NMOCD approves of the delineation completed for 1RP-4878 and proposed remediation with clarifications:
1) Sidewall and bottom confirmation samples are required.
2) For lined areas, confirmation sidewall samples are required.
3) Provide a scaled map with confirmation sample locations demarcated, area with liner outlined, and areas with differing excavation depths annotated.

January 19, 2018 Reference No. 088210-56

Mr. Zane Kurtz
Sr. Safety and Environmental Representative
5509 Champions Dr.
Midland, TX 79706
VIA E-Mail: zane_kurtz@eogresources.com

APPROVED
By Olivia Yu at 2:59 pm, Jan 30, 2018

Dear Mr. Kurtz:

Re: Site Assessment Summary and Remediation Work Plan
Checkerboard 23 Fed Battery (1RP-4878)
EOG Resources, Inc.
Site Location: Unit O, Sec. 23, T 22-S, R 32-E
(Lat 32.3710°, Long -103.6423°)
Lea County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this site assessment summary and work plan for the above referenced site. Assessment activities were performed at the Checkerboard 23 Fed Battery (hereafter referred to as the "Site"), on November 21 and 22, 2017 by GHD. The Site is located within Unit O, Section 23, Township 22 South, Range 32 East, in Lea County, New Mexico (Figure 1). The property is owned by the US Bureau of Land Management (BLM).

The Site is an active battery and is located approximately 28 miles southwest of Monument, New Mexico. According to EOG Resources, Inc. (EOG) supplied Site information, a release of approximately 75 barrels (bbls) of oil and produced water occurred when a hole developed in the heater treater fire tube. Approximately 50 bbls of the fluids were recovered. The release was discovered on November 16, 2017 and a C-141 Form was submitted to the New Mexico Oil Conservation Division (NMOCD) on November 20, 2017. Remediation permit RP-4878 was assigned by NMOCD for this release.

1. Recommended Remediation Action Limits

There are relatively few groundwater wells in the area of the Site with which to obtain a depth to groundwater. 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 1.3 miles from the Site. The depth to groundwater measured in this well was 360 (ft bgs).

Based on information available from the United States Geological Survey (USGS) website, the closest gauging site is located approximately 7 miles east, northeast of the site. The website data indicates groundwater was located at a depth of approximately 388 ft bgs in 1972. Copies of the well information are included in Appendix A.

There do not appear to be any well head protection areas and no surface water bodies within 200 to 1000 ft of the Site. Therefore, the preliminary total ranking score for the Site 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, xylenes (BTEX), 5,000 mg/kg for total petroleum hydrocarbons (TPH), and 600 mg/kg for chlorides.

In a telephone conversation between Bernard Bockisch of GHD and Jim Griswold, NMOCD Environmental Bureau Chief on August 28, 2017, GHD was informed that the NMOCD is accepting chloride concentrations of 600 mg/kg for assessment clean up levels.

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 (200 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 TPH[1], and 600 mg/kg for chlorides.	

NMOCD Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993

2. Assessment Activities

GHD and SDR Enterprises, LLC (SDR) performed an initial assessment on November 21 and 22, 2017 that included the collection of 30 soil samples from 13 points (Spl-3 through Spl-15) at depths ranging from 4 inches to 12 ft bgs. within the release area (Figure 2). The soil samples were screened in the field using HACH Titration Strips. Select samples were submitted to Xenco Laboratories in Midland, Texas for benzene, toluene, ethylbenzene, xylene (BTEX) analysis by EPA Method 8021B, total petroleum hydrocarbons (TPH) full range by 8015 modified, and chloride analysis by EPA 300.

Field screened chloride concentrations ranged from <124 to 12,952 mg/kg. Based on the field screening data, additional samples were collected from depths ranging from 0.5 to 12 ft. bgs. Sampling points were extended in depth until field screening indicated that the chloride concentrations were below the RRAL.

Once field screening indicated chloride concentrations were below the RRAL, soil samples were collected and submitted to Xenco Laboratories in Midland, Texas for benzene, toluene, ethylbenzene, xylene (BTEX) analysis by EPA Method 8021B, total petroleum hydrocarbons (TPH) full range by 8015 modified, and chloride analysis by EPA 300.

None of the laboratory analyzed samples contained BTEX concentrations above the laboratory reporting levels (LRL) and total TPH concentrations ranged from below the LRL to 451 mg/kg. Chloride concentrations ranged from below the LRL to 1,010 mg/kg. Chloride concentrations exceeding the RRAL were encountered in the samples collected from Spl-8 and Spl-9, both at a depth of 2 ft bgs. The

laboratory and field screening results are summarized on Figure 2 and in Table 1. The laboratory reports are included in Appendix B.

3. Summary and Recommendations

Based on the results of the assessment activities, petroleum hydrocarbons were not detected above the LRLs and chloride laboratory concentrations exceeding the RRAL exist in two locations at 2 ft bgs. GHD recommends the following:

- Excavate the areas containing chloride impacted soil concentrations above the RRAL to a depth not to exceed 4 ft bgs (see Figure 2 for proposed excavation locations). The limits of the excavations may be influenced by piping and equipment in the area of the release. Field screening for chloride will be performed to assist in assessing the horizontal extent of impacted soil during the excavation activities.
- The collection of confirmation soil samples from the sidewalls of the excavation for laboratory analysis for chloride by EPA Method 300.
- Upon receipt of confirmation that chloride concentrations are below the RRAL, place a 20-mil liner in the base of the excavation and backfill.
- Fertilize and reseed the disturbed area with a BLM approved seed mix.

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 or Bernard.Bockisch@ghd.com.

Sincerely,

GHD

Alan Brandon
Senior Project Manager

Bernard Bockisch
Albuquerque Operations Manager

AB/mc/30

Figures

Source: USGS 7.5 Minute Quad "Bootleg Ridge, The Divide, Grama Ridge, and Tip Top Wells, New Mexico"

