



January 9, 2018

Reference No. 11135250-8

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

Dear Mr. Ericson:

Re: Site Assessment Summary and Remediation Work Plan A-14 Compressor Station 1RP-4850 ETC Field Services LLC Site Location: Unit H, Sec. 6, T 24-S, R 25-E (Lat 32.246448N°, Long -103.402059W°) Lea County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this work plan for the above referenced site. The A-14 Compressor Station (hereafter referred to as the "Site") is located within Unit H, Section 6, Township 24 South, Range 25 East, in Lea County, New Mexico (see Figure 1). The site is owned by the U. S. Bureau of Land Management (BLM).

On October 20, 2017, a release of approximately 17.48 barrels) of water/condensate was reported to the State of New Mexico Oil Conservation Division (NMOCD) and the BLM via Form C-141. A pipeline relief valve failed due to a lodged cup pig causing the release. Contaminated surface soils were scraped in the pad area and stockpiled on site (see Figure 2). Release number 1RP-4850 was assigned by NMOCD for this event.

1. Recommended Remediation Action Limits

Based on information available from the United States Geologic Survey National Water Information System, the depth to groundwater at the Site is approximately 40 ft. below ground surface (bgs). This is based on a water well that is located approximately 2.68 mile west, south west of the Site (see Appendix A, Water Well Reports for depth to water). Additionally, there are no well head protection areas or surface water bodies within 1,000 ft. of the Site. Therefore, the preliminary total ranking score is 20 (see Table below).

Based on this score, the applicable NMOCD Site specific Recommended Remediation Action Limits (RRALs) are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for total benzene, toluene, ethylbenzene, and xylenes (BTEX), 100 mg/kg for total petroleum hydrocarbons (TPH), and 600 mg/kg for chlorides.





New Mexico Oil Conservation Division Site Assessment	
Ranking Criteria	Score
Depth to Ground Water (<50 ft. bgs)	20
Wellhead Protection Area (> 1000 ft. from water source, > 200 ft. from domestic source)	0
Distance to Surface Body Water (>1000 ft.)	0
Ranking Criteria Total Score	20*
*Because the ranking criteria total score is 20, NMOCD established RRALs are 10 mg/kg 50 mg/kg for total BTEX, 100 mg/kg for total TPH and 600 ppm for chlorides ¹ .	g for benzene,

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

2. Assessment Activities

GHD personnel performed limited soil sampling at the site on October 23 and 24, 2017. The Site assessment included the collection of soil samples within the scraped pad area and in the pasture (off-pad area) for field screening and laboratory analysis for petroleum hydrocarbons and chloride (see Figure 2 for locations). Six soil samples, TP-1 through TP-6, were collected from either a depth of 3 to 6 inches or from the surface to 2 inches in the pad area and submitted to Hall Environmental Analysis Laboratory located in Albuquerque, New Mexico. The samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA Method 8021, total petroleum hydrocarbons (TPH) by EPA Method 8015, and chloride by EPA 300.0 analysis.

BTEX constituents were not detected above the laboratory reporting limits (LRLs). Total TPH concentrations ranged from 52 to 1,410 milligrams per kilogram (mg/kg), and chloride concentrations ranged from 280 to 6,600 mg/kg. The laboratory report is included in Appendix B and the results are summarize on Figure 2 and in Table 1.

Total TPH concentrations exceed the RRAL in five samples, TP-2 and TP-3 from 3 to 6 inches and TP-4, TP-5, and TP-6 from ground surface to 2 inches. Chloride concentrations exceeded the RRAL in all samples collected from TP-2 through TP-6.

Limited sampling in the pasture area consisted of the collection of nine surface soil samples TP-7 through TP-15, collected at a depth from ground surface to 2 inches deep. These samples were field screened for petroleum hydrocarbons using the Petroflag TPH Analyzer System and for chlorides using HACH Titration Strips. Petroflag TPH concentrations ranged from 161 to 1,647 parts per million (ppm) and chloride field screening concentrations ranged from <100 to 1,136 milligrams per liter (mg/L).

Three additional soil samples were collected from a depth of 6 to 8 inches at the TP-13 through TP-15 locations within the heavy spray area (closest to the release point) in the pasture and submitted to HEAL



for laboratory analysis. The samples were analyzed for BTEX, total TPH and chloride by same methods described above.

Laboratory results from samples collected from the heavy spray area indicate BTEX constituents were not detected above the LRLs, total TPH concentrations ranged from below the LRLs to 31 mg/kg, and chloride concentrations ranged from 48 to 150 mg/kg. None of the detected concentrations exceeded the RRALs. The laboratory report is included in Appendix B and the results are summarize on Figure 2 and in Table 1.

GHD contracted with Boone Archaeological Resource Consultants, LLC located in Carlsbad, New Mexico to perform a Class III Archaeological Survey of the release area in order to initiate remediation activities. New Mexico Cultural Resources Information System number 139360 was assigned to the project. No cultural resources were updated or recorded during the survey. A copy of the survey report is included in Appendix C.

ETC Field Services, LLC (ETC) is planning on removing all of the structures and equipment from the pad area in the first or second quarter of 2018 to accommodate proposed soils remediation activities, described below.

3. Summary and Recommendations

Soil samples were collected from the release area within the fenced pad and from the adjoining pasture (see Figure 2) and submitted for laboratory analysis. Based on the laboratory results, the vertical and horizontal extent of petroleum hydrocarbon and chloride impacted soil has not been assessed to below the RRALs in the pad area. The horizontal and vertical extent of petroleum hydrocarbon and chloride impacted soil has been assessed to below the RRALs in the pasture.

Based on the results of the assessment activities, impacted soil concentrations exceeding the RRALs are only located within the pad area. Contingent upon removal of structures and equipment within the pad area by ETC, GHD proposes the following:

- Request a variance from the NMOCD and the BLM to leave the impacted soil in place in the pad area until the structures have been removed. Once the structures have been removed, the impacted soils will be excavated to an approximate depth of 1 to 2 feet and disposed of at a regulated facility. Confirmation samples will be collected for laboratory analyses following excavation activities. A 20 mil liner will be placed in the bottom of the excavation at a depth no greater than 4 ft. bgs, if necessary. Excavated areas will then be backfilled and the area re-seeded with a BLM approved seed mixture.
- Micro-Blaze® will be applied to the pasture area to remediate any residual contamination. Micro-Blaze® contains a proprietary blend of wetting agents, nutrients, and several strains of safe, non-pathogenic Bacillus bacteria. When applied to a hydrocarbon-based or organic spill or contaminant, the wetting agent begins breaking down the contaminants into smaller molecules for



more efficient degradation, by the microbes, into harmless byproducts like carbon dioxide, water, and trace salts.

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

Sincerely,

GHD

AIC Brand

Alan Brandon Senior Project Manager

AB/mc/8

Allaller

Jeffrey Walker Senior Project Manager



GHD | Ericson-A-14 Compressor | 11135250 (8)



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-08(000)GN-DL001.dwg



Source: Microsoft Product Screen shot(s) Reprinted with permission from Microsoft Corporation

Lat/Long: 32.246271° North, 103.402223° West



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1113----\11135250-ETC Field Services\11135250-08(000)GN-DL001.dwg

Tables

GHD | Ericson-A-14 Compressor | 11135250 (8)

Table 1

ETC Field Services LLC - A-14 Compressor Station Section 20, Township 20 South, Range 37 East Lea County, New Mexico Soil Analytical Results Summary

