | |
|-------------------------------|-------------------|-----|----------------|-------------|------|-----------|----------------------------------|------|----------|-------|--|
| Sample ID | 1707E88-002AMSD | | SampType: | MSD | | TestCode: | EPA Method 8015D: Gasoline Range | | | | |
| Client ID: | S1113525007-07271 | | Batch ID: | 33109 | | RunNo: | 44673 | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: | 8/2/2017 | | SeqNo: | 1413157 | | Units: | mg/Kg | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Gasoline Range Organics (GRO) | 26 | 4.7 | 23.43 | 0 | 109 | 77.8 | 128 | 5.21 | 20 | | |
| Surr: BFB | 1000 | | 937.2 | | 109 | 54 | 150 | 0 | 0 | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1707E88

07-Aug-17

Client: GHD
Project: 2A-20

| | | | | | | | | | | |
|--------------------------------|----------|-------|-------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | MB-33109 | | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | PBS | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413168 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | ND | 0.10 | | | | | | | | |
| Benzene | ND | 0.025 | | | | | | | | |
| Toluene | ND | 0.050 | | | | | | | | |
| Ethylbenzene | ND | 0.050 | | | | | | | | |
| Xylenes, Total | ND | 0.10 | | | | | | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 113 | 66.6 | 132 | | | |

| | | | | | | | | | | |
|--------------------------------|-----------|-------|-------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-33109 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413169 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 0.97 | 0.10 | 1.000 | 0 | 97.4 | 66.5 | 120 | | | |
| Benzene | 1.0 | 0.025 | 1.000 | 0 | 103 | 80 | 120 | | | |
| Toluene | 1.0 | 0.050 | 1.000 | 0 | 101 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 102 | 80 | 120 | | | |
| Xylenes, Total | 3.1 | 0.10 | 3.000 | 0 | 103 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 1.000 | | 112 | 66.6 | 132 | | | |

| | | | | | | | | | | |
|--------------------------------|-------------------|-------|-------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | 1707E88-001AMS | | SampType: MS | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | S1113525007-07271 | | Batch ID: 33109 | | RunNo: 44673 | | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: 8/2/2017 | | SeqNo: 1413171 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Methyl tert-butyl ether (MTBE) | 1.0 | 0.097 | 0.9737 | 0 | 104 | 72.5 | 138 | | | |
| Benzene | 1.1 | 0.024 | 0.9737 | 0 | 110 | 80.9 | 132 | | | |
| Toluene | 1.1 | 0.049 | 0.9737 | 0.01069 | 108 | 79.8 | 136 | | | |
| Ethylbenzene | 1.1 | 0.049 | 0.9737 | 0 | 111 | 79.4 | 140 | | | |
| Xylenes, Total | 3.3 | 0.097 | 2.921 | 0.01514 | 111 | 78.5 | 142 | | | |
| Surr: 4-Bromofluorobenzene | 1.1 | | 0.9737 | | 110 | 66.6 | 132 | | | |

| | | | | | | | | | | | |
|--------------------------------|-------------------|-------|----------------|-------------|------|-----------|-----------------------------|------|----------|-------|--|
| Sample ID | 1707E88-001AMSD | | SampType: | MSD | | TestCode: | EPA Method 8021B: Volatiles | | | | |
| Client ID: | S1113525007-07271 | | Batch ID: | 33109 | | RunNo: | 44673 | | | | |
| Prep Date: | 8/1/2017 | | Analysis Date: | 8/2/2017 | | SeqNo: | 1413172 | | Units: | mg/Kg | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Methyl tert-butyl ether (MTBE) | 0.99 | 0.093 | 0.9346 | 0 | 106 | 72.5 | 138 | 2.43 | 20 | | |
| Benzene | 1.0 | 0.023 | 0.9346 | 0 | 110 | 80.9 | 132 | 3.52 | 20 | | |
| Toluene | 1.0 | 0.047 | 0.9346 | 0.01069 | 109 | 79.8 | 136 | 3.59 | 20 | | |
| Ethylbenzene | 1.0 | 0.047 | 0.9346 | 0 | 112 | 79.4 | 140 | 2.94 | 20 | | |