Lat/Long: 32.3710° North, 103.6423° West

0 1000 2000ft

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

EOG RESOURCES
LEA COUNTY, NEW MEXICO
CHECKERBOARD 23 FEDERAL BATTERY

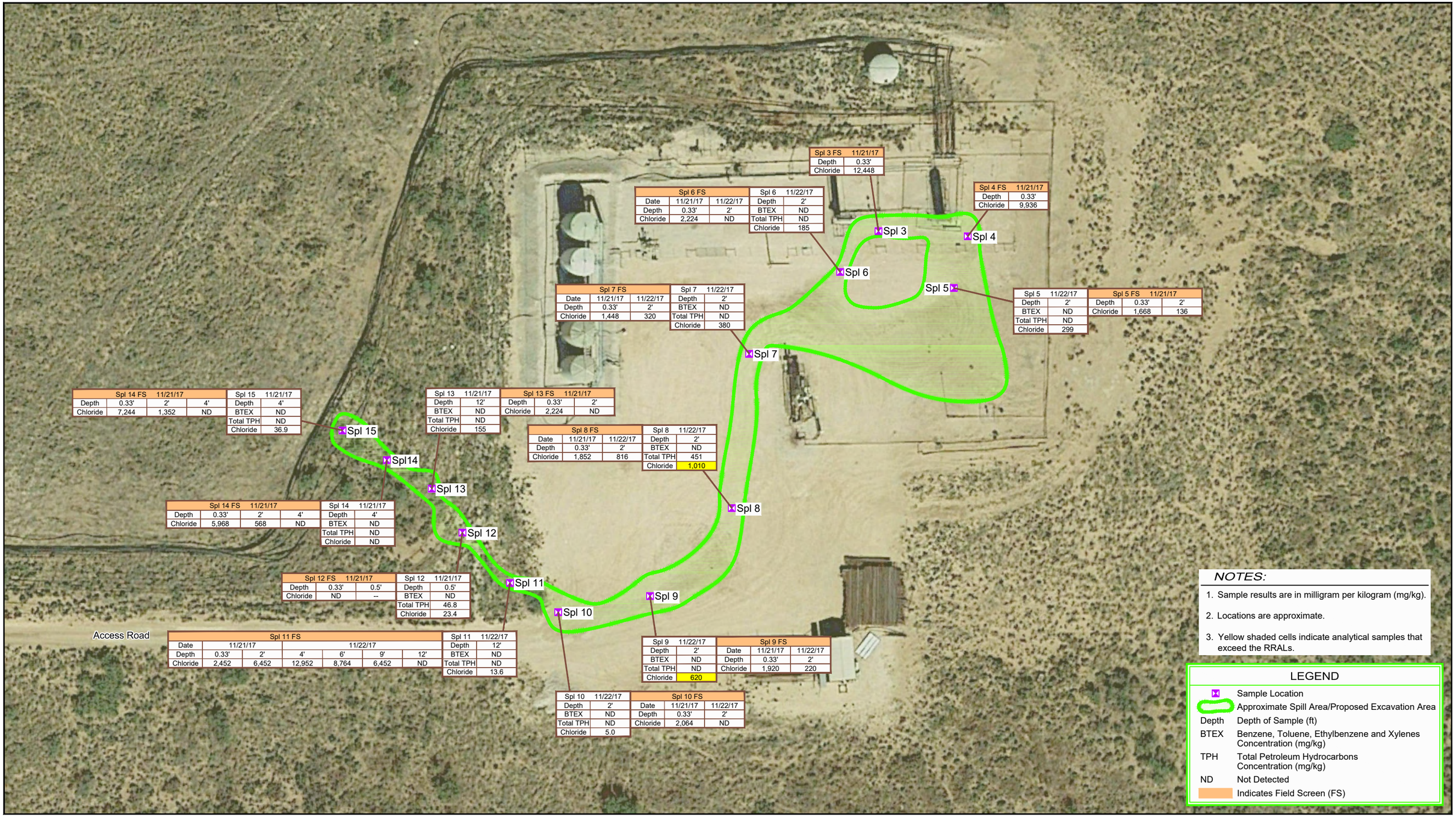
088210-56

Dec 7, 2017

SITE LOCATION MAP

FIGURE 1

CAD File: I:\CAD\Files\08----\088---\088210-EOG-Madera Ridge 25-1\088210-56(000)GN-DL001.dwg



NOTES:

1. Sample results are in milligram per kilogram (mg/kg).
2. Locations are approximate.
3. Yellow shaded cells indicate analytical samples that exceed the RRALs.

LEGEND

	Sample Location
	Approximate Spill Area/Proposed Excavation Area
Depth	Depth of Sample (ft)
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes Concentration (mg/kg)
TPH	Total Petroleum Hydrocarbons Concentration (mg/kg)
ND	Not Detected
	Indicates Field Screen (FS)

Source: Image © 2017 Google - Imagery Date: November 2, 2017

Lat/Long: 32.3710° North, 103.6423° West

0 25 50ft

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

GHD

EOG RESOURCES
LEA COUNTY, NEW MEXICO
CHECKERBOARD 23 FEDERAL BATTERY

088210-56

Jan 17, 2018

SAMPLE LOCATION MAP

FIGURE 2

CAD File: I:\CAD\Files\08----\088---\088210-EOG-Madera Ridge 25-1\088210-56(000)GN-DL001.dwg

Tables

Table 1

Checkerboard 23 Fed Battery - Summary of Soil Analytical Data

Sample ID	Depth (feet)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Chloride	Chloride Field Screen (mg/L)
Spl 3	0.33	11/21/2017											12,448
Spl 4	0.33	11/21/2017											9,936
Spl 5	0.33	11/21/2017											1,668
Spl 5	2	11/22/2017	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<15	<15	<15	<45	299	136
Spl 6	0.33	11/21/2017											2,224
Spl 6	2	11/22/2017	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15	<15	<15	<45	185	<124
Spl 7	0.33	11/21/2017											1,448
Spl 7	2	11/22/2017	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15	<15	<15	<45	380	320
Spl 8	0.33	11/21/2017											1,852
Spl 8	2	11/22/2017	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15	346	105	451	1,010	816
Spl 9	0.33	11/21/2017											1,920
Spl 9	2	11/22/2017	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15	<15	<15	<45	620	220
Spl 10	0.33	11/21/2017											2,064
Spl 10	2	11/22/2017	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15	<15	<15	<45	5.0	<124
Spl 11	0.33	11/21/2017											2,452
Spl 11	2	11/21/2017											6,452
Spl 11	4	11/22/2017											12,952
Spl 11	6	11/22/2017											8,764
Spl 11	9	11/22/2017											6,452
Spl 11	12	11/22/2017	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15	<15	<15	<45	13.6	<124

Table 1

Checkerboard 23 Fed Battery - Summary of Soil Analytical Data

Sample ID	Depth (feet)	Date	Benzene	Toluene	Ethylbenzene	Xylenes	BTEX	TPH (GRO)	TPH (DRO)	TPH (MRO)	Total TPH	Chloride	Chloride Field Screen (mg/L)
Spl 12	0.33	11/21/2017											<124
Spl 12	0.5	11/21/2017	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<14.9	46.8	<14.9	46.8	23.4	--
Spl 13	0.33	11/21/2017											2,224
Spl 13	2	11/21/2017	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<15	<15	<15	<45	155	<124
Spl 14	0.33	11/21/2017											5,968
Spl 14	2	11/21/2017											568
Spl 14	4	11/21/2017	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<15	<15	<15	<45	<4.91	<124
Spl 15	0.33	11/21/2017											7,244
Spl 15	2	11/21/2017											1,352
Spl 15	4	11/21/2017	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<15	<15	<15	<45	36.9	<124
MOCD RRALs (Total Ranking Score =			**10**	**50**				**Total TPH: 5,000**				**600**	

Notes:

All sample results are in milligrams per kilogram
-- = Not tested
NMOCD = New Mexico Oil Conservation
RRALs = Recommended Remediation A
Highlighted = Exceeds NMOCD RRAL
Field screening only

Appendices

Appendix A
Well Information

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)

Checkerboard 23 Fed Battery

(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	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02096			ED	2	3	14	22S	32E		627204	3584464*	2165	435	360	75
C 02821		C	LE	2	2	3	14	22S	32E	627303	3584563*	2241	540	340	200

Average Depth to Water: **350 feet**

Minimum Depth: **340 feet**

Maximum Depth: **360 feet**

Record Count: 2

~ 1.3 Mile

UTMNAD83 Radius Search (in meters):

Easting (X): 627720.95 **Northing (Y):** 3582361.25 **Radius:** 3000

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

11/21/17 5:42 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Checkerboard 23 Fed Battery
7 miles east, NE