Sample ID	Sample Depth	Date	Chlorides	Benzene	Toluene	Ethylbenzene	Xylenes	Total BTEX	ТРН	ТРН	ТРН	Total TPH	Field Screen - Hydrocarbons (PetroFlag)
	(inches)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	GRO (C6-C10)	DRO (C10- C28)	EXT DRO (C28- C36)	GRO/DRO	(ppm)
									(mg/kg)	(mg/kg)	, í	(mg/kg)	
NMOCD Remediatio	on Action Levels		600	10	NE	NE	NE	50	NE	NE	NE	100	
				•			SUB	SURFACE IN	ESTIGATION SA	MPLES			
S-11135250-08-102317-MG-TP-1-3/6	3-6	10/23/2017	280	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	42	<47	42	
S-11135250-08-102317-MG-TP-2-3/6	3-6	10/23/2017	3,400	< 0.024	<0.048	<0.048	<0.095	<0.215	<4.8	1200	770	1,970	
S-11135250-08-102317-MG-TP-3-3/6	3-6	10/23/2017	3,000	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	270	150	420	
S-11135250-08-102317-MG-TP-4-0/2	0-2	10/23/2017	6,600	<0.024	<0.047	<0.047	<0.095	<0.213	<4.7	310	220	530	
S-11135250-08-102317-MG-TP-5-0/2	0-2	10/23/2017	6,500	<0.024	< 0.049	<0.049	<0.098	<0.218	<4.9	450	420	870	
S-11135250-08-102317-MG-TP-6-0/2	0-2	10/23/2017	4,700	<0.024	<0.048	<0.048	<0.096	<0.216	<4.8	810	600	1,410	
S-11135250-08-102417-MG-TP-7-0/2	0-2	10/24/2017	170	<0.025	< 0.049	<0.049	<0.099	<0.220	<4.9	12	<48	12	241
S-11135250-08-102417-MG-TP-8-0/2	0-2	10/24/2017	370	< 0.023	<0.047	<0.047	<0.093	<0.210	<4.7	17	<50	17	274
S-11135250-08-102417-MG-TP-9-0/2	0-2	10/24/2017	210	<0.023	<0.047	<0.047	<0.093	<0.210	<4.7	<10	<51	<65.7	230
S-11135250-08-102417-MG-TP-10-0/2	0-2	10/24/2017	450	< 0.024	<0.048	<0.048	<0.096	<0.216	<4.8	15	<48	15	418
S-11135250-08-102417-MG-TP-11-0/2	0-2	10/24/2017	490	<0.024	<0.048	<0.048	<0.097	<0.217	<4.8	11	<49	11	390
S-11135250-08-102417-MG-TP-12-0/2	0-2	10/24/2017	74	< 0.023	<0.046	<0.046	<0.093	<0.208	<4.6	<9.7	<48	<62.3	161
TP-13	0-2	10/24/2017											681
S-11135250-08-102417-MG-TP-13-6/8	6-8	10/24/2017	48	<0.025	< 0.050	<0.050	<0.10	<0.225	<5.0	<10.0	<51.0	<66.0	56
TP-14	0-2	10/24/2017											1,095
S-11135250-08-102417-MG-TP-14-6/8	6-8	10/24/2017	42	< 0.023	< 0.046	<0.046	<0.091	<0.206	<4.6	31.0	<47	31.0	66
TP-15	0-2	10/24/2017											1,647
S-11135250-08-102417-MG-TP-15-6/8	6-8	10/24/2017	150	<0.023	<0.046	<0.046	<0.092	<0.207	<4.6	<9.5	<47	<61.1	83

Note: Concentrations that are yellow shaded exceed the NMOCD Remediation Action Leve

NE = Not Established

mg/Kg = milligrams per Kilogram NA = Not Analyzed

Field Screen



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Appendix A Well Information



USGS Home Contact USGS Search USGS

National Water Information System: Web Interface

USGS Water Resources

Data Category:	1.00	Geographic Area:
Groundwater	V	Geographic Area: United States

GO

Click to hideNews Bulletins

- Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

Agency code = usgs site_no list =

• 321357103265201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

USGS 321357103265201 24S.34E.11.112313

Available data for this site Groundwater: Field measurements V GO

Lea County, New Mexico Hydrologic Unit Code 13070007 Latitude 32°14'16.5", Longitude 103°26'49.0" NAD83 Land-surface elevation 3,486 feet above NAVD88 This well is completed in the Ogallala Formation (1210GLL) local aquifer.

Output formats

Tab	e	of	da	ta

Tab-separated data

Graph of data

Reselect period



----- Period of approved data

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

Download a presentation-quality graph

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 https://nwis.waterdata.usgs.gov/nwis/gwlevels?

 Page Contact Information:
 USGS Water Data Support Team



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Appendix B Laboratory Reports



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

November 09, 2017

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

RE: A 14

OrderNo.: 1710F05

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 12 sample(s) on 10/26/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analy	vtical	Report	
Allary	ucar	Report	

Date Reported: 11/9/2017

CLIENT: GHD Project: A 14				Lab Or	der: 1710F	205
Lab ID: 1710F05-001			Collection	Date: 10/2	3/2017 1:56:00 H	РМ
Client Sample ID: S-11135250-08-102	317-MG-TP-1	-3/6	Μ	latrix: SOI		
Analyses	Result	PQL (Qual Units	DF I	Date Analyzed	Batch I
EPA METHOD 300.0: ANIONS					Ana	alyst: MR/
Chloride	280	30	mg/Kg	20	11/3/2017 9:33:17	•
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				Ana	alyst: TON
Diesel Range Organics (DRO)	42	9.4	mg/Kg	1	10/31/2017 7:09:57	-
Motor Oil Range Organics (MRO)	ND	47	mg/Kg		10/31/2017 7:09:57	
Surr: DNOP	80.0	70-130	%Rec		10/31/2017 7:09:57	
EPA METHOD 8015D: GASOLINE RAN	GE				Ana	alyst: NSE
Gasoline Range Organics (GRO)	ND	4.6	mg/Kg	1	10/31/2017 6:58:43	3 PM 3470
Surr: BFB	83.6	15-316	%Rec	1	10/31/2017 6:58:43	3 PM 3470
EPA METHOD 8021B: VOLATILES					Ana	alyst: NSE
Benzene	ND	0.023	mg/Kg	1	10/31/2017 6:58:43	3 PM 347(
Toluene	ND	0.046	mg/Kg	1	10/31/2017 6:58:43	3 PM 3470
Ethylbenzene	ND	0.046	mg/Kg	1	10/31/2017 6:58:43	3 PM 3470
Xylenes, Total	ND	0.092	mg/Kg	1	10/31/2017 6:58:43	3 PM 3470
Surr: 4-Bromofluorobenzene	92.0	80-120	%Rec	1	10/31/2017 6:58:43	3 PM 3470
Lab ID: 1710F05-002			Collection	Date: 10/2	3/2017 2:10:00 H	РМ
Client Sample ID: S-11135250-08-102	317-MG-TP-2	-3/6	Μ	latrix: SOI		
Analyses	Result	PQL O	Qual Units	DF I	Date Analyzed	Batch I
EPA METHOD 300.0: ANIONS					Ana	alvst: CJS
EPA METHOD 300.0: ANIONS Chloride	3400	150	mg/Kg	100	Ana 11/6/2017 7:29:13	alyst: CJS PM 3481
Chloride			mg/Kg	100	11/6/2017 7:29:13	PM 3481
Chloride EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS				11/6/2017 7:29:13 Ana	PM 3481 alyst: TON
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO)	E ORGANICS	95	mg/Kg	10	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09	PM 3481 alyst: TON 9 PM 3471
Chloride EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS			10 10	11/6/2017 7:29:13 Ana	PM 3481 alyst: TON 9 PM 3471 9 PM 3471
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	E ORGANICS 1200 770 0	95 480	mg/Kg mg/Kg	10 10	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09	PM 3481 alyst: TON 9 PM 3471 9 PM 3471 9 PM 3471
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN	E ORGANICS 1200 770 0 GE	95 480 70-130	mg/Kg mg/Kg S %Rec	10 10 10	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09	PM 3481 alyst: TON 9 PM 3471 9 PM 3471 9 PM 3471 alyst: NSE
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	E ORGANICS 1200 770 0	95 480	mg/Kg mg/Kg	10 10 10	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana	PM 3481 alyst: TON PM 3471
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO)	E ORGANICS 1200 770 0 GE ND	95 480 70-130 4.8	mg/Kg mg/Kg S %Rec mg/Kg	10 10 10	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana 11/1/2017 8:03:16 11/1/2017 8:03:16	PM 3481 alyst: TON 9 PM 3471 9 PM 3470
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	E ORGANICS 1200 770 0 GE ND 97.3	95 480 70-130 4.8 15-316	mg/Kg mg/Kg S %Rec mg/Kg %Rec	10 10 10 1 1	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana 11/1/2017 8:03:16 11/1/2017 8:03:16 Ana	PM 3481 alyst: TON PM 3471 alyst: NSE PM 3470 PM 3470 PM 3470 PM 3470
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	E ORGANICS 1200 770 0 GE ND	95 480 70-130 4.8	mg/Kg mg/Kg S %Rec mg/Kg %Rec mg/Kg	10 10 10 1 1 1	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana 11/1/2017 8:03:16 11/1/2017 8:03:16 Ana 11/1/2017 8:03:16	PM 3481 alyst: TON PM 3471 alyst: NSE PM 3470 PM 3470 PM 3470 PM 3470 PM 3470 PM 3470
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	E ORGANICS 1200 770 0 GE ND 97.3 ND	95 480 70-130 4.8 15-316 0.024	mg/Kg mg/Kg S %Rec mg/Kg %Rec mg/Kg	10 10 10 1 1 1 1	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana 11/1/2017 8:03:16 11/1/2017 8:03:16 Ana	PM 3481 alyst: TON PM 3471 alyst: NSE PM 3470 pM 3470 PM 3470 PM 3470 PM 3470
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	E ORGANICS 1200 770 0 GE ND 97.3 ND ND	95 480 70-130 4.8 15-316 0.024 0.048	mg/Kg mg/Kg S %Rec mg/Kg %Rec mg/Kg	10 10 10 1 1 1 1 1	11/6/2017 7:29:13 Ana 10/31/2017 7:32:09 10/31/2017 7:32:09 10/31/2017 7:32:09 Ana 11/1/2017 8:03:16 11/1/2017 8:03:16 11/1/2017 8:03:16 11/1/2017 8:03:16	PM 3481 alyst: TON PM 3471 alyst: NSE PM 3470 PM 3470