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 Quantitative 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#: 1707E88

07-Aug-17

Client: GHD
Project: 2A-20

| | | | | | | | | | | |
|----------------------------|-------------------|----------------|-----------|-------------|-----------------------------|----------|-----------|------|----------|------|
| Sample ID | 1707E88-001AMSD | SampType: | MSD | TestCode: | EPA Method 8021B: Volatiles | | | | | |
| Client ID: | S1113525007-07271 | Batch ID: | 33109 | RunNo: | 44673 | | | | | |
| Prep Date: | 8/1/2017 | Analysis Date: | 8/2/2017 | SeqNo: | 1413172 | Units: | mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Xylenes, Total | 3.2 | 0.093 | 2.804 | 0.01514 | 114 | 78.5 | 142 | 1.63 | 20 | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 0.9346 | | 112 | 66.6 | 132 | 0 | 0 | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

Sample Log-In Check List

Client Name: GHD

Work Order Number: 1707E88

RcptNo: 1

Received By: Isaiah Ortiz

7/28/2017 10:00:00 AM

IO

Completed By: Erin Melendrez

7/30/2017 2:48:48 PM

EM

Reviewed By:

[Signature]

7/31/17

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? Client

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels? Yes ☒ No ☐ # of preserved bottles checked for pH: _____
(Note discrepancies on chain of custody) (<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? Yes ☒ No ☐ Checked by: _____
(If no, notify customer for authorization.)

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 | 5.0 | Good | Not Present | | | |

| Chain-of-Custody Record | | Turn-Around Time: | |
|--|--|--|--|
| Client: <u>GHD Services, Inc.</u> | | <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush _____ | |
| Mailing Address: <u>6121 Indian School Rd. Ste 200</u> | | Project Name: <u>2A-20</u> | |
| <u>NE Albuquerque, NM 87110</u> | | Project #: <u>11135250-07</u> | |
| Phone #: <u>505 884 0672</u> | | Project Manager: <u>Bernard Bockisch</u> | |
| email or Fax #: <u>Bernard.Bockisch@ghd.com</u> | | | |
| QA/QC Package: | | | |
| <input type="checkbox"/> Standard <input type="checkbox"/> Level 4 (Full Validation) | | | |
| Accreditation | | Sampler: _____ | |
| <input type="checkbox"/> NELAP <input type="checkbox"/> Other _____ | | On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| <input type="checkbox"/> EDD (Type) _____ | | Sample Temperature: <u>50</u> | |

☒ Standard ☐ Rush

2A-28

1135250-07

Bernard Bockisch

On Ice: ☒ Yes ☐ No

Sample Temperature: 5.0



4901 Hawkins NE - Albuquerque, NM 87109

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

| | | | | | | |
|--|---|---|---|---|---|--|
| | X | X | X | X | X | BTEX + MTBE + TMB's (8021) |
| | | | | | | BTEX + MTBE + TPH (Gas only) |
| | | | | X | X | TPH 8015B (GRO / DRO / MRO) |
| | | | | | | TPH (Method 418.1) |
| | | | | | | EDB (Method 504.1) |
| | | | | | | PAH's (8310 or 8270 SIMS) |
| | | | | | | RCRA 8 Metals |
| | | | | | | Anions ($F_2ClNO_3, NO_2, PO_4, SO_4$) |
| | | | | | | 8081 Pesticides / 8082 PCB's |
| | | | | | | 8260B (VOA) |
| | | | | | | 8270 (Semi-VOA) |
| | | | X | X | X | Chloride (500) |
| | | | | | | Air Bubbles (Y or N) |

[illegible]

| | | | | | | |
|---------|-------|-------------------|-----------------|---------|-------|----------|
| Date: | Time: | Relinquished by: | Received by: | Date: | Time: | Remarks: |
| 7/27 | 14:30 | <i>M. J. Galt</i> | <i>SP h</i> | 7/27/17 | 14:30 | |
| Date: | Time: | Relinquished by: | Received by: | Date: | Time: | |
| 7/27/17 | 19:00 | <i>SP h</i> | <i>I. O. J.</i> | 7/28/17 | 10:00 | |

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

October 18, 2017

Bernie Bockisch

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: 2A 20

OrderNo.: 1710678

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 5 sample(s) on 10/12/2017 for the analyses presented in the following report.