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

site_no list =

- 322331103312701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

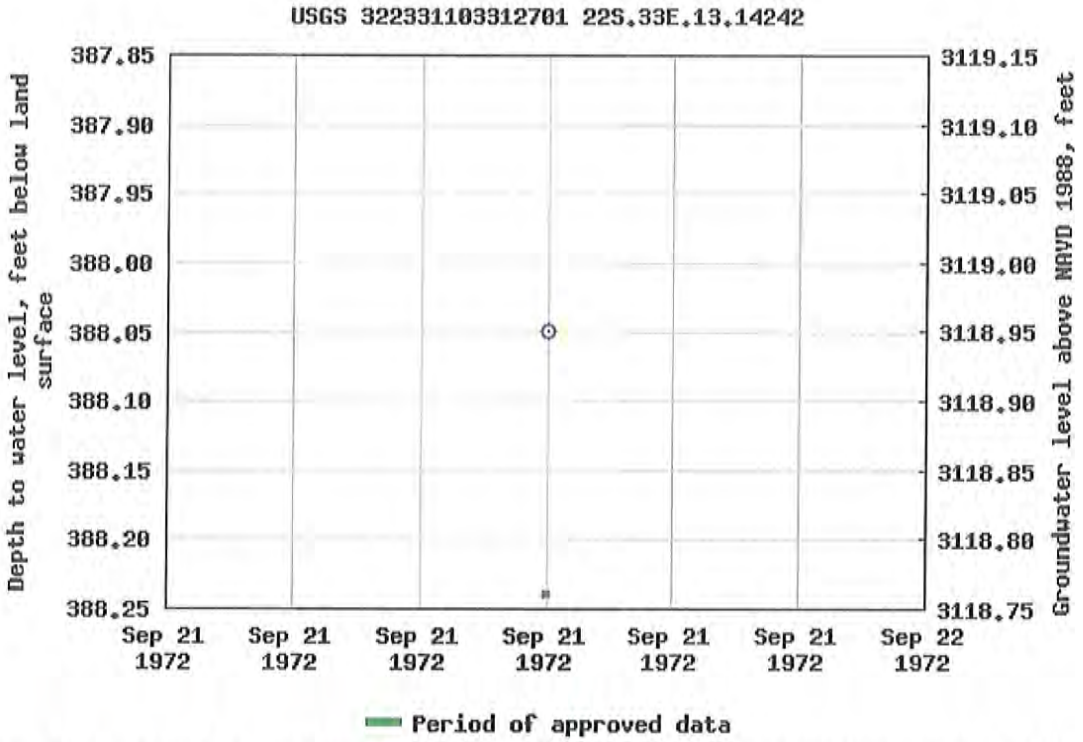
USGS 322331103312701 22S.33E.13.14242

Available data for this site Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code --
Latitude 32°23'31", Longitude 103°31'27" NAD27
Land-surface elevation 3,507 feet above NAVD88
The depth of the well is 490 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

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

Appendix B
Laboratory Analytical Report

Certificate of Analysis Summary 569343

GHD Services, INC- Midland, Midland, TX

Project Name: Section 23-T22S-R

Project Id: 088210-56
Contact: Bernard Bokisch
Project Location:

Date Received in Lab: Mon Nov-27-17 01:28 pm
Report Date: 04-DEC-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	569343-001		569343-002		569343-003		569343-004		569343-005		569343-006	
	Field Id:	Spl 12-6"		Spl 13-2'		Spl 14-4'		Spl 15-4'		Spl 11-12'		Spl 5-2'	
	Depth:	6- In		2- In		4- In		4- In		12- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-21-17 12:33		Nov-21-17 15:49		Nov-21-17 17:21		Nov-21-17 17:25		Nov-22-17 13:10		Nov-22-17 15:52	
BTEX by EPA 8021B	***Extracted:***	Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50	
	Analyzed:	Dec-01-17 16:47		Dec-01-17 17:06		Dec-01-17 17:25		Dec-01-17 17:44		Dec-01-17 18:03		Dec-01-17 18:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00	
	Analyzed:	Dec-01-17 20:35		Dec-01-17 20:52		Dec-01-17 20:58		Dec-01-17 21:04		Dec-01-17 21:10		Dec-01-17 21:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		23.4	5.00	155	5.00	<4.91	4.91	36.9	4.96	13.6	4.94	299	4.99
TPH By SW8015 Mod	***Extracted:***	Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00	
	Analyzed:	Nov-30-17 05:28		Nov-30-17 05:51		Nov-30-17 06:14		Nov-30-17 06:37		Nov-30-17 07:00		Nov-30-17 07:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		46.8	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 569343

GHD Services, INC- Midland, Midland, TX

Project Name: Section 23-T22S-R

Project Id: 088210-56
Contact: Bernard Bokisch
Project Location:

Date Received in Lab: Mon Nov-27-17 01:28 pm
Report Date: 04-DEC-17
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	569343-007		569343-008		569343-009		569343-010		569343-011	
	Field Id:	Spl 6-2'		Spl 7-2'		Spl 9-2'		Spl 10-2'		Spl 8-2'	
	Depth:	2- In		2- In		2- In		2- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-22-17 15:58		Nov-22-17 16:06		Nov-22-17 16:46		Nov-22-17 16:50		Nov-22-17 12:33	
BTEX by EPA 8021B	***Extracted:***	Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-29-17 16:00		Nov-29-17 16:00	
	Analyzed:	Dec-01-17 18:42		Dec-01-17 19:01		Dec-01-17 19:20		Nov-30-17 08:03		Nov-30-17 08:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403	<0.00404	0.00404	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	***Extracted:***	Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-04-17 09:00		Dec-04-17 09:00	
	Analyzed:	Dec-01-17 21:34		Dec-01-17 21:40		Dec-01-17 21:46		Dec-04-17 09:57		Dec-04-17 10:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		185	4.90	380	4.96	620	5.00	5.00	4.91	1010	4.96
TPH By SW8015 Mod	***Extracted:***	Nov-29-17 16:00		Nov-29-17 16:00		Nov-30-17 14:00		Nov-30-17 14:00		Nov-30-17 14:00	
	Analyzed:	Nov-30-17 07:47		Nov-30-17 08:11		Nov-30-17 19:38		Nov-30-17 20:38		Nov-30-17 21:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Analytical Report 569343

for

GHD Services, INC- Midland

Project Manager: Bernard Bokisch

Section 23-T22S-R

088210-56

04-DEC-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

04-DEC-17

Project Manager: **Bernard Bokisch**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **569343**
Section 23-T22S-R
Project Address:

Bernard Bokisch:

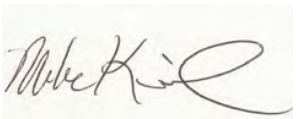
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 569343. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 569343 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Spl 12-6"	S	11-21-17 12:33	6 In	569343-001
Spl 13-2'	S	11-21-17 15:49	2 In	569343-002
Spl 14-4'	S	11-21-17 17:21	4 In	569343-003
Spl 15-4'	S	11-21-17 17:25	4 In	569343-004
Spl 11-12'	S	11-22-17 13:10	12 In	569343-005
Spl 5-2'	S	11-22-17 15:52	2 In	569343-006
Spl 6-2'	S	11-22-17 15:58	2 In	569343-007
Spl 7-2'	S	11-22-17 16:06	2 In	569343-008
Spl 9-2'	S	11-22-17 16:46	2 In	569343-009
Spl 10-2'	S	11-22-17 16:50	2 In	569343-010
Spl 8-2'	S	11-22-17 12:33	2 In	569343-011

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3034532 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3034813 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3034831 Inorganic Anions by EPA 300/300.1
Lab Sample ID 569894-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 569343-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 12-6"**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-001	Date Collected:	11.21.17 12.33	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.4**	5.00	mg/kg	12.01.17 20.35		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	11.30.17 05.28	U	1
Diesel Range Organics	C10C28DRO	**46.8**	14.9	mg/kg	11.30.17 05.28		1
Oil Range Hydrocarbons	PHCG2835	<14.9	14.9	mg/kg	11.30.17 05.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	11.30.17 05.28	
o-Terphenyl	84-15-1	90	%	70-135	11.30.17 05.28	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.17 16.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 16.47	
4-Bromofluorobenzene	460-00-4	88	%	80-120	12.01.17 16.47	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 13-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-002	Date Collected:	11.21.17 15.49	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	5.00	mg/kg	12.01.17 20.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 05.51	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 05.51	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 05.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 05.51	
o-Terphenyl	84-15-1	87	%	70-135	11.30.17 05.51	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.01.17 17.06	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 17.06	
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 17.06	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 14-4'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-003	Date Collected:	11.21.17 17.21	Sample Depth:	4 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.91	4.91	mg/kg	12.01.17 20.58	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 06.14	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 06.14	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 06.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	11.30.17 06.14	
o-Terphenyl	84-15-1	89	%	70-135	11.30.17 06.14	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.01.17 17.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	80-120	12.01.17 17.25	
1,4-Difluorobenzene	540-36-3	102	%	80-120	12.01.17 17.25	