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

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

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analy	vtical	Report	
Allary	ucar	Report	

Date Reported: 11/9/2017

CLIENT:GHDProject:A 14				Lab O	rder: 1710	F05	
Lab ID: 1710F05-003			Collection D	ate: 10/	23/2017 2:15:00	PM	
Client Sample ID: S-11135250-08-10231	7-MG-TP-3-	-3/6	Mat	trix: SO	IL		
Analyses	Result	PQL Q	Qual Units	DF	Date Analyzed	Batch	h ID
EPA METHOD 300.0: ANIONS					An	alyst: C.	JS
Chloride	3000	150	mg/Kg	100	11/6/2017 8:06:27	-	4812
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				An	alyst: T(ом
Diesel Range Organics (DRO)	270	9.1	mg/Kg	1	11/1/2017 10:16:4	-	
Motor Oil Range Organics (MRO)	150	46	mg/Kg	1	11/1/2017 10:16:4		
Surr: DNOP	94.4	70-130	%Rec	1	11/1/2017 10:16:4		
EPA METHOD 8015D: GASOLINE RANGE					An	alyst: N	SB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	11/1/2017 8:49:58	-	4703
Surr: BFB	80.0	15-316	%Rec	1	11/1/2017 8:49:58		4703
EPA METHOD 8021B: VOLATILES					An	alyst: N	SB
Benzene	ND	0.023	mg/Kg	1	11/1/2017 8:49:58	-	 4703
Toluene	ND	0.047	mg/Kg	1	11/1/2017 8:49:58		4703
Ethylbenzene	ND	0.047	mg/Kg	1	11/1/2017 8:49:58		4703
Xylenes, Total	ND	0.093	mg/Kg	1	11/1/2017 8:49:58		4703
Surr: 4-Bromofluorobenzene	90.4	80-120	%Rec	1	11/1/2017 8:49:58	PM 34	4703
Lab ID: 1710F05-004			Collection D	ate: 10/	23/2017 2:25:00	PM	
Client Sample ID: S-11135250-08-10231	7-MG-TP-4-	-0/2	Mat	trix: SO	IL		
Analyses	Result	PQL Q	Qual Units	DF	Date Analyzed	Batch	h ID
EPA METHOD 300.0: ANIONS					An	alyst: C.	JS
Chloride	6600	300	mg/Kg	200	11/6/2017 8:18:51	-	4812
						alyst: T(ом
EPA METHOD 8015M/D: DIESEL RANGE	ORGANICS				An	aryst. It	
			ma/Ka	1		-	471Z
Diesel Range Organics (DRO)	ORGANICS 310 220	9.7 48	mg/Kg mg/Kg	1 1	An 11/1/2017 10:44:3 11/1/2017 10:44:3	0 AM 34	
	310	9.7	mg/Kg mg/Kg %Rec		11/1/2017 10:44:3	0 AM 34 0 AM 34	4712
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	310 220 93.8	9.7 48	mg/Kg	1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3	0 AM 34 0 AM 34	4712 4712
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE	310 220 93.8	9.7 48	mg/Kg %Rec	1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3	0 AM 34 0 AM 34 0 AM 34 alyst: N	4712 4712 SB
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	310 220 93.8	9.7 48 70-130	mg/Kg	1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An	0 AM 34 0 AM 34 0 AM 34 alyst: N 6 PM 34	4712 4712 SB 4703
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	310 220 93.8	9.7 48 70-130 4.7	mg/Kg %Rec mg/Kg	1 1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An 10/31/2017 8:08:3 10/31/2017 8:08:3	0 AM 34 0 AM 34 0 AM 34 alyst: N 6 PM 34 6 PM 34	4712 4712 SB 4703 4703
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO)	310 220 93.8 ND 80.0	9.7 48 70-130 4.7 15-316	mg/Kg %Rec mg/Kg %Rec	1 1 1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An 10/31/2017 8:08:3 10/31/2017 8:08:3 An	0 AM 34 0 AM 34 0 AM 34 alyst: N3 6 PM 34 6 PM 34 alyst: N3	4712 4712 SB 4703 4703 SB
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	310 220 93.8	9.7 48 70-130 4.7	mg/Kg %Rec mg/Kg %Rec mg/Kg	1 1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An 10/31/2017 8:08:3 10/31/2017 8:08:3	0 AM 34 0 AM 34 0 AM 34 alyst: N 6 PM 34 6 PM 34 alyst: N 6 PM 34	4712 4712 SB 4703 4703 SB 4703
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	310 220 93.8	9.7 48 70-130 4.7 15-316 0.024	mg/Kg %Rec mg/Kg %Rec mg/Kg mg/Kg	1 1 1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An 10/31/2017 8:08:3 10/31/2017 8:08:3 An 10/31/2017 8:08:3	0 AM 34 0 AM 34 0 AM 34 alyst: N 6 PM 34 6 PM 34 6 PM 34 6 PM 34 6 PM 34	4712 4712 SB 4703 4703 SB 4703 4703
Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	310 220 93.8 ND 80.0 ND ND	9.7 48 70-130 4.7 15-316 0.024 0.047	mg/Kg %Rec mg/Kg %Rec mg/Kg	1 1 1 1 1	11/1/2017 10:44:3 11/1/2017 10:44:3 11/1/2017 10:44:3 An 10/31/2017 8:08:3 10/31/2017 8:08:3 10/31/2017 8:08:3 10/31/2017 8:08:3	0 AM 34 0 AM 34 0 AM 34 alyst: N 6 PM 34 6 PM 34 6 PM 34 6 PM 34 6 PM 34	4712 4712 SB 4703 4703 SB 4703 4703 4703

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

- Qualifiers: * Value exceeds Maximum Contaminant Level.
 - D Sample Diluted Due to Matrix
 - H Holding times for preparation or analysis exceeded
 - ND Not Detected at the Reporting Limit
 - PQL Practical Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical Report	Anal	vtical	Report	
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Date Reported: 11/9/2017