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

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1710678

Date Reported: 10/18/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A 20

Lab Order: 1710678

Lab ID: 1710678-001

Collection Date: 10/10/2017 11:30:00 AM

Client Sample ID: S-11135250-07-101017-MG-HA-1

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 92 | 30 | | mg/Kg | 20 | 10/13/2017 2:44:01 PM | 34404 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 15 | 10 | | mg/Kg | 1 | 10/16/2017 6:43:03 PM | 34401 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 10/16/2017 6:43:03 PM | 34401 |
| Surr: DNOP | 80.8 | 70-130 | | %Rec | 1 | 10/16/2017 6:43:03 PM | 34401 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 10/13/2017 5:53:24 PM | 34383 |
| Surr: BFB | 94.3 | 54-150 | | %Rec | 1 | 10/13/2017 5:53:24 PM | 34383 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/13/2017 5:53:24 PM | 34383 |
| Toluene | ND | 0.049 | | mg/Kg | 1 | 10/13/2017 5:53:24 PM | 34383 |
| Ethylbenzene | ND | 0.049 | | mg/Kg | 1 | 10/13/2017 5:53:24 PM | 34383 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 10/13/2017 5:53:24 PM | 34383 |
| Surr: 4-Bromofluorobenzene | 98.9 | 66.6-132 | | %Rec | 1 | 10/13/2017 5:53:24 PM | 34383 |

Lab ID: 1710678-002

Collection Date: 10/10/2017 11:32:00 AM

Client Sample ID: S-11135250-07-101017-MG-HA-2

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 160 | 30 | | mg/Kg | 20 | 10/13/2017 3:21:15 PM | 34404 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 8400 | 97 | | mg/Kg | 10 | 10/16/2017 2:59:55 PM | 34401 |
| Motor Oil Range Organics (MRO) | 3200 | 490 | | mg/Kg | 10 | 10/16/2017 2:59:55 PM | 34401 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 10/16/2017 2:59:55 PM | 34401 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 80 | 4.6 | | mg/Kg | 1 | 10/13/2017 6:16:46 PM | 34383 |
| Surr: BFB | 664 | 54-150 | S | %Rec | 1 | 10/13/2017 6:16:46 PM | 34383 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.023 | | mg/Kg | 1 | 10/13/2017 6:16:46 PM | 34383 |
| Toluene | ND | 0.046 | | mg/Kg | 1 | 10/13/2017 6:16:46 PM | 34383 |
| Ethylbenzene | ND | 0.046 | | mg/Kg | 1 | 10/13/2017 6:16:46 PM | 34383 |
| Xylenes, Total | ND | 0.093 | | mg/Kg | 1 | 10/13/2017 6:16:46 PM | 34383 |
| Surr: 4-Bromofluorobenzene | 131 | 66.6-132 | | %Rec | 1 | 10/13/2017 6:16:46 PM | 34383 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1710678