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 15-4'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-004	Date Collected:	11.21.17 17.25	Sample Depth:	4 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.9**	4.96	mg/kg	12.01.17 21.04		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 06.37	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 06.37	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 06.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	11.30.17 06.37	
o-Terphenyl	84-15-1	91	%	70-135	11.30.17 06.37	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.01.17 17.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	12.01.17 17.44	
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 17.44	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 11-12'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-005	Date Collected:	11.22.17 13.10	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.6**	4.94	mg/kg	12.01.17 21.10		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.00	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.00	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.00	
o-Terphenyl	84-15-1	92	%	70-135	11.30.17 07.00	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.17 18.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 18.03	
1,4-Difluorobenzene	540-36-3	92	%	80-120	12.01.17 18.03	

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GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 5-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-006	Date Collected:	11.22.17 15.52	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**299**	4.99	mg/kg	12.01.17 21.28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.23	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.23	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.23	
o-Terphenyl	84-15-1	91	%	70-135	11.30.17 07.23	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.01.17 18.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	12.01.17 18.23	
4-Bromofluorobenzene	460-00-4	92	%	80-120	12.01.17 18.23	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 6-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-007	Date Collected:	11.22.17 15.58	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**185**	4.90	mg/kg	12.01.17 21.34		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.47	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.47	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.47	
o-Terphenyl	84-15-1	92	%	70-135	11.30.17 07.47	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.01.17 18.42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 18.42	
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 18.42	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 7-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-008	Date Collected:	11.22.17 16.06	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**380**	4.96	mg/kg	12.01.17 21.40		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 08.11	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 08.11	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 08.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	11.30.17 08.11	
o-Terphenyl	84-15-1	86	%	70-135	11.30.17 08.11	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.01.17 19.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	12.01.17 19.01	
4-Bromofluorobenzene	460-00-4	88	%	80-120	12.01.17 19.01	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 9-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-009	Date Collected:	11.22.17 16.46	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**620**	5.00	mg/kg	12.01.17 21.46		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 19.38	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 19.38	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 19.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	11.30.17 19.38	
o-Terphenyl	84-15-1	84	%	70-135	11.30.17 19.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.01.17 19.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	12.01.17 19.20	
4-Bromofluorobenzene	460-00-4	84	%	80-120	12.01.17 19.20	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 10-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-010	Date Collected:	11.22.17 16.50	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	12.04.17 09.00	Basis:	Wet Weight
Seq Number:	3034908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.00**	4.91	mg/kg	12.04.17 09.57		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 20.38	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 20.38	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 20.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.30.17 20.38	
o-Terphenyl	84-15-1	100	%	70-135	11.30.17 20.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.30.17 08.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	80-120	11.30.17 08.03	
1,4-Difluorobenzene	540-36-3	87	%	80-120	11.30.17 08.03	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 8-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-011	Date Collected:	11.22.17 12.33	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	12.04.17 09.00	Basis:	Wet Weight
Seq Number:	3034908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1010**	4.96	mg/kg	12.04.17 10.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 21.00	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 21.00	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 21.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	11.30.17 21.00	
o-Terphenyl	84-15-1	87	%	70-135	11.30.17 21.00	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.30.17 08.22	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	11.30.17 08.22	
4-Bromofluorobenzene	460-00-4	88	%	80-120	11.30.17 08.22	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 569343

GHD Services, INC- Midland

Section 23-T22S-R

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Solid Date Prep: 12.01.17
MB Sample Id: 7635321-1-BLK LCS Sample Id: 7635321-1-BKS LCSD Sample Id: 7635321-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	259	104	253	101	90-110	2	20	mg/kg	12.01.17 20:23	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Solid Date Prep: 12.04.17
MB Sample Id: 7635380-1-BLK LCS Sample Id: 7635380-1-BKS LCSD Sample Id: 7635380-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	226	90	227	91	90-110	0	20	mg/kg	12.04.17 09:45	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Soil Date Prep: 12.01.17
Parent Sample Id: 569343-001 MS Sample Id: 569343-001 S MSD Sample Id: 569343-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.4	250	295	109	301	111	90-110	2	20	mg/kg	12.01.17 20:40	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Soil Date Prep: 12.01.17
Parent Sample Id: 569894-006 MS Sample Id: 569894-006 S MSD Sample Id: 569894-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	263	106	268	108	90-110	2	20	mg/kg	12.01.17 22:03	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Soil Date Prep: 12.04.17
Parent Sample Id: 569343-010 MS Sample Id: 569343-010 S MSD Sample Id: 569343-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.00	246	262	104	260	104	90-110	1	20	mg/kg	12.04.17 10:03	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Soil Date Prep: 12.04.17
Parent Sample Id: 569374-001 MS Sample Id: 569374-001 S MSD Sample Id: 569374-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	969	249	1120	61	1150	73	90-110	3	20	mg/kg	12.04.17 11:26	X

QC Summary 569343

GHD Services, INC- Midland

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Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034587 Matrix: Solid Date Prep: 11.29.17
MB Sample Id: 7635166-1-BLK LCS Sample Id: 7635166-1-BKS LCSD Sample Id: 7635166-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	1000	910	91	891	89	70-135	2	35	mg/kg	11.29.17 22:34	
Diesel Range Organics	<15.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.29.17 22:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		94		83		70-135	%	11.29.17 22:34
o-Terphenyl	97		96		87		70-135	%	11.29.17 22:34

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034675 Matrix: Solid Date Prep: 11.30.17
MB Sample Id: 7635254-1-BLK LCS Sample Id: 7635254-1-BKS LCSD Sample Id: 7635254-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	1000	912	91	879	88	70-135	4	35	mg/kg	11.30.17 18:55	
Diesel Range Organics	<15.0	1000	1030	103	997	100	70-135	3	35	mg/kg	11.30.17 18:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		91		89		70-135	%	11.30.17 18:55
o-Terphenyl	104		95		88		70-135	%	11.30.17 18:55

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034587 Matrix: Soil Date Prep: 11.29.17
Parent Sample Id: 569304-001 MS Sample Id: 569304-001 S MSD Sample Id: 569304-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	22.5	999	934	91	974	95	70-135	4	35	mg/kg	11.29.17 23:43	
Diesel Range Organics	262	999	1200	94	1220	96	70-135	2	35	mg/kg	11.29.17 23:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		95		70-135	%	11.29.17 23:43
o-Terphenyl	85		91		70-135	%	11.29.17 23:43