CLIENT: GHD Project: A 14				Lab (Order:	1710F05	
Lab ID: 1710F05-005			Collectio	n Date: 10	/23/2017 2	:35:00 PM	
Client Sample ID: S-11135250-08-102	317-MG-TP-5-	-0/2	I	Matrix: SC	DIL		
Analyses	Result	PQL (Qual Units	DF	Date Ana	lyzed Ba	atch ID
EPA METHOD 300.0: ANIONS						Analyst	: CJS
Chloride	6500	300	mg/Kg	20	0 11/6/2017	8:31:16 PM	
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS		0.0			Analyst	: том
Diesel Range Organics (DRO)	450	9.8	mg/Kg	1	11/1/2017	11:11:58 AM	
Motor Oil Range Organics (MRO)	430	49	mg/Kg	1		11:11:58 AM	
Surr: DNOP	99.1	70-130	%Rec	1		11:11:58 AM	
EPA METHOD 8015D: GASOLINE RAN	GE					Analyst	: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/31/201	7 8:31:55 PM	
Surr: BFB	79.6	15-316	%Rec	1		7 8:31:55 PM	
EPA METHOD 8021B: VOLATILES						Analyst	NSB
Benzene	ND	0.024	mg/Kg	1	10/31/201	7 8:31:55 PM	
Toluene	ND	0.049	mg/Kg	1		7 8:31:55 PM	
Ethylbenzene	ND	0.049	mg/Kg	1		7 8:31:55 PM	
Xylenes, Total	ND	0.098	mg/Kg	1		7 8:31:55 PM	
Surr: 4-Bromofluorobenzene	87.8	80-120	%Rec	1	10/31/201	7 8:31:55 PM	34703
Lab ID: 1710F05-006			Collectio	Da4a4 10	122/2017 2	:05:00 PM	
			Conecuo	n Date: 10	123/20173		
	317-MG-TP-6-	-0/2		Matrix: SC		.05.001 14	
Client Sample ID: S-11135250-08-102 Analyses	317-MG-TP-6 Result			Matrix: SO			atch ID
Client Sample ID: S-11135250-08-102 Analyses			I	Matrix: SO	DIL	lyzed Ba	atch ID
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS	Result	PQL] Qual Units	Matrix: SC DF	DIL Y Date Ana	lyzed B a Analyst	: CJS
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride	Result 4700	PQL .	I	Matrix: SC DF	DIL	lyzed Ba Analyst 8:43:40 PM	: CJS 34812
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG	Result 4700 GE ORGANICS	PQL 300	I Qual Units mg/Kg	Matrix: SC DF 20	DIL ' Date Ana 0 11/6/2017	lyzed B Analyst 8:43:40 PM Analyst	: CJS 34812 : TOM
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO)	Result 4700 GE ORGANICS 810	PQL 300 95	I Qual Units mg/Kg mg/Kg	Matrix: SC DF 20 10	DIL Date Ana 11/6/2017 10/31/201	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM	: CJS 34812 : TOM 34712
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	Result 4700 SE ORGANICS 810 600	PQL 300 95 480	I Qual Units mg/Kg mg/Kg mg/Kg	Matrix: SC DF 20 10 10	DIL Date Ana 0 11/6/2017 10/31/201 10/31/201	lyzed B: Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM	: CJS 34812 : TOM 34712 34712
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	Result 4700 BE ORGANICS 810 600 0	PQL 300 95	I Qual Units mg/Kg mg/Kg	Matrix: SC DF 20 10	DIL Date Ana 0 11/6/2017 10/31/201 10/31/201	lyzed B: Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM	: CJS 34812 : TOM 34712 34712 34712
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN	Result 4700 SE ORGANICS 810 600 0 GE	PQL 300 95 480 70-130	Qual Units mg/Kg mg/Kg mg/Kg S %Rec	Matrix: SC DF 20 10 10 10	DIL DIL Date Ana 0 11/6/2017 10/31/201 10/31/201 10/31/201	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM Analyst	: CJS 34812 : TOM 34712 34712 34712 : NSB
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO)	Result 4700 SE ORGANICS 810 600 0 GE ND	PQL 300 95 480 70-130 4.8	Qual Units mg/Kg mg/Kg S %Rec mg/Kg	Matrix: SC DF 20 10 10 10 10	DIL Date Ana 11/6/2017 10/31/201 10/31/201 10/31/201 10/31/201	lyzed B: Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 : NSB 34703
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	Result 4700 SE ORGANICS 810 600 0 GE	PQL 300 95 480 70-130	Qual Units mg/Kg mg/Kg mg/Kg S %Rec	Matrix: SC DF 20 10 10 10	DIL Date Ana 11/6/2017 10/31/201 10/31/201 10/31/201 10/31/201	lyzed B: Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 : NSB 34703 34703
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	Result 4700 SE ORGANICS 810 600 0 GE ND 78.4	PQL 300 95 480 70-130 4.8 15-316	Qual Units mg/Kg mg/Kg S %Rec mg/Kg %Rec	Matrix: SC DF 20 10 10 10 10 10 10	DIL DIL Date Ana 0 11/6/2017 10/31/201 10/31/201 10/31/201 10/31/201	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 34712 : NSB 34703 34703 34703
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	Result 4700 SE ORGANICS 810 600 0 GE ND 78.4 ND	PQL 300 95 480 70-130 4.8 15-316 0.024	Qual Units mg/Kg mg/Kg S %Rec mg/Kg %Rec mg/Kg	Matrix: SC DF 20 10 10 10 10 10 10	DIL DIL Date Ana 0 11/6/2017 10/31/201 10/31/201 10/31/201 10/31/201 10/31/201	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM Analyst 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 34712 34703 34703 : NSB 34703
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	Result 4700 SE ORGANICS 810 600 0 GE ND 78.4 ND ND ND	PQL 300 95 480 70-130 4.8 15-316 0.024 0.048	Qual Units mg/Kg mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg mg/Kg	Matrix: SC DF 20 10 10 10 10 1 1 1 1 1	DIL DIL Date Ana 0 11/6/2017 10/31/201 10/31/201 10/31/201 10/31/201 10/31/201	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM Analyst 7 8:55:13 PM 7 8:55:13 PM 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 : NSB 34703 34703 34703 34703
Client Sample ID: S-11135250-08-102 Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	Result 4700 SE ORGANICS 810 600 0 GE ND 78.4 ND	PQL 300 95 480 70-130 4.8 15-316 0.024	Qual Units mg/Kg mg/Kg S %Rec mg/Kg %Rec mg/Kg	Matrix: SC DF 20 10 10 10 10 10 10	DIL DIL Date Ana 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017 10/31/2017	lyzed Ba Analyst 8:43:40 PM Analyst 7 9:00:25 PM 7 9:00:25 PM Analyst 7 8:55:13 PM Analyst 7 8:55:13 PM	: CJS 34812 : TOM 34712 34712 34712 : NSB 34703 34703 34703 34703 34703

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

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

Analy	vtical	Report	
Allary	ucar	Report	

Date Reported: 11/9/2017

CLIENT:GHDProject:A 14				Lab O	rder: 1710	F05
Lab ID: 1710F05-007 Client Sample ID: S-11135250-08-102	417_MG_TP_7	_0/2		ate: 10/ trix: SO	24/2017 11:55:00	AM
Analyses	Result		al Units		Date Analyzed	Batch ID
					-	
EPA METHOD 300.0: ANIONS						alyst: MRA
Chloride	170	30	mg/Kg	20	11/3/2017 11:37:2	
EPA METHOD 8015M/D: DIESEL RANG					An	alyst: TOM
Diesel Range Organics (DRO)	12	9.6	mg/Kg	1	10/31/2017 9:22:2	
Motor Oil Range Organics (MRO)	ND	48	mg/Kg	1	10/31/2017 9:22:2	
Surr: DNOP	79.8	70-130	%Rec	1	10/31/2017 9:22:2	9 PM 34712
EPA METHOD 8015D: GASOLINE RAN	GE				An	alyst: NSB
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	10/31/2017 9:18:2	9 PM 34703
Surr: BFB	79.4	15-316	%Rec	1	10/31/2017 9:18:2	9 PM 34703
EPA METHOD 8021B: VOLATILES					An	alyst: NSB
Benzene	ND	0.025	mg/Kg	1	10/31/2017 9:18:2	-
Toluene	ND	0.049	mg/Kg	1	10/31/2017 9:18:2	
Ethylbenzene	ND	0.049	mg/Kg	1	10/31/2017 9:18:2	PM 34703
Xylenes, Total	ND	0.099	mg/Kg	1	10/31/2017 9:18:2	9 PM 34703
Surr: 4-Bromofluorobenzene	89.9	80-120	%Rec	1	10/31/2017 9:18:2	9 PM 34703
Lab ID: 1710F05-008			Collection D	ate: 10/	24/2017 12:00:00	PM
Client Sample ID: S-11135250-08-102	417-MG-TP-8	-0/2	Ma	trix: SO	IL	
	Dogult	POL OI	al Units	DF	Date Analyzed	Batch ID
Analyses	Result	1 <u>2</u> 1 <u>2</u> ,				
EPA METHOD 300.0: ANIONS	Kesun	1.65 4.			An	alyst: MRA
-	370	30	mg/Kg	20	An: 11/3/2017 11:49:4	-
EPA METHOD 300.0: ANIONS Chloride	370	30	mg/Kg	20	11/3/2017 11:49:4	7 PM 34812
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG	370 E ORGANICS	30		-	11/3/2017 11:49:4 Ana	7 PM 34812 alyst: TOM
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO)	370 E ORGANICS 17	30 9.9	mg/Kg	1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3	7 PM 34812 alyst: TOM 6 PM 34712
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	370 E ORGANICS 17 ND	30	mg/Kg mg/Kg	-	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	370 E ORGANICS 17 ND 84.2	30 9.9 50	mg/Kg	1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN	370 E ORGANICS 17 ND 84.2 GE	30 9.9 50 70-130	mg/Kg mg/Kg %Rec	1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An:	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 6 PM 34712 alyst: NSB
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO)	370 E ORGANICS 17 ND 84.2 GE ND	30 9.9 50 70-130 4.7	mg/Kg mg/Kg %Rec mg/Kg	1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 alyst: NSB 0 PM 34703
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB	370 E ORGANICS 17 ND 84.2 GE	30 9.9 50 70-130	mg/Kg mg/Kg %Rec	1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0 10/31/2017 9:42:0	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 alyst: NSB 0 PM 34703 0 PM 34703
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	370 E ORGANICS 17 ND 84.2 GE ND 83.0	30 9.9 50 70-130 4.7 15-316	mg/Kg mg/Kg %Rec mg/Kg %Rec	1 1 1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0 10/31/2017 9:42:0 An:	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 alyst: NSB 0 PM 34703 0 PM 34703 0 PM 34703
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	370 E ORGANICS 17 ND 84.2 GE ND 83.0 ND	30 9.9 50 70-130 4.7 15-316 0.023	mg/Kg mg/Kg %Rec mg/Kg mg/Kg	1 1 1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0 10/31/2017 9:42:0 An: 10/31/2017 9:42:0	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 alyst: NSB 0 PM 34703 0 PM 34703 alyst: NSB 0 PM 34703
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	370 E ORGANICS 17 ND 84.2 GE ND 83.0 ND ND ND	30 9.9 50 70-130 4.7 15-316 0.023 0.047	mg/Kg mg/Kg %Rec mg/Kg mg/Kg mg/Kg	1 1 1 1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0 10/31/2017 9:42:0 An: 10/31/2017 9:42:0 10/31/2017 9:42:0	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 alyst: NSB 0 PM 34703 0 PM 34703 alyst: NSB 0 PM 34703 0 PM 34703
EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	370 E ORGANICS 17 ND 84.2 GE ND 83.0 ND	30 9.9 50 70-130 4.7 15-316 0.023	mg/Kg mg/Kg %Rec mg/Kg mg/Kg	1 1 1 1 1	11/3/2017 11:49:4 An: 10/31/2017 9:44:3 10/31/2017 9:44:3 10/31/2017 9:44:3 An: 10/31/2017 9:42:0 10/31/2017 9:42:0 An: 10/31/2017 9:42:0	7 PM 34812 alyst: TOM 5 PM 34712 5 PM 34712 5 PM 34712 5 PM 34712 6 PM 34712 6 PM 34712 6 PM 34703 0 PM 34703