Date Reported: 10/18/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A 20

Lab Order: 1710678

Lab ID: 1710678-003

Collection Date: 10/10/2017 11:35:00 AM

Client Sample ID: S-11135250-07-101017-MG-HA-3

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|-----|------------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 320 | 30 | | mg/Kg | 20 | 10/13/2017 3:33:40 PM | 34404 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 13000 | 960 | | mg/Kg | 100 | 10/16/2017 11:18:55 AM | 34401 |
| Motor Oil Range Organics (MRO) | 7400 | 4800 | | mg/Kg | 100 | 10/16/2017 11:18:55 AM | 34401 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 100 | 10/16/2017 11:18:55 AM | 34401 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | 140 | 9.9 | | mg/Kg | 2 | 10/13/2017 7:03:37 PM | 34383 |
| Surr: BFB | 389 | 54-150 | S | %Rec | 2 | 10/13/2017 7:03:37 PM | 34383 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.050 | | mg/Kg | 2 | 10/13/2017 7:03:37 PM | 34383 |
| Toluene | 0.11 | 0.099 | | mg/Kg | 2 | 10/13/2017 7:03:37 PM | 34383 |
| Ethylbenzene | 0.90 | 0.099 | | mg/Kg | 2 | 10/13/2017 7:03:37 PM | 34383 |
| Xylenes, Total | 4.8 | 0.20 | | mg/Kg | 2 | 10/13/2017 7:03:37 PM | 34383 |
| Surr: 4-Bromofluorobenzene | 123 | 66.6-132 | | %Rec | 2 | 10/13/2017 7:03:37 PM | 34383 |

Lab ID: 1710678-004

Collection Date: 10/10/2017 11:40:00 AM

Client Sample ID: S-11135250-07-101017-MG-HA-4

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|----------|------|-------|----|-----------------------|--------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 120 | 30 | | mg/Kg | 20 | 10/13/2017 3:46:04 PM | 34404 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 790 | 9.7 | | mg/Kg | 1 | 10/16/2017 7:11:08 PM | 34401 |
| Motor Oil Range Organics (MRO) | 590 | 48 | | mg/Kg | 1 | 10/16/2017 7:11:08 PM | 34401 |
| Surr: DNOP | 108 | 70-130 | | %Rec | 1 | 10/16/2017 7:11:08 PM | 34401 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/13/2017 7:50:29 PM | 34383 |
| Surr: BFB | 88.7 | 54-150 | | %Rec | 1 | 10/13/2017 7:50:29 PM | 34383 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/13/2017 7:50:29 PM | 34383 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/13/2017 7:50:29 PM | 34383 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/13/2017 7:50:29 PM | 34383 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 10/13/2017 7:50:29 PM | 34383 |
| Surr: 4-Bromofluorobenzene | 95.5 | 66.6-132 | | %Rec | 1 | 10/13/2017 7:50:29 PM | 34383 |

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 Quantitative 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 |

Analytical Report

Lab Order: 1710678

Date Reported: 10/18/2017

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A 20

Lab Order: 1710678**Lab ID:** 1710678-005**Collection Date:** 10/10/2017 11:45:00 AM**Client Sample ID:** S-11135250-07-101017-MG-HA-5**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 | 10/13/2017 3:58:28 PM | 34404 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 1400 | 92 | | mg/Kg | 10 | 10/17/2017 1:09:35 PM | 34401 |
| Motor Oil Range Organics (MRO) | 990 | 460 | | mg/Kg | 10 | 10/17/2017 1:09:35 PM | 34401 |
| Surr: DNOP | 0 | 70-130 | S | %Rec | 10 | 10/17/2017 1:09:35 PM | 34401 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 10/13/2017 8:13:56 PM | 34383 |
| Surr: BFB | 93.0 | 54-150 | | %Rec | 1 | 10/13/2017 8:13:56 PM | 34383 |
| EPA METHOD 8021B: VOLATILES | | | | | | | Analyst: NSB |
| Benzene | ND | 0.024 | | mg/Kg | 1 | 10/13/2017 8:13:56 PM | 34383 |
| Toluene | ND | 0.048 | | mg/Kg | 1 | 10/13/2017 8:13:56 PM | 34383 |
| Ethylbenzene | ND | 0.048 | | mg/Kg | 1 | 10/13/2017 8:13:56 PM | 34383 |
| Xylenes, Total | ND | 0.097 | | mg/Kg | 1 | 10/13/2017 8:13:56 PM | 34383 |
| Surr: 4-Bromofluorobenzene | 96.4 | 66.6-132 | | %Rec | 1 | 10/13/2017 8:13:56 PM | 34383 |