QC Summary 569343

GHD Services, INC- Midland

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Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034675 Matrix: Soil Date Prep: 11.30.17
Parent Sample Id: 569343-009 MS Sample Id: 569343-009 S MSD Sample Id: 569343-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	997	905	91	865	87	70-135	5	35	mg/kg	11.30.17 19:58	
Diesel Range Organics	<15.0	997	982	98	1020	102	70-135	4	35	mg/kg	11.30.17 19:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		96		70-135	%	11.30.17 19:58
o-Terphenyl	90		97		70-135	%	11.30.17 19:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3034532 Matrix: Solid Date Prep: 11.29.17
MB Sample Id: 7635171-1-BLK LCS Sample Id: 7635171-1-BKS LCSD Sample Id: 7635171-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0971	97	0.0931	93	70-130	4	35	mg/kg	11.29.17 23:43	
Toluene	<0.00200	0.0998	0.0917	92	0.0871	87	70-130	5	35	mg/kg	11.29.17 23:43	
Ethylbenzene	<0.00200	0.0998	0.0902	90	0.0867	87	71-129	4	35	mg/kg	11.29.17 23:43	
m,p-Xylenes	<0.00399	0.200	0.171	86	0.164	82	70-135	4	35	mg/kg	11.29.17 23:43	
o-Xylene	<0.00200	0.0998	0.0862	86	0.0832	83	71-133	4	35	mg/kg	11.29.17 23:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		104		80-120	%	11.29.17 23:43
4-Bromofluorobenzene	85		91		95		80-120	%	11.29.17 23:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3034813 Matrix: Solid Date Prep: 11.30.17
MB Sample Id: 7635311-1-BLK LCS Sample Id: 7635311-1-BKS LCSD Sample Id: 7635311-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.101	100	0.0989	99	70-130	2	35	mg/kg	12.01.17 14:16	
Toluene	<0.00202	0.101	0.0950	94	0.0924	92	70-130	3	35	mg/kg	12.01.17 14:16	
Ethylbenzene	<0.00202	0.101	0.0927	92	0.0904	90	71-129	3	35	mg/kg	12.01.17 14:16	
m,p-Xylenes	<0.00404	0.202	0.177	88	0.173	86	70-135	2	35	mg/kg	12.01.17 14:16	
o-Xylene	<0.00202	0.101	0.0891	88	0.0863	86	71-133	3	35	mg/kg	12.01.17 14:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		97		80-120	%	12.01.17 14:16
4-Bromofluorobenzene	85		96		94		80-120	%	12.01.17 14:16

QC Summary 569343

GHD Services, INC- Midland

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Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3034532 Matrix: Soil Date Prep: 11.29.17

Parent Sample Id: 569650-001 MS Sample Id: 569650-001 S MSD Sample Id: 569650-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0709	71	0.0824	83	70-130	15	35	mg/kg	11.30.17 00:21	
Toluene	<0.00199	0.0994	0.0658	66	0.0769	77	70-130	16	35	mg/kg	11.30.17 00:21	X
Ethylbenzene	<0.00199	0.0994	0.0666	67	0.0759	76	71-129	13	35	mg/kg	11.30.17 00:21	X
m,p-Xylenes	<0.00398	0.199	0.128	64	0.144	72	70-135	12	35	mg/kg	11.30.17 00:21	X
o-Xylene	<0.00199	0.0994	0.0668	67	0.0734	74	71-133	9	35	mg/kg	11.30.17 00:21	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		100		80-120	%	11.30.17 00:21
4-Bromofluorobenzene	98		95		80-120	%	11.30.17 00:21

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3034813 Matrix: Soil Date Prep: 11.30.17

Parent Sample Id: 569347-004 MS Sample Id: 569347-004 S MSD Sample Id: 569347-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00218	0.109	0.0758	70	0.0916	83	70-130	19	35	mg/kg	12.01.17 14:52	
Toluene	<0.00218	0.109	0.0703	64	0.0848	77	70-130	19	35	mg/kg	12.01.17 14:52	X
Ethylbenzene	<0.00218	0.109	0.0674	62	0.0794	72	71-129	16	35	mg/kg	12.01.17 14:52	X
m,p-Xylenes	<0.00437	0.218	0.128	59	0.150	68	70-135	16	35	mg/kg	12.01.17 14:52	X
o-Xylene	<0.00218	0.109	0.0663	61	0.0767	70	71-133	15	35	mg/kg	12.01.17 14:52	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		80-120	%	12.01.17 14:52
4-Bromofluorobenzene	93		96		80-120	%	12.01.17 14:52

CHAIN OF CUSTODY

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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #

Xenco Job # 569343

Client / Reporting Information

Company Name / Branch: GHD Services, Inc.--Midland, TX
Company Address: 2135 S. Loop 250 West, Midland, TX 79703
Email: Christopher.Knight@ghd.com; Bernard.Bockisch@ghd.com
Phone No:
Project Contact: Bernie Bockisch
Samplers's Name John Schnable

Project Information

Project Name/Number: 088210-56
Project Location: Section 23-T22S-R
Invoice To: Direct Bill to EOG Resources, Inc.--Attn: Zane Kurtz
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH Gasoline Range—8015	TPH Diesel Range—8015	TPH Oil Range—8015	BTEX—8021B	Chloride—EPA 300.0	Field Comments
1	Spl 12—6"	6"	11/21/2017	12:33	Soil	1								x	x	x	x	x	x	
2	Spl 13—2'	2'	11/21/2017	15:49	Soil	1								x	x	x	x	x	x	
3	Spl 14—4'	4'	11/21/2017	17:21	Soil	1								x	x	x	x	x	x	
4	Spl 15—4'	4'	11/21/2017	17:25	Soil	1								x	x	x	x	x	x	
5	Spl 11—12'	12'	11/22/2017	13:10	Soil	1								x	x	x	x	x	x	
6	Spl 5—2'	2'	11/22/2017	15:52	Soil	1								x	x	x	x	x	x	
7	Spl 6—2'	2'	11/22/2017	15:58	Soil	1								x	x	x	x	x	x	
8	Spl 7—2'	2'	11/22/2017	16:06	Soil	1								x	x	x	x	x	x	
9	Spl 9—2'	2'	11/22/2017	16:46	Soil	1								x	x	x	x	x	x	
10	Spl 10—2'	2'	11/22/2017	16:50	Soil	1								x	x	x	x	x	x	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [x] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Temp: 0.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 0.6

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

1	Relinquished by Sampler: John Schnable	Date Time: 11-27-17 13:20	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2
3	Relinquished by:	Date Time:	Received By: 3 13:28	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X — Cooler Temp. — Thermo. Corr. Factor

CHAIN OF CUSTODY

Page 2 Of 2

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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 569343

Client / Reporting Information

Company Name / Branch: GHD Services, Inc.--Midland, TX
Company Address: 2135 S. Loop 250 West, Midland, TX 79703
Email: Christopher.Knight@ghd.com; Bernard.Bockisch@ghd.com
Phone No:
Project Contact: Bernie Bockisch
Samplers's Name John Schnable

Project Information

Project Name/Number: 088210-56
Project Location: Section 23-T22S-R3
Invoice To: Direct Bill to EOG Resources, Inc.--Attn: Zane Kurtz
PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH Gasoline Range—8015	TPH Diesel Range—8015	TPH Oil Range—8015	BTEX—8021B	Chloride—EPA 300.0	Field Comments
1	Spl 8—2'	2'	11/22/2017	16:52	Soil	1								x	x	x	x	x	x	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY
- TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Temp: 0.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 0.6

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1 John Schnable	Date Time: 11-27-17 13:28	Received By: 1 Jannel Smith	Relinquished By: 2	Date Time:	Received By: 2	
Relinquished by: 3	Date Time:	Received By: 3 13:28	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐	Cooler Temp. / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 11/27/2017 01:28:00 PM

Work Order #: 569343

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 11/27/2017
Shawnee Smith

Checklist reviewed by: Mike Kimmel Date: 12/01/2017
Mike Kimmel

Certificate of Analysis Summary 569343

GHD Services, INC- Midland, Midland, TX

Project Name: Section 23-T22S-R

Project Id: 088210-56
Contact: Bernard Bokisch
Project Location:

Date Received in Lab: Mon Nov-27-17 01:28 pm
Report Date: 04-DEC-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	569343-001		569343-002		569343-003		569343-004		569343-005		569343-006	
	Field Id:	Spl 12-6"		Spl 13-2'		Spl 14-4'		Spl 15-4'		Spl 11-12'		Spl 5-2'	
	Depth:	6- In		2- In		4- In		4- In		12- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-21-17 12:33		Nov-21-17 15:49		Nov-21-17 17:21		Nov-21-17 17:25		Nov-22-17 13:10		Nov-22-17 15:52	
BTEX by EPA 8021B	***Extracted:***	Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50	
	Analyzed:	Dec-01-17 16:47		Dec-01-17 17:06		Dec-01-17 17:25		Dec-01-17 17:44		Dec-01-17 18:03		Dec-01-17 18:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00404	0.00404	<0.00401	0.00401	<0.00399	0.00399	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00202	0.00202	<0.00200	0.00200	<0.00200	0.00200	<0.00199	0.00199
Inorganic Anions by EPA 300/300.1	***Extracted:***	Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00	
	Analyzed:	Dec-01-17 20:35		Dec-01-17 20:52		Dec-01-17 20:58		Dec-01-17 21:04		Dec-01-17 21:10		Dec-01-17 21:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		23.4	5.00	155	5.00	<4.91	4.91	36.9	4.96	13.6	4.94	299	4.99
TPH By SW8015 Mod	***Extracted:***	Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00		Nov-29-17 16:00	
	Analyzed:	Nov-30-17 05:28		Nov-30-17 05:51		Nov-30-17 06:14		Nov-30-17 06:37		Nov-30-17 07:00		Nov-30-17 07:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		46.8	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons		<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 569343

GHD Services, INC- Midland, Midland, TX

Project Name: Section 23-T22S-R

Project Id: 088210-56
Contact: Bernard Bokisch
Project Location:

Date Received in Lab: Mon Nov-27-17 01:28 pm
Report Date: 04-DEC-17
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	569343-007		569343-008		569343-009		569343-010		569343-011	
	Field Id:	Spl 6-2'		Spl 7-2'		Spl 9-2'		Spl 10-2'		Spl 8-2'	
	Depth:	2- In		2- In		2- In		2- In		2- In	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Nov-22-17 15:58		Nov-22-17 16:06		Nov-22-17 16:46		Nov-22-17 16:50		Nov-22-17 12:33	
BTEX by EPA 8021B	***Extracted:***	Nov-30-17 15:50		Nov-30-17 15:50		Nov-30-17 15:50		Nov-29-17 16:00		Nov-29-17 16:00	
	Analyzed:	Dec-01-17 18:42		Dec-01-17 19:01		Dec-01-17 19:20		Nov-30-17 08:03		Nov-30-17 08:22	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00403	0.00403	<0.00404	0.00404	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Inorganic Anions by EPA 300/300.1	***Extracted:***	Dec-01-17 15:00		Dec-01-17 15:00		Dec-01-17 15:00		Dec-04-17 09:00		Dec-04-17 09:00	
	Analyzed:	Dec-01-17 21:34		Dec-01-17 21:40		Dec-01-17 21:46		Dec-04-17 09:57		Dec-04-17 10:15	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		185	4.90	380	4.96	620	5.00	5.00	4.91	1010	4.96
TPH By SW8015 Mod	***Extracted:***	Nov-29-17 16:00		Nov-29-17 16:00		Nov-30-17 14:00		Nov-30-17 14:00		Nov-30-17 14:00	
	Analyzed:	Nov-30-17 07:47		Nov-30-17 08:11		Nov-30-17 19:38		Nov-30-17 20:38		Nov-30-17 21:00	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Mike Kimmel
Client Services Manager

Analytical Report 569343

for

GHD Services, INC- Midland

Project Manager: Bernard Bokisch

Section 23-T22S-R

088210-56

04-DEC-17

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

04-DEC-17

Project Manager: **Bernard Bokisch**
GHD Services, INC- Midland
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **569343**
Section 23-T22S-R
Project Address:

Bernard Bokisch:

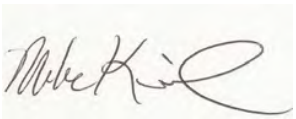
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 569343. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 569343 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,



Mike Kimmel
Client Services Manager

Sample Cross Reference 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Spl 12-6"	S	11-21-17 12:33	6 In	569343-001
Spl 13-2'	S	11-21-17 15:49	2 In	569343-002
Spl 14-4'	S	11-21-17 17:21	4 In	569343-003
Spl 15-4'	S	11-21-17 17:25	4 In	569343-004
Spl 11-12'	S	11-22-17 13:10	12 In	569343-005
Spl 5-2'	S	11-22-17 15:52	2 In	569343-006
Spl 6-2'	S	11-22-17 15:58	2 In	569343-007
Spl 7-2'	S	11-22-17 16:06	2 In	569343-008
Spl 9-2'	S	11-22-17 16:46	2 In	569343-009
Spl 10-2'	S	11-22-17 16:50	2 In	569343-010
Spl 8-2'	S	11-22-17 12:33	2 In	569343-011

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3034532 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3034813 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3034831 Inorganic Anions by EPA 300/300.1
Lab Sample ID 569894-006 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 569343-001, -002, -003, -004, -005, -006, -007, -008, -009.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 12-6"**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-001	Date Collected:	11.21.17 12.33	Sample Depth:	6 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**23.4**	5.00	mg/kg	12.01.17 20.35		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	11.30.17 05.28	U	1
Diesel Range Organics	C10C28DRO	**46.8**	14.9	mg/kg	11.30.17 05.28		1
Oil Range Hydrocarbons	PHCG2835	<14.9	14.9	mg/kg	11.30.17 05.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	11.30.17 05.28	
o-Terphenyl	84-15-1	90	%	70-135	11.30.17 05.28	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.17 16.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 16.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 16.47	
4-Bromofluorobenzene	460-00-4	88	%	80-120	12.01.17 16.47	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 13-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-002	Date Collected:	11.21.17 15.49	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**155**	5.00	mg/kg	12.01.17 20.52		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 05.51	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 05.51	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 05.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 05.51	
o-Terphenyl	84-15-1	87	%	70-135	11.30.17 05.51	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.01.17 17.06	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.01.17 17.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 17.06	
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 17.06	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 14-4'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-003	Date Collected:	11.21.17 17.21	Sample Depth:	4 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.91	4.91	mg/kg	12.01.17 20.58	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 06.14	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 06.14	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 06.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-135	11.30.17 06.14	
o-Terphenyl	84-15-1	89	%	70-135	11.30.17 06.14	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.01.17 17.25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	83	%	80-120	12.01.17 17.25	
1,4-Difluorobenzene	540-36-3	102	%	80-120	12.01.17 17.25	

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 15-4'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-004	Date Collected:	11.21.17 17.25	Sample Depth:	4 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.9**	4.96	mg/kg	12.01.17 21.04		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 06.37	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 06.37	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 06.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	11.30.17 06.37	
o-Terphenyl	84-15-1	91	%	70-135	11.30.17 06.37	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	12.01.17 17.44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 17.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	12.01.17 17.44	
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 17.44	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 11-12'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-005	Date Collected:	11.22.17 13.10	Sample Depth:	12 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**13.6**	4.94	mg/kg	12.01.17 21.10		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.00	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.00	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.00	
o-Terphenyl	84-15-1	92	%	70-135	11.30.17 07.00	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	12.01.17 18.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	12.01.17 18.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 18.03	
1,4-Difluorobenzene	540-36-3	92	%	80-120	12.01.17 18.03	