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

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

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 4 of 10
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analy	tical	Report	
7 7 11 COL	ucai	I Uppit	

Date Reported: 11/9/2017

CLIENT:GHDProject:A 14				Lab O	rder: 1710	F05
Lab ID: 1710F05-009			Collection Da	te: 10/	24/2017 12:10:00	PM
Client Sample ID: S-11135250-08-1024	17-MG-TP-9-	-0/2	Matr	ix: SO	IL	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					An	alyst: MRA
Chloride	210	30	mg/Kg	20	11/4/2017 12:02:1	1 AM 34812
EPA METHOD 8015M/D: DIESEL RANGI	E ORGANICS				An	alyst: TOM
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/31/2017 10:06:	40 PM 34712
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	10/31/2017 10:06:	
Surr: DNOP	86.2	70-130	%Rec	1	10/31/2017 10:06:	40 PM 34712
EPA METHOD 8015D: GASOLINE RANG	E				An	alyst: NSB
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	10/31/2017 10:05:	30 PM 34703
Surr: BFB	83.1	15-316	%Rec	1	10/31/2017 10:05:	30 PM 34703
EPA METHOD 8021B: VOLATILES					An	alyst: NSB
Benzene	ND	0.023	mg/Kg	1	10/31/2017 10:05:	30 PM 34703
Toluene	ND	0.047	mg/Kg	1	10/31/2017 10:05:	30 PM 34703
Ethylbenzene	ND	0.047	mg/Kg	1	10/31/2017 10:05:	30 PM 34703
Xylenes, Total	ND	0.093	mg/Kg	1	10/31/2017 10:05:	30 PM 34703
Surr: 4-Bromofluorobenzene	92.5	80-120	%Rec	1	10/31/2017 10:05:	30 PM 34703
Lab ID: 1710F05-010			Collection Da	te: 10/	24/2017 12:15:00	PM
Client Sample ID: S-11135250-08-1024	17-MG-TP-10	0-0/2	Matr	ix: SO	IL	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					An	alyst: MRA
EPA METHOD 300.0: ANIONS Chloride	450	30	mg/Kg	20	An 11/4/2017 12:14:3	-
			mg/Kg	20	11/4/2017 12:14:3	-
Chloride				20 1	11/4/2017 12:14:3	5 AM 34812 alyst: TOM
Chloride EPA METHOD 8015M/D: DIESEL RANGI	ORGANICS		mg/Kg mg/Kg mg/Kg	-	11/4/2017 12:14:3 An	5 AM 34812 alyst: TOM 42 PM 34712
Chloride EPA METHOD 8015M/D: DIESEL RANGI Diesel Range Organics (DRO)	E ORGANICS	9.7	mg/Kg	1	11/4/2017 12:14:3 An 10/31/2017 10:28:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712
Chloride EPA METHOD 8015M/D: DIESEL RANGI Diesel Range Organics (DRO) Motor Oil Range Organics (MRO)	E ORGANICS 15 ND 81.0	9.7 48	mg/Kg mg/Kg	1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712
Chloride EPA METHOD 8015M/D: DIESEL RANGE Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE	E ORGANICS 15 ND 81.0	9.7 48	mg/Kg mg/Kg %Rec	1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB
Chloride EPA METHOD 8015M/D: DIESEL RANGI Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	E ORGANICS 15 ND 81.0	9.7 48 70-130	mg/Kg mg/Kg	1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703
Chloride EPA METHOD 8015M/D: DIESEL RANGI Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO)	E ORGANICS 15 ND 81.0 E ND	9.7 48 70-130 4.8	mg/Kg mg/Kg %Rec mg/Kg	1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An 10/31/2017 11:39: 10/31/2017 11:39:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703
Chloride EPA METHOD 8015M/D: DIESEL RANGE Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB	E ORGANICS 15 ND 81.0 E ND	9.7 48 70-130 4.8	mg/Kg mg/Kg %Rec mg/Kg	1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An 10/31/2017 11:39: 10/31/2017 11:39:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703 07 PM 34703 07 PM 34703
Chloride EPA METHOD 8015M/D: DIESEL RANGE Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	E ORGANICS 15 ND 81.0 E ND 81.6	9.7 48 70-130 4.8 15-316	mg/Kg mg/Kg %Rec mg/Kg %Rec	1 1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An 10/31/2017 11:39: 10/31/2017 11:39: An	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703 07 PM 34703 alyst: NSB 07 PM 34703
Chloride EPA METHOD 8015M/D: DIESEL RANGI Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANG Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	E ORGANICS 15 ND 81.0 6E ND 81.6 ND	9.7 48 70-130 4.8 15-316 0.024	mg/Kg mg/Kg %Rec %Rec mg/Kg	1 1 1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An 10/31/2017 11:39: 10/31/2017 11:39: An 10/31/2017 11:39:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703 07 PM 34703 alyst: NSB 07 PM 34703 07 PM 34703
Chloride EPA METHOD 8015M/D: DIESEL RANGE Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RANGE Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	E ORGANICS 15 ND 81.0 E ND 81.6 ND ND ND	9.7 48 70-130 4.8 15-316 0.024 0.048	mg/Kg mg/Kg %Rec mg/Kg mg/Kg mg/Kg	1 1 1 1 1 1 1	11/4/2017 12:14:3 An 10/31/2017 10:28: 10/31/2017 10:28: 10/31/2017 10:28: An 10/31/2017 11:39: 10/31/2017 11:39: An 10/31/2017 11:39: 10/31/2017 11:39:	5 AM 34812 alyst: TOM 42 PM 34712 42 PM 34712 42 PM 34712 alyst: NSB 07 PM 34703 07 PM 34703 alyst: NSB 07 PM 34703 07 PM 34703 07 PM 34703