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 Quantitative 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#: 1710678

18-Oct-17

Client: GHD
Project: 2A 20

| | | | | | | | | | | | |
|------------|------------|-----|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID | MB-34404 | | SampType: | mblk | | TestCode: | EPA Method 300.0: Anions | | | | |
| Client ID: | PBS | | Batch ID: | 34404 | | RunNo: | 46328 | | | | |
| Prep Date: | 10/13/2017 | | Analysis Date: | 10/13/2017 | | SeqNo: | 1476892 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | ND | 1.5 | | | | | | | | | |

| | | | | | | | | | | |
|------------|------------|-----|---------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-34404 | | SampType: lcs | | TestCode: EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | | Batch ID: 34404 | | RunNo: 46328 | | | | | |
| Prep Date: | 10/13/2017 | | Analysis Date: 10/13/2017 | | SeqNo: 1476893 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 14 | 1.5 | 15.00 | 0 | 94.8 | 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 Quantitative 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#: 1710678

18-Oct-17

Client: GHD
Project: 2A 20

| | | | | | | | | | | |
|-----------------------------|------------|-----|---------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | LCS-34401 | | SampType: LCS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | | Batch ID: 34401 | | RunNo: 46361 | | | | | |
| Prep Date: | 10/13/2017 | | Analysis Date: 10/16/2017 | | SeqNo: 1476752 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 46 | 10 | 50.00 | 0 | 92.3 | 73.2 | 114 | | | |
| Surr: DNOP | 4.6 | | 5.000 | | 92.8 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|------------|---------------------------|-----------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | MB-34401 | SampType: MBLK | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: 34401 | | | RunNo: 46361 | | | | | |
| Prep Date: | 10/13/2017 | Analysis Date: 10/16/2017 | | | SeqNo: 1476753 | | 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 | | 89.0 | 70 | 130 | | | |

Qualifiers:

| | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative 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#: 1710678

18-Oct-17

Client: GHD
Project: 2A 20

| | | | | | | | | | | |
|-------------------------------|------------|-----|---------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | MB-34383 | | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | | Batch ID: 34383 | | RunNo: 46333 | | | | | |
| Prep Date: | 10/12/2017 | | Analysis Date: 10/13/2017 | | SeqNo: 1476152 | | 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 | 950 | | 1000 | | 94.7 | 54 | 150 | | | |

| | | | | | | | | | | |
|-------------------------------|------------|-----|---------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | LCS-34383 | | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | | Batch ID: 34383 | | RunNo: 46333 | | | | | |
| Prep Date: | 10/12/2017 | | Analysis Date: 10/13/2017 | | SeqNo: 1476153 | | 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 | 119 | 75.9 | 131 | | | |
| Surr: BFB | 1100 | | 1000 | | 109 | 54 | 150 | | | |

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 Quantitative 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#: 1710678

18-Oct-17

Client: GHD
Project: 2A 20

| | | | | | | | | | | |
|----------------------------|------------|---------------------------|-----------|---------------------------------------|------|--------------|-----------|------|----------|------|
| Sample ID | MB-34383 | SampType: MBLK | | TestCode: EPA Method 8021B: Volatiles | | | | | | |
| Client ID: | PBS | Batch ID: 34383 | | RunNo: 46333 | | | | | | |
| Prep Date: | 10/12/2017 | Analysis Date: 10/13/2017 | | SeqNo: 1476175 | | 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 | 1.0 | | 1.000 | | 102 | 66.6 | 132 | | | |

| | | | | | | | | | | |
|----------------------------|------------|-------|---------------------------|-------------|---------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-34383 | | SampType: LCS | | TestCode: EPA Method 8021B: Volatiles | | | | | |
| Client ID: | LCSS | | Batch ID: 34383 | | RunNo: 46333 | | | | | |
| Prep Date: | 10/12/2017 | | Analysis Date: 10/13/2017 | | SeqNo: 1476176 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Benzene | 0.97 | 0.025 | 1.000 | 0 | 97.1 | 80 | 120 | | | |
| Toluene | 0.97 | 0.050 | 1.000 | 0 | 97.0 | 80 | 120 | | | |
| Ethylbenzene | 1.0 | 0.050 | 1.000 | 0 | 99.6 | 80 | 120 | | | |
| Xylenes, Total | 3.0 | 0.10 | 3.000 | 0 | 99.4 | 80 | 120 | | | |
| Surr: 4-Bromofluorobenzene | 1.0 | | 1.000 | | 102 | 66.6 | 132 | | | |