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GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 5-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-006	Date Collected:	11.22.17 15.52	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**299**	4.99	mg/kg	12.01.17 21.28		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.23	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.23	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.23	
o-Terphenyl	84-15-1	91	%	70-135	11.30.17 07.23	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	12.01.17 18.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	12.01.17 18.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	80-120	12.01.17 18.23	
4-Bromofluorobenzene	460-00-4	92	%	80-120	12.01.17 18.23	

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GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 6-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-007	Date Collected:	11.22.17 15.58	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**185**	4.90	mg/kg	12.01.17 21.34		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 07.47	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 07.47	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 07.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	11.30.17 07.47	
o-Terphenyl	84-15-1	92	%	70-135	11.30.17 07.47	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	12.01.17 18.42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	12.01.17 18.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	93	%	80-120	12.01.17 18.42	
4-Bromofluorobenzene	460-00-4	86	%	80-120	12.01.17 18.42	

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GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 7-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-008	Date Collected:	11.22.17 16.06	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**380**	4.96	mg/kg	12.01.17 21.40		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034587				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 08.11	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 08.11	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 08.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-135	11.30.17 08.11	
o-Terphenyl	84-15-1	86	%	70-135	11.30.17 08.11	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	12.01.17 19.01	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 19.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	12.01.17 19.01	
4-Bromofluorobenzene	460-00-4	88	%	80-120	12.01.17 19.01	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 9-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-009	Date Collected:	11.22.17 16.46	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MNV			% Moisture:	
Analyst:	MNV	Date Prep:	12.01.17 15.00	Basis:	Wet Weight
Seq Number:	3034831				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**620**	5.00	mg/kg	12.01.17 21.46		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 19.38	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 19.38	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 19.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	87	%	70-135	11.30.17 19.38	
o-Terphenyl	84-15-1	84	%	70-135	11.30.17 19.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.30.17 15.50	Basis:	Wet Weight
Seq Number:	3034813				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	12.01.17 19.20	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1
Total BTEX		<0.00202	0.00202	mg/kg	12.01.17 19.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	95	%	80-120	12.01.17 19.20	
4-Bromofluorobenzene	460-00-4	84	%	80-120	12.01.17 19.20	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 10-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-010	Date Collected:	11.22.17 16.50	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	12.04.17 09.00	Basis:	Wet Weight
Seq Number:	3034908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**5.00**	4.91	mg/kg	12.04.17 09.57		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 20.38	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 20.38	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 20.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	11.30.17 20.38	
o-Terphenyl	84-15-1	100	%	70-135	11.30.17 20.38	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	11.30.17 08.03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	11.30.17 08.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	81	%	80-120	11.30.17 08.03	
1,4-Difluorobenzene	540-36-3	87	%	80-120	11.30.17 08.03	

Certificate of Analytical Results 569343

GHD Services, INC- Midland, Midland, TX

Section 23-T22S-R

Sample Id:	**Spl 8-2'**	Matrix:	Soil	Date Received:	11.27.17 13.28
Lab Sample Id:	569343-011	Date Collected:	11.22.17 12.33	Sample Depth:	2 In

Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	12.04.17 09.00	Basis:	Wet Weight
Seq Number:	3034908				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1010**	4.96	mg/kg	12.04.17 10.15		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	11.30.17 14.00	Basis:	Wet Weight
Seq Number:	3034675				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	11.30.17 21.00	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	11.30.17 21.00	U	1
Oil Range Hydrocarbons	PHCG2835	<15.0	15.0	mg/kg	11.30.17 21.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-135	11.30.17 21.00	
o-Terphenyl	84-15-1	87	%	70-135	11.30.17 21.00	

Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	11.29.17 16.00	Basis:	Wet Weight
Seq Number:	3034532				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	11.30.17 08.22	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1
Total BTEX		<0.00201	0.00201	mg/kg	11.30.17 08.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	94	%	80-120	11.30.17 08.22	
4-Bromofluorobenzene	460-00-4	88	%	80-120	11.30.17 08.22	

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

QC Summary 569343

GHD Services, INC- Midland

Section 23-T22S-R

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Solid Date Prep: 12.01.17
MB Sample Id: 7635321-1-BLK LCS Sample Id: 7635321-1-BKS LCSD Sample Id: 7635321-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	259	104	253	101	90-110	2	20	mg/kg	12.01.17 20:23	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Solid Date Prep: 12.04.17
MB Sample Id: 7635380-1-BLK LCS Sample Id: 7635380-1-BKS LCSD Sample Id: 7635380-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	226	90	227	91	90-110	0	20	mg/kg	12.04.17 09:45	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Soil Date Prep: 12.01.17
Parent Sample Id: 569343-001 MS Sample Id: 569343-001 S MSD Sample Id: 569343-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	23.4	250	295	109	301	111	90-110	2	20	mg/kg	12.01.17 20:40	X

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034831 Matrix: Soil Date Prep: 12.01.17
Parent Sample Id: 569894-006 MS Sample Id: 569894-006 S MSD Sample Id: 569894-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.98	249	263	106	268	108	90-110	2	20	mg/kg	12.01.17 22:03	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Soil Date Prep: 12.04.17
Parent Sample Id: 569343-010 MS Sample Id: 569343-010 S MSD Sample Id: 569343-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	5.00	246	262	104	260	104	90-110	1	20	mg/kg	12.04.17 10:03	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3034908 Matrix: Soil Date Prep: 12.04.17
Parent Sample Id: 569374-001 MS Sample Id: 569374-001 S MSD Sample Id: 569374-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	969	249	1120	61	1150	73	90-110	3	20	mg/kg	12.04.17 11:26	X

QC Summary 569343

GHD Services, INC- Midland

Section 23-T22S-R

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034587 Matrix: Solid Date Prep: 11.29.17
MB Sample Id: 7635166-1-BLK LCS Sample Id: 7635166-1-BKS LCSD Sample Id: 7635166-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	1000	910	91	891	89	70-135	2	35	mg/kg	11.29.17 22:34	
Diesel Range Organics	<15.0	1000	1010	101	1000	100	70-135	1	35	mg/kg	11.29.17 22:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		94		83		70-135	%	11.29.17 22:34
o-Terphenyl	97		96		87		70-135	%	11.29.17 22:34

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034675 Matrix: Solid Date Prep: 11.30.17
MB Sample Id: 7635254-1-BLK LCS Sample Id: 7635254-1-BKS LCSD Sample Id: 7635254-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	1000	912	91	879	88	70-135	4	35	mg/kg	11.30.17 18:55	
Diesel Range Organics	<15.0	1000	1030	103	997	100	70-135	3	35	mg/kg	11.30.17 18:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		91		89		70-135	%	11.30.17 18:55
o-Terphenyl	104		95		88		70-135	%	11.30.17 18:55

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034587 Matrix: Soil Date Prep: 11.29.17
Parent Sample Id: 569304-001 MS Sample Id: 569304-001 S MSD Sample Id: 569304-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	22.5	999	934	91	974	95	70-135	4	35	mg/kg	11.29.17 23:43	
Diesel Range Organics	262	999	1200	94	1220	96	70-135	2	35	mg/kg	11.29.17 23:43	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	93		95		70-135	%	11.29.17 23:43
o-Terphenyl	85		91		70-135	%	11.29.17 23:43

QC Summary 569343

GHD Services, INC- Midland

Section 23-T22S-R

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3034675 Matrix: Soil Date Prep: 11.30.17
Parent Sample Id: 569343-009 MS Sample Id: 569343-009 S MSD Sample Id: 569343-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<15.0	997	905	91	865	87	70-135	5	35	mg/kg	11.30.17 19:58	
Diesel Range Organics	<15.0	997	982	98	1020	102	70-135	4	35	mg/kg	11.30.17 19:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	89		96		70-135	%	11.30.17 19:58
o-Terphenyl	90		97		70-135	%	11.30.17 19:58