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

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

Date Reported: 11/9/2017

CLIENT:GHDProject:A 14				Lab O	rder: 1710	F05
Lab ID: 1710F05-011			Collection D	ate: 10/	24/2017 12:20:00) PM
Client Sample ID: S-11135250-08-102	417-MG-TP-1	1-0/2	Mat	rix: SO	IL	
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS					An	alyst: MRA
Chloride	490	30	mg/Kg	20	11/4/2017 12:27:0	
EPA METHOD 8015M/D: DIESEL RANG	SE ORGANICS	5			An	alyst: TOM
Diesel Range Organics (DRO)		9.8	mg/Kg	1	10/31/2017 10:50:	-
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	10/31/2017 10:50:	
Surr: DNOP	83.6	70-130	%Rec	1	10/31/2017 10:50:	
EPA METHOD 8015D: GASOLINE RAN	GF				An	alyst: NSB
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	1	11/1/2017 12:02:3	
Surr: BFB	84.0	4.0 15-316	%Rec	1	11/1/2017 12:02:3	
EPA METHOD 8021B: VOLATILES						alyst: NSB
Benzene	ND	0.024	mg/Kg	1	11/1/2017 12:02:3	•
Toluene	ND	0.024	mg/Kg	1	11/1/2017 12:02:3	
Ethylbenzene	ND	0.048	mg/Kg	1	11/1/2017 12:02:3	
Xylenes, Total	ND	0.097	mg/Kg	1	11/1/2017 12:02:3	
Surr: 4-Bromofluorobenzene	93.5	80-120	%Rec	1	11/1/2017 12:02:3	5 AM 34703
Lab ID: 1710F05-012			Collection D	ate: 10/	24/2017 12:25:00) PM
Client Sample ID: S-11135250-08-102	417-MG-TP-1	2-0/2	Mat	rix: SO	IL	
-	417-MG-TP-1 Result	2-0/2 PQL Qu			IL Date Analyzed	Batch ID
-					Date Analyzed	
Analyses			al Units		Date Analyzed	alyst: MRA
Analyses EPA METHOD 300.0: ANIONS Chloride	Result 74	PQL Qu		DF	Date Analyzed An 11/4/2017 12:39:2	alyst: MRA 4 AM 34812
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC	Result 74 GE ORGANICS	PQL Qu 30	al Units mg/Kg	DF 20	Date Analyzed An 11/4/2017 12:39:2 An	alyst: MRA 4 AM 34812 alyst: TOM
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO)	Result 74 GE ORGANICS ND	PQL Qu 30 9.7	al Units mg/Kg mg/Kg	DF 20 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12:	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC	Result 74 GE ORGANICS	PQL Qu 30	al Units mg/Kg	DF 20	Date Analyzed An 11/4/2017 12:39:2 An	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712
Chloride EPA METHOD 8015M/D: DIESEL RANG Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP	Result 74 GE ORGANICS ND ND 75.8	PQL Qu 30 9.7 48	al Units mg/Kg mg/Kg mg/Kg	DF 20 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12:	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN	Result 74 SE ORGANICS ND ND 75.8 GE	PQL Qu 30 9.7 48 70-130	al Units mg/Kg mg/Kg %Rec	DF 20 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO)	Result 74 SE ORGANICS ND ND 75.8 GE ND	PQL Qu 30 9.7 48 70-130 4.6	al Units mg/Kg mg/Kg %Rec mg/Kg	DF 20 1 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	Result 74 SE ORGANICS ND ND 75.8 GE	PQL Qu 30 9.7 48 70-130	al Units mg/Kg mg/Kg %Rec	DF 20 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703 3 AM 34703
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	Result 74 SE ORGANICS ND 75.8 GE ND 81.3	PQL Qu 30 9.7 48 70-130 4.6 15-316	al Units mg/Kg mg/Kg %Rec mg/Kg %Rec	DF 20 1 1 1 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0 11/1/2017 12:26:0 An	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703 3 AM 34703 alyst: NSB
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	Result 74 SE ORGANICS ND 75.8 GE ND 81.3 ND	PQL Qu 30 9.7 48 70-130 4.6 15-316 0.023	al Units mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg	DF 20 1 1 1 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0 11/1/2017 12:26:0 An 11/1/2017 12:26:0	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703 3 AM 34703 alyst: NSB 3 AM 34703
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	Result 74 SE ORGANICS ND 75.8 GE ND 81.3 ND ND ND	PQL Qu 30 9.7 48 70-130 4.6 15-316 0.023 0.046	al Units mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg mg/Kg	DF 20 1 1 1 1 1 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0 11/1/2017 12:26:0 11/1/2017 12:26:0	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703 3 AM 34703 alyst: NSB 3 AM 34703 3 AM 34703
Analyses EPA METHOD 300.0: ANIONS Chloride EPA METHOD 8015M/D: DIESEL RANC Diesel Range Organics (DRO) Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	Result 74 SE ORGANICS ND 75.8 GE ND 81.3 ND	PQL Qu 30 9.7 48 70-130 4.6 15-316 0.023	al Units mg/Kg mg/Kg %Rec mg/Kg %Rec mg/Kg	DF 20 1 1 1 1 1 1	Date Analyzed An 11/4/2017 12:39:2 An 10/31/2017 11:12: 10/31/2017 11:12: 10/31/2017 11:12: An 11/1/2017 12:26:0 11/1/2017 12:26:0 An 11/1/2017 12:26:0	alyst: MRA 4 AM 34812 alyst: TOM 52 PM 34712 52 PM 34712 52 PM 34712 alyst: NSB 3 AM 34703 alyst: NSB 3 AM 34703 3 AM 34703 3 AM 34703 3 AM 34703

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

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

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

GHD

Project: A 14		
Sample ID MB-34812	SampType: mblk TestCode: EPA Method 300.0: Anions	
Client ID: PBS	Batch ID: 34812 RunNo: 46865	
Prep Date: 11/3/2017	Analysis Date: 11/3/2017 SeqNo: 1496174 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Chloride	ND 1.5	
Sample ID LCS-34812	SampType: Ics TestCode: EPA Method 300.0: Anions	
Client ID: LCSS	Batch ID: 34812 RunNo: 46865	
Prep Date: 11/3/2017	Analysis Date: 11/3/2017 SeqNo: 1496175 Units: mg/Kg	
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit	Qual
Chloride	15 1.5 15.00 0 99.7 90 110	

Qualifiers:

Client:

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

Client:GHDProject:A 14

Sample ID LCS-34712	SampT	ype: LC	s	TestCode: EPA Method 8015M/D: Diesel Range Organics						
Client ID: LCSS	•	n ID: 34			RunNo: 4			0	U	
Prep Date: 10/30/2017	Analysis Date: 10/31/2017			S	SeqNo: 1491802			Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.0	73.2	114			
			- 000		05.4	70	400			
Surr: DNOP	4.3		5.000		85.4	70	130			
Surr: DNOP Sample ID MB-34712		ype: ME		Tes			130 8015M/D: Die	esel Range	e Organics	
	SampT	ÿpe: ME n ID: 34	BLK			PA Method		esel Rang	e Organics	
Sample ID MB-34712 Client ID: PBS	SampT	n ID: 34	BLK	F	tCode: El	PA Method		U	e Organics	
Sample ID MB-34712 Client ID: PBS	SampT Batch	n ID: 34	BLK 712 D/31/2017	F	tCode: El	PA Method	8015M/D: Die	U	e Organics	Qual
Sample ID MB-34712 Client ID: PBS Prep Date: 10/30/2017 Analyte	SampT Batch Analysis D	n ID: 34 Date: 10	BLK 712 D/31/2017	F	tCode: EF RunNo: 40 SeqNo: 14	PA Method 6767 491803	8015M/D: Die Units: mg/K	(g	U	Qual
Sample ID MB-34712 Client ID: PBS Prep Date: 10/30/2017	SampT Batch Analysis D Result	n ID: 34 Date: 1 (PQL	BLK 712 D/31/2017	F	tCode: EF RunNo: 40 SeqNo: 14	PA Method 6767 491803	8015M/D: Die Units: mg/K	(g	U	Qual