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 Quantitative 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
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: 1710678

RcptNo: 1

Received By: Isaiah Ortiz 10/12/2017 9:15:00 AM

Completed By: Sophia Campuzano 10/12/2017 10:05:00 AM

Reviewed By: DDS 10/12/17

ISO

Sophia Campuzano

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 $>0^{\circ}\text{C}$ 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: | <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person |
| Regarding: | _____ | | |
| Client Instructions: | _____ | | |

17. Additional remarks:

18. Cooler Information

| Cooler No | Temp $^{\circ}\text{C}$ | Condition | Seal Intact | Seal No | Seal Date | Signed By |
|-----------|-------------------------|-----------|-------------|---------|-----------|-----------|
| 1 | 0.3 | Good | Yes | | | |

Client: GHD Services, Inc.

Mailing Address: 612 Indian School Rd Ste 200

NE Albuquerque, NM 87110

Phone #: 505 884 0672

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

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other☐ EDD (Type)

Turn-Around Time:

☒ Standard ☐ Rush

Project Name:

2A-20

Project #:

11135250-07

Project Manager:


Bernard Bockisch


Sampler: Michael Cant

On Ice: ☒ Yes ☐ No


Sample Temperature: 0.3

[illegible]

| | | |
|----------|-------|---|
| Date: | Time: | Relinquished by: |
| 10/11/17 | 1530 |  |

| | | |
|----------|-------|---|
| Date: | Time: | Relinquished by: |
| 04/11/17 | 1900 |  |

| | | |
|--------------------|---------|------|
| Received by: | Date | Time |
| <i>[Signature]</i> | 10/4/17 | 1530 |

Received by:  Date: 10/21/17 Time: 09:15

[illegible]

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analysis Request

| | | | | | | |
|--|--|---|---|---|---|---|
| | BTEX + MtBE TMBE (3021) | X | X | X | X | X |
| | BTEX + MTBE + TPH (Gas only) | | | | | |
| | TPH 8015B (GRO / DRO / MRO) | X | X | X | X | X |
| | 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 | X | X | X | X | X |
| | Air Bubbles (Y or N) | | | | | |



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

January 11, 2018

Bernie Bockisch

GHD

6121 Indian School Road, NE #200

Albuquerque, NM 87110

TEL: (505) 884-0672

FAX

RE: 2A 20

OrderNo.: 1712D88

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/22/2017 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,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Analytical Report

Lab Order: 1712D88

Date Reported: 1/11/2018

Hall Environmental Analysis Laboratory, Inc.

CLIENT: GHD
Project: 2A 20

Lab Order: 1712D88

Lab ID: 1712D88-001

Collection Date: 12/21/2017 9:26:00 AM

Client Sample ID: 11135250-7-122117-BB1

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 | 1/9/2018 2:21:23 PM | 35887 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | ND | 10 | | mg/Kg | 1 | 12/29/2017 1:57:55 PM | 35722 |
| Motor Oil Range Organics (MRO) | ND | 50 | | mg/Kg | 1 | 12/29/2017 1:57:55 PM | 35722 |
| Surr: DNOP | 115 | 70-130 | | %Rec | 1 | 12/29/2017 1:57:55 PM | 35722 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.9 | | mg/Kg | 1 | 12/27/2017 10:59:16 AM | 35701 |
| Surr: BFB | 104 | 15-316 | | %Rec | 1 | 12/27/2017 10:59:16 AM | 35701 |