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3034532 Matrix: Solid Date Prep: 11.29.17
MB Sample Id: 7635171-1-BLK LCS Sample Id: 7635171-1-BKS LCSD Sample Id: 7635171-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0971	97	0.0931	93	70-130	4	35	mg/kg	11.29.17 23:43	
Toluene	<0.00200	0.0998	0.0917	92	0.0871	87	70-130	5	35	mg/kg	11.29.17 23:43	
Ethylbenzene	<0.00200	0.0998	0.0902	90	0.0867	87	71-129	4	35	mg/kg	11.29.17 23:43	
m,p-Xylenes	<0.00399	0.200	0.171	86	0.164	82	70-135	4	35	mg/kg	11.29.17 23:43	
o-Xylene	<0.00200	0.0998	0.0862	86	0.0832	83	71-133	4	35	mg/kg	11.29.17 23:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		104		80-120	%	11.29.17 23:43
4-Bromofluorobenzene	85		91		95		80-120	%	11.29.17 23:43

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3034813 Matrix: Solid Date Prep: 11.30.17
MB Sample Id: 7635311-1-BLK LCS Sample Id: 7635311-1-BKS LCSD Sample Id: 7635311-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.101	100	0.0989	99	70-130	2	35	mg/kg	12.01.17 14:16	
Toluene	<0.00202	0.101	0.0950	94	0.0924	92	70-130	3	35	mg/kg	12.01.17 14:16	
Ethylbenzene	<0.00202	0.101	0.0927	92	0.0904	90	71-129	3	35	mg/kg	12.01.17 14:16	
m,p-Xylenes	<0.00404	0.202	0.177	88	0.173	86	70-135	2	35	mg/kg	12.01.17 14:16	
o-Xylene	<0.00202	0.101	0.0891	88	0.0863	86	71-133	3	35	mg/kg	12.01.17 14:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		96		97		80-120	%	12.01.17 14:16
4-Bromofluorobenzene	85		96		94		80-120	%	12.01.17 14:16

QC Summary 569343

GHD Services, INC- Midland

Section 23-T22S-R

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3034532 Matrix: Soil Date Prep: 11.29.17

Parent Sample Id: 569650-001 MS Sample Id: 569650-001 S MSD Sample Id: 569650-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0709	71	0.0824	83	70-130	15	35	mg/kg	11.30.17 00:21	
Toluene	<0.00199	0.0994	0.0658	66	0.0769	77	70-130	16	35	mg/kg	11.30.17 00:21	X
Ethylbenzene	<0.00199	0.0994	0.0666	67	0.0759	76	71-129	13	35	mg/kg	11.30.17 00:21	X
m,p-Xylenes	<0.00398	0.199	0.128	64	0.144	72	70-135	12	35	mg/kg	11.30.17 00:21	X
o-Xylene	<0.00199	0.0994	0.0668	67	0.0734	74	71-133	9	35	mg/kg	11.30.17 00:21	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		100		80-120	%	11.30.17 00:21
4-Bromofluorobenzene	98		95		80-120	%	11.30.17 00:21

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3034813 Matrix: Soil Date Prep: 11.30.17

Parent Sample Id: 569347-004 MS Sample Id: 569347-004 S MSD Sample Id: 569347-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00218	0.109	0.0758	70	0.0916	83	70-130	19	35	mg/kg	12.01.17 14:52	
Toluene	<0.00218	0.109	0.0703	64	0.0848	77	70-130	19	35	mg/kg	12.01.17 14:52	X
Ethylbenzene	<0.00218	0.109	0.0674	62	0.0794	72	71-129	16	35	mg/kg	12.01.17 14:52	X
m,p-Xylenes	<0.00437	0.218	0.128	59	0.150	68	70-135	16	35	mg/kg	12.01.17 14:52	X
o-Xylene	<0.00218	0.109	0.0663	61	0.0767	70	71-133	15	35	mg/kg	12.01.17 14:52	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	94		95		80-120	%	12.01.17 14:52
4-Bromofluorobenzene	93		96		80-120	%	12.01.17 14:52

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Client / Reporting Information

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Phone No:
Project Contact: Bernie Bockisch
Samplers's Name John Schnable

Project Information

Project Name/Number: 088210-56
Project Location: Section 23-T22S-R
Invoice To: Direct Bill to EOG Resources, Inc.--Attn: Zane Kurtz
PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH Gasoline Range—8015	TPH Diesel Range—8015	TPH Oil Range—8015	BTEX—8021B	Chloride—EPA 300.0	Field Comments
1	Spl 12—6"	6"	11/21/2017	12:33	Soil	1								x	x	x	x	x	x	
2	Spl 13—2'	2'	11/21/2017	15:49	Soil	1								x	x	x	x	x	x	
3	Spl 14—4'	4'	11/21/2017	17:21	Soil	1								x	x	x	x	x	x	
4	Spl 15—4'	4'	11/21/2017	17:25	Soil	1								x	x	x	x	x	x	
5	Spl 11—12'	12'	11/22/2017	13:10	Soil	1								x	x	x	x	x	x	
6	Spl 5—2'	2'	11/22/2017	15:52	Soil	1								x	x	x	x	x	x	
7	Spl 6—2'	2'	11/22/2017	15:58	Soil	1								x	x	x	x	x	x	
8	Spl 7—2'	2'	11/22/2017	16:06	Soil	1								x	x	x	x	x	x	
9	Spl 9—2'	2'	11/22/2017	16:46	Soil	1								x	x	x	x	x	x	
10	Spl 10—2'	2'	11/22/2017	16:50	Soil	1								x	x	x	x	x	x	

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [x] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] TRRP Checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Temp: 0.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 0.6

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1 John Schnable	Date Time: 11-27-17 13:20	Received By: 1	Relinquished By: 2	Date Time:	Received By: 2	
Relinquished by: 3	Date Time:	Received By: 3 13:28	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X	Cooler Temp. / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

Page 2 Of 2

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #
Xenco Job # 569343

Client / Reporting Information

Company Name / Branch: GHD Services, Inc.--Midland, TX
Company Address: 2135 S. Loop 250 West, Midland, TX 79703
Email: Christopher.Knight@ghd.com; Bernard.Bockisch@ghd.com
Phone No:
Project Contact: Bernie Bockisch
Samplers's Name John Schnable

Project Information

Project Name/Number: 088210-56
Project Location: Section 23-T22S-R3
Invoice To: Direct Bill to EOG Resources, Inc.--Attn: Zane Kurtz
PO Number:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH Gasoline Range—8015	TPH Diesel Range—8015	TPH Oil Range—8015	BTEX—8021B	Chloride—EPA 300.0	Field Comments
1	Spl 8—2'	2'	11/22/2017	16:52	Soil	1								x	x	x	x	x	x	
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Turnaround Time (Business days)

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- ☐ 5 Day TAT
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- ☐ 7 Day TAT
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- ☐ Level IV (Full Data Pkg /raw data)
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- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Temp: 0.8 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 0.6

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

Relinquished by Sampler: 1 John Schnable	Date Time: 11-27-17 13:28	Received By: 1 Jannel Smith	Relinquished By: 2	Date Time:	Received By: 2	
Relinquished by: 3	Date Time:	Received By: 3 13:28	Relinquished By: 4	Date Time:	Received By: 4	
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable ☐	On Ice ☐	Cooler Temp. / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: GHD Services, INC- Midland

Date/ Time Received: 11/27/2017 01:28:00 PM

Work Order #: 569343

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.6
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

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

Analyst: PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 11/27/2017
Shawnee Smith

Checklist reviewed by: Mike Kimmel Date: 12/01/2017
Mike Kimmel