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 8 of 10

Client:	GHD A 14												
Project:													
Sample ID	MB-34703	SampTy	pe: ME	BLK	Tes	tCode: El	PA Method	8015D: Gasc	oline Rang	e			
Client ID:	PBS	Batch	ID: 34	703	R	unNo: 4	6774						
Prep Date:	10/30/2017	Analysis Da	ite: 10	0/31/2017	S	eqNo: 14	491570	Units: mg/k	(g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	ge Organics (GRO)	ND	5.0										
Surr: BFB		840		1000		83.6	15	316					
Sample ID	LCS-34703	SampTy	pe: LC	s	Tes	tCode: El	PA Method	8015D: Gaso	line Rang	e			
Client ID:	LCSS	Batch	ID: 34	703	R	unNo: 4	6774						
Prep Date:	10/30/2017	Analysis Da	ite: 10	0/31/2017	S	eqNo: 14	491571	Units: mg/k	٢g				
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual		
Gasoline Rang	ge Organics (GRO)	25	5.0	25.00	0	101	75.9	131					
Surr: BFB		980		1000		98.2	15	316					
Sample ID	1710F05-001AMS	SampTy	pe: M S	S	Tes	tCode: El	PA Method	8015D: Gasc	line Rang	e			
•	1710F05-001AMS S-11135250-08-10		•			tCode: El		8015D: Gasc	oline Rang	e			
•	S-11135250-08-10		ID: 34	703	R		6774	8015D: Gasc Units: mg/k	Ū	e			
Client ID:	S-11135250-08-10	023 Batch	ID: 34	703 0/31/2017	R	unNo: 4	6774		Ū	e RPDLimit	Qual		
Client ID: Prep Date: Analyte	S-11135250-08-10	023 Batch Analysis Da	ID: 34 Ite: 1(703 0/31/2017	ਸ 2	tunNo: 40 GeqNo: 14	6774 491574	Units: mg/k	(g		Qual		
Client ID: Prep Date: Analyte	S-11135250-08-10 10/30/2017	023 Batch Analysis Da Result	ID: 34 Ite: 1(PQL	703 0/31/2017 SPK value	R S SPK Ref Val	aunNo: 40 SeqNo: 14 %REC	6774 491574 LowLimit	Units: mg/⊮ HighLimit	(g		Qual		
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	S-11135250-08-10 10/30/2017	023 Batch Analysis Da Result 26 940	ID: 34 Ite: 1(PQL 4.7	703 0/31/2017 SPK value 23.74 949.7	R S SPK Ref Val 0	eunNo: 44 SeqNo: 14 %REC 109 98.6	6774 491574 LowLimit 77.8 15	Units: mg/k HighLimit 128	رو RPD	RPDLimit	Qual		
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB	S-11135250-08-10 10/30/2017 ge Organics (GRO) 1710F05-001AMS	D23 Batch Analysis Da Result 26 940 SD SampTy	ID: 34 Ite: 1(PQL 4.7	703 0/31/2017 SPK value 23.74 949.7 SD	R S SPK Ref Val 0 Tes	eunNo: 44 SeqNo: 14 %REC 109 98.6	6774 491574 LowLimit 77.8 15 PA Method	Units: mg/F HighLimit 128 316	رو RPD	RPDLimit	Qual		
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	S-11135250-08-10 10/30/2017 ge Organics (GRO) 1710F05-001AMS	D23 Batch Analysis Da Result 26 940 SD SampTy	ID: 34 Ite: 10 PQL 4.7 pe: M\$ ID: 34	703 0/31/2017 SPK value 23.74 949.7 SD 703	R S SPK Ref Val 0 Tes R	eunNo: 40 6eqNo: 14 %REC 109 98.6 tCode: Ef	6774 491574 LowLimit 77.8 15 PA Method 6774	Units: mg/F HighLimit 128 316	(g %RPD	RPDLimit	Qual		
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID:	S-11135250-08-10 10/30/2017 ge Organics (GRO) 1710F05-001AMS S-11135250-08-10	D23 Batch Analysis Da Result 26 940 CD SampTy D23 Batch	ID: 34 Ite: 10 PQL 4.7 pe: M\$ ID: 34	703 0/31/2017 SPK value 23.74 949.7 SD 703 0/31/2017	R S SPK Ref Val 0 Tes R	2unNo: 4 6eqNo: 14 709 98.6 109 109 109 109 109 109 109 109 109 109	6774 491574 LowLimit 77.8 15 PA Method 6774	Units: mg/k HighLimit 128 316 8015D: Gasc	(g %RPD	RPDLimit	Qual		
Client ID: Prep Date: Analyte Gasoline Rang Surr: BFB Sample ID Client ID: Prep Date: Analyte	S-11135250-08-10 10/30/2017 ge Organics (GRO) 1710F05-001AMS S-11135250-08-10	23 Batch Analysis Da Result 26 940 50 SampTy 52 Batch Analysis Da	ID: 34 Ite: 10 PQL 4.7 ID: 34 Ite: 10	703 0/31/2017 SPK value 23.74 949.7 SD 703 0/31/2017	R SPK Ref Val 0 Tes R S	2unNo: 4 6eqNo: 14 %REC 109 98.6 Code: Ef 2unNo: 4 6eqNo: 14	6774 491574 LowLimit 77.8 15 PA Method 6774 491575	Units: mg/k HighLimit 128 316 8015D: Gaso Units: mg/k	Sg %RPD Pline Rang	RPDLimit e			

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 9 of 10

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	1710F05
	09-Nov-17

Client: GHD

Project: A 14

Sample ID MB-34703	Samp	Гуре: МЕ	BLK	Tes						
Client ID: PBS	Batc	h ID: 34	703	F	RunNo: 4	6774				
Prep Date: 10/30/2017	Analysis E	Date: 10	0/31/2017	S	SeqNo: 1	491596	Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Com A David Annah annah							100			
Surr: 4-Bromofluorobenzene	0.93		1.000		92.6	80	120			
Surr: 4-Bromotiluorobenzene Sample ID LCS-34703		Гуре: LC		Tes			120 8021B: Volat	tiles		
	Samp	Гуре: LC h ID: 34	S			PA Method		tiles		
Sample ID LCS-34703	Samp	h ID: 34	:S 703	F	tCode: El	PA Method 6774				
Sample ID LCS-34703 Client ID: LCSS	Samp] Batc	h ID: 34	:S 703 D/31/2017	F	tCode: El RunNo: 4	PA Method 6774	8021B: Volat		RPDLimit	Qual
Sample IDLCS-34703Client ID:LCSSPrep Date:10/30/2017	Samp Batc Analysis [h ID: 34 Date: 1(:S 703 D/31/2017	F	tCode: El RunNo: 4 SeqNo: 1	PA Method 6774 491597	8021B: Volat Units: mg/K	ſg	RPDLimit	Qual
Sample ID LCS-34703 Client ID: LCSS Prep Date: 10/30/2017 Analyte Benzene	Samp Batc Analysis I Result	h ID: 34 Date: 1(PQL	:S 703 D/31/2017 SPK value	F S SPK Ref Val	tCode: El RunNo: 4 SeqNo: 1 %REC	PA Method 6774 491597 LowLimit	8021B: Volat Units: mg/k HighLimit	ſg	RPDLimit	Qual
Sample ID LCS-34703 Client ID: LCSS Prep Date: 10/30/2017 Analyte	SampT Batc Analysis E Result 0.98	h ID: 34 Date: 1(<u>PQL</u> 0.025	S 703 D/31/2017 SPK value 1.000	F S SPK Ref Val 0	tCode: El RunNo: 4 SeqNo: 1 %REC 98.0	PA Method 6774 491597 LowLimit 77.3	8021B: Volat Units: mg/K HighLimit 128	ſg	RPDLimit	Qual
Sample ID LCS-34703 Client ID: LCSS Prep Date: 10/30/2017 Analyte Benzene Toluene	SampT Batc Analysis E Result 0.98 0.98	h ID: 34 Date: 1(<u>PQL</u> 0.025 0.050	S 703 0/31/2017 SPK value 1.000 1.000	F SPK Ref Val 0 0	tCode: El RunNo: 4 SeqNo: 1 %REC 98.0 97.5	PA Method 6774 491597 LowLimit 77.3 79.2	8021B: Volat Units: mg/k HighLimit 128 125	ſg	RPDLimit	Qual

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

	HALL
	ENVIRONMENTAL
	ANALYSIS
	LABORATORY
_	

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

Sample Log-In Check List

Clie	nt Name:	GHD		Work (Order Numl	ber: 1710F0	5	1		
Rece	eived By:	Richie Eria	acho	10/26/20	0 AM	12	~ <	· .		
Com	pleted By:	Sophia Ca				PM		e dagen		
	ewed By:	Ne		10/27/1.			Copera			
	,.	102			/					
<u>Cha</u>	in of Cus	tody								
1. (Custody sea	ils intact on s	ample bottles	?		Yes [] и	•	Not Present 🗹	
2. I	s Chain of (Custody comp	lete?			Yes 🖌	2 N	•	Not Present	
3. H	How was the	e sample deliv	vered?			Courier				
<u>Log</u>	<u>ı In</u>									
4. 1	Was an atte	empt made to	cool the same	bles?		Yes		lo 🗌	NA 🗌	
5. N	Nere all sar	nples receive	d at a tempera	ature of >0° C	to 6.0°C	Yes 🔽) No	b	NA 🗌	
6. :	Sample(s) ii	n proper conta	ainer(s)?			Yes		io 🗌		
7. ٤	Sufficient sa	mple volume	for indicated t	est(s)?		Yes 🖌	n N	•		
8. A	Are samples	except VOA	and ONG) pr	operly preserv	ed?	Yes 🛛) N	•		
9. v	Vas preserv	ative added t	o bottles?			Yes 🗌] N	• 🔽	NA 🗌	
10.\	/OA vials ha	ave zero head	space?			Yes [] N	• 🗆	No VOA Vials 🗹	
11.1	Nere any sa	ample contain	ers received b	proken?		Yes [" п	o 🔽		
									# of preserved bottles checked	
		vork match bo				Yes 🖌		•	for pH:	or >12 unless noted)
			ain of custody ntified on Cha	() in of Custody?		Yes 🔽	n Ni	•	Adjusted?	or >12 unless noted)
			ere requested	-		Yes 🖳	_	_	-	
		times abl				Yes 🔽		• 🗆	Checked by:	
(lf no, notify	customer for a	authorization.))						
Spec	ial Hand	ling (if app	olicahle)							
				vith this order?	I	Yes	1 N/	b	NA 🗹	
10.1		Notified:			·					
	By Wh				Date Via:	μ	Dhana [•
	Regard				via.	eMail	Phone [_ гах	In Person	
		Instructions:						dekalista dariatetta		
17. /	Additional re	?								į
18. 0	Cooler Info	rmation								
	Cooler No	o Temp ⁰C	Condition	Seal Intact	Seal No	Seal Date	Signed	l By]	
	[1	2.6	Good	Yes						