Lab ID: 1712D88-002

Collection Date: 12/21/2017 9:30:00 AM

Client Sample ID: 11135250-7-122117-BB2

Matrix: SOIL

| Analyses | Result | PQL | Qual | Units | DF | Date Analyzed | Batch ID |
|--|--------|--------|------|-------|----|-----------------------|---------------------|
| EPA METHOD 300.0: ANIONS | | | | | | | Analyst: MRA |
| Chloride | 57 | 30 | | mg/Kg | 20 | 1/9/2018 2:33:48 PM | 35887 |
| EPA METHOD 8015M/D: DIESEL RANGE ORGANICS | | | | | | | Analyst: TOM |
| Diesel Range Organics (DRO) | 470 | 9.8 | | mg/Kg | 1 | 12/29/2017 2:22:21 PM | 35722 |
| Motor Oil Range Organics (MRO) | 400 | 49 | | mg/Kg | 1 | 12/29/2017 2:22:21 PM | 35722 |
| Surr: DNOP | 118 | 70-130 | | %Rec | 1 | 12/29/2017 2:22:21 PM | 35722 |
| EPA METHOD 8015D: GASOLINE RANGE | | | | | | | Analyst: NSB |
| Gasoline Range Organics (GRO) | ND | 4.8 | | mg/Kg | 1 | 12/27/2017 2:58:40 PM | 35701 |
| Surr: BFB | 141 | 15-316 | | %Rec | 1 | 12/27/2017 2:58:40 PM | 35701 |

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 Quantitative 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#: 1712D88

11-Jan-18

Client: GHD
Project: 2A 20

| | | | | | | | | | | | |
|------------|----------|-----|----------------|-------------|------|-----------|--------------------------|------|--------------|------|--|
| Sample ID | MB-35887 | | SampType: | mblk | | TestCode: | EPA Method 300.0: Anions | | | | |
| Client ID: | PBS | | Batch ID: | 35887 | | RunNo: | 48295 | | | | |
| Prep Date: | 1/6/2018 | | Analysis Date: | 1/7/2018 | | SeqNo: | 1551034 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Chloride | ND | 1.5 | | | | | | | | | |

| | | | | | | | | | | |
|------------|-----------|-----|-------------------------|-------------|------------------------------------|----------|--------------|------|----------|------|
| Sample ID | LCS-35887 | | SampType: lcs | | TestCode: EPA Method 300.0: Anions | | | | | |
| Client ID: | LCSS | | Batch ID: 35887 | | RunNo: 48295 | | | | | |
| Prep Date: | 1/6/2018 | | Analysis Date: 1/7/2018 | | SeqNo: 1551035 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Chloride | 15 | 1.5 | 15.00 | 0 | 96.7 | 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 Quantitative 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#: 1712D88

11-Jan-18

Client: GHD
Project: 2A 20

| | | | | | | | | | | |
|-----------------------------|------------|-----|---------------------------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | LCS-35722 | | SampType: LCS | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | LCSS | | Batch ID: 35722 | | RunNo: 48059 | | | | | |
| Prep Date: | 12/27/2017 | | Analysis Date: 12/28/2017 | | SeqNo: 1540466 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Diesel Range Organics (DRO) | 45 | 10 | 50.00 | 0 | 90.4 | 73.2 | 114 | | | |
| Surr: DNOP | 4.5 | | 5.000 | | 90.1 | 70 | 130 | | | |

| | | | | | | | | | | |
|--------------------------------|------------|---------------------------|-----------|-------------|---|----------|--------------|------|----------|------|
| Sample ID | MB-35722 | SampType: MBLK | | | TestCode: EPA Method 8015M/D: Diesel Range Organics | | | | | |
| Client ID: | PBS | Batch ID: 35722 | | | RunNo: 48059 | | | | | |
| Prep Date: | 12/27/2017 | Analysis Date: 12/28/2017 | | | SeqNo: 1540467 | | 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 | 9.9 | | 10.00 | | 99.4 | 70 | 130 | | | |

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of range due to dilution or matrix

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1712D88

11-Jan-18

Client: GHD
Project: 2A 20

| | | | | | | | | | | |
|-------------------------------|------------|-----|---------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | MB-35701 | | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | | Batch ID: 35701 | | RunNo: 48032 | | | | | |
| Prep Date: | 12/26/2017 | | Analysis Date: 12/27/2017 | | SeqNo: 1539809 | | 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 | 1100 | | 1000 | | 114 | 15 | 316 | | | |

| | | | | | | | | | | |
|-------------------------------|------------|-----|---------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | LCS-35701 | | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | | Batch ID: 35701 | | RunNo: 48032 | | | | | |
| Prep Date: | 12/26/2017 | | Analysis Date: 12/27/2017 | | SeqNo: 1539810 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 27 | 5.0 | 25.00 | 0 | 109 | 75.9 | 131 | | | |
| Surr: BFB | 1200 | | 1000 | | 124 | 15 | 316 | | | |

| | | | | | | | | | | |
|-------------------------------|--------------------|-----|---------------------------|-------------|--|----------|--------------|------|----------|------|
| Sample ID | 1712D88-001AMS | | SampType: MS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | 11135250-7-122117- | | Batch ID: 35701 | | RunNo: 48032 | | | | | |
| Prep Date: | 12/26/2017 | | Analysis Date: 12/27/2017 | | SeqNo: 1539812 | | Units: mg/Kg | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Gasoline Range Organics (GRO) | 30 | 4.9 | 24.30 | 0 | 125 | 77.8 | 128 | | | |
| Surr: BFB | 1200 | | 971.8 | | 121 | 15 | 316 | | | |

| | | | | | | | | | | | |
|-------------------------------|--------------------|-----|----------------|-------------|-------|----------|-----------|----------------------------------|--------------|------|--|
| Sample ID | 1712D88-001AMSD | | | SampType: | MSD | | TestCode: | EPA Method 8015D: Gasoline Range | | | |
| Client ID: | 11135250-7-122117- | | | Batch ID: | 35701 | | RunNo: | 48032 | | | |
| Prep Date: | 12/26/2017 | | Analysis Date: | 12/27/2017 | | SeqNo: | 1539813 | | Units: mg/Kg | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual | |
| Gasoline Range Organics (GRO) | 32 | 4.9 | 24.63 | 0 | 128 | 77.8 | 128 | 3.74 | 20 | S | |
| Surr: BFB | 1200 | | 985.2 | | 123 | 15 | 316 | 0 | 0 | | |

| | | | | | | | | | | |
|------------|------------|-----|---------------------------|-------------|--|----------|-------------|------|----------|------|
| Sample ID | MB-35757 | | SampType: MBLK | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | PBS | | Batch ID: 35757 | | RunNo: 48111 | | | | | |
| Prep Date: | 12/28/2017 | | Analysis Date: 12/29/2017 | | SeqNo: 1542681 | | Units: %Rec | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 830 | | 1000 | | 83.3 | 15 | 316 | | | |

| | | | | | | | | | | |
|------------|------------|-----|---------------------------|-------------|--|----------|-------------|------|----------|------|
| Sample ID | LCS-35757 | | SampType: LCS | | TestCode: EPA Method 8015D: Gasoline Range | | | | | |
| Client ID: | LCSS | | Batch ID: 35757 | | RunNo: 48111 | | | | | |
| Prep Date: | 12/28/2017 | | Analysis Date: 12/29/2017 | | SeqNo: 1542682 | | Units: %Rec | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | %RPD | RPDLimit | Qual |
| Surr: BFB | 950 | | 1000 | | 94.6 | 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 Quantitative 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 |

Sample Log-In Check List

Client Name: GHD

Work Order Number: 1712D88

RcptNo: 1

Received By: Erin Melendrez 12/22/2017 9:40:00 AM

Completed By: Sophia Campuzano 12/22/2017 1:50:53 PM

Reviewed By: DDS 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 ☐
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 | 4.6 | Good | Yes | | | |

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.