len!./	0								C							
2	CIH	Service	WENCHID Services Inc.	K Standard	C Rush		Π	1		ANAI	ANAL VETS		AB	ac	VETS I ABODATODY	12
				Project Name:					¢ •	ed and	mos letrementationaled www.	- 2		2		2
lailing	Address	I ICIDE	Mailing Address: (2) Indian School Rd Ste 200	4-14			4	4901 Hawkins NE	awking	NE	- Albuc	nergu	ie. NM	Albuquerove, NM 87109		
IE A	1 Dug	Leca be	NE Albuquerave NM STILD	Project #: 11135350	20.0%			Tel. 50	Tel. 505-345-3975	3975	Fax	× 505	505-345-4107	107		
Jone #	24:	128 5	0614							4	Analysis	-	Request			
nail or	Fax#:	DECORCA	email or Fax#: Derrard. Dor K & D Ad Com	Project Manager:			_				. 0	_				-
QA/QC Packa □ Standard	QA/QC Package.	j	Level 4 (Full Validation)	Bernard	Backbeh.	risch	_			(SMI	a Ud			(
Accreditation	ation			Sampler: Micho	- Jo	Gant		-		1. C.1	UN			20		-u
L NELAP	Ч	D Other		On Ice: X	es	D No	_		-	1.15	-	_		(A		
EDD	C EDD (Type)			Sample Temperature	2.	470.2=2.6	-		_	-	-	-	()	00		N
Date	Time	Matrix	Sample Request ID	Container Pre Type and #	Preservative Type	HEAL No.	BTEX + MT	TM + X3T8 88108 H9T	TPH (Method	EDB (Metho PAH's (831)	Anions (E.C.	0,7) anoinA Ditae9 f808	40V) 80828	1005) 0728		Air Bubbles
(6)23	1356	5	5-1135355-08-162317-46-78-1-286 40256	4a.Sil Sac I	CE	100-	X	X						×		
10/23	NID		2/2-647-211-1200-80' 4262311-2	-		-002	X	X						×		
0/33	1415		Successory lossing the start			-003	X	X	. 1					X		
6 23	1425		5-11135250-05-102317416:TP4-01			-004	×	×						X		
0/33	1435		5-1135260-06-102317-116-TP 5-44			-00 S	×	×	-					X		
0123	1505		5-1113050-08-102317-106-17-6-04			-006	X	×						X	-	
0124	1155		5-1135250-02-10471-06-79-70b			100-	×	X						X		
0124 1	1200		0-8-91-911-1440-30-9255501-5			-008	×	X				1	1	X		
Helon	1210		511135350-05-107471-216-TP-9-023			-009	X	X						×		
PLAN	1215	-	Silles as a supprise the ob.			-010	×	X				12		X		
i HELD	0201		100-11-2T-24-1400-20-0525211-2			110-	X	X				1		X		
T	1235		5 112-25 205- 10 thr - 46-7P 12-00		1	210-	X	X						×		
d'AS	Time:	Relinquished by	and Con	Received by	Y	10/25/17 DEC	Remarks:	rks:								
The Time.	feel	Religitation		Received by.		Date" Time										



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

November 07, 2017

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

RE: A 14

OrderNo.: 1710F02

Dear Bernie Bockisch:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/26/2017 for the analyses presented in the following report.

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

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

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

Sincerely,

andis

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 11/7/2017

CLIENT:GHDProject:A 14				Lab O	rder: 1710	F02	
Lab ID: 1710F02-001			Collection D	ate: 10/	24/2017 2:05:00]	PM	
Client Sample ID: S-11135250-08-102	417-MG-TP-1	3-618	Mat	rix: SO	IL		
Analyses	Result	PQL Qu	al Units	DF	Date Analyzed	Batch	ID
EPA METHOD 300.0: ANIONS					An	alyst: MF	RA
Chloride	48	30	mg/Kg	20	11/3/2017 8:06:24		812
EPA METHOD 8015M/D: DIESEL RANG	E ORGANICS		0 0		An	alyst: TO	м
Diesel Range Organics (DRO)	ND	10	mg/Kg	1	10/31/2017 5:41:3	-	
Motor Oil Range Organics (MRO)	ND	51	mg/Kg	1	10/31/2017 5:41:3		
Surr: DNOP	84.9	70-130	%Rec	1	10/31/2017 5:41:3		
EPA METHOD 8015D: GASOLINE RAN					An	alyst: NS	R
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	10/31/2017 2:22:0	-	
Surr: BFB	106	15-316	%Rec	1	10/31/2017 2:22:0		
	100	10 010	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
EPA METHOD 8021B: VOLATILES		0.005				alyst: NS	
Benzene	ND	0.025	mg/Kg	1	10/31/2017 2:22:0		
Toluene	ND	0.050	mg/Kg	1	10/31/2017 2:22:0		
Ethylbenzene	ND ND	0.050 0.10	mg/Kg	1 1	10/31/2017 2:22:0 10/31/2017 2:22:0		
Xylenes, Total Surr: 4-Bromofluorobenzene	105	80-120	mg/Kg %Rec	1	10/31/2017 2:22:0		
Lab ID: 1710F02-002 Client Sample ID: S-11135250-08-102	417-MG-TP-1	4-618		ate: 10/ crix: SO	24/2017 2:00:00 I II	PM	
Analyses	Result	PQL Qu			Date Analyzed	Batch	ID
EPA METHOD 300.0: ANIONS					An	alyst: MF	RA
Chloride	42	30	mg/Kg	20	11/3/2017 9:08:27		812
EPA METHOD 8015M/D: DIESEL RANG			3. 3	-		alyst: TO	
Diesel Range Organics (DRO)	31	9.3	malka	1	11/1/2017 2:26:19	-	712
	31	9.0	mg/Kg	1	11/1/2017 2:26:19		712
			ma/Ka	1			
Motor Oil Range Organics (MRO)	ND	47	mg/Kg %Rec	1 1			112
Motor Oil Range Organics (MRO) Surr: DNOP	ND 70.3		mg/Kg %Rec	1 1	11/1/2017 2:26:19	PM 347	
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN	ND 70.3 GE	47 70-130	%Rec	1	11/1/2017 2:26:19 Ana	PM 347 alyst: NS	SB
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO)	ND 70.3 GE ND	47 70-130 4.6	%Rec mg/Kg	1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42	PM 347 alyst: NS PM 347	5B 708
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB	ND 70.3 GE	47 70-130	%Rec	1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42	PM 347 alyst: NS PM 347 PM 347	5B 708 708
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES	ND 70.3 GE ND 82.0	47 70-130 4.6 15-316	%Rec mg/Kg %Rec	1 1 1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42 An:	PM 347 alyst: NS PM 347 PM 347 alyst: NS	5 B 708 708 5 B
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene	ND 70.3 GE ND 82.0 ND	47 70-130 4.6 15-316 0.023	%Rec mg/Kg %Rec mg/Kg	1 1 1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42 An: 10/31/2017 7:31:0	PM 347 alyst: NS PM 347 PM 347 alyst: NS 5 PM 347	5 B 708 708 5 B 708
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	ND 70.3 GE ND 82.0 ND ND	47 70-130 4.6 15-316 0.023 0.046	%Rec mg/Kg %Rec mg/Kg mg/Kg	1 1 1 1 1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42 An: 10/31/2017 7:31:0 10/31/2017 7:31:0	PM 347 alyst: NS PM 347 PM 347 alyst: NS 5 PM 347 5 PM 347	5 B 708 708 5 B 708 708
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene Ethylbenzene	ND 70.3 GE ND 82.0 ND ND ND	47 70-130 4.6 15-316 0.023 0.046 0.046	%Rec mg/Kg %Rec mg/Kg mg/Kg mg/Kg	1 1 1 1 1 1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42 An: 10/31/2017 7:31:0 10/31/2017 7:31:0 10/31/2017 7:31:0	PM 347 alyst: NS PM 347 PM 347 alyst: NS alyst: NS 5 PM 347	5 B 708 708 5 B 708 708 708
Motor Oil Range Organics (MRO) Surr: DNOP EPA METHOD 8015D: GASOLINE RAN Gasoline Range Organics (GRO) Surr: BFB EPA METHOD 8021B: VOLATILES Benzene Toluene	ND 70.3 GE ND 82.0 ND ND	47 70-130 4.6 15-316 0.023 0.046	%Rec mg/Kg %Rec mg/Kg mg/Kg	1 1 1 1 1	11/1/2017 2:26:19 An: 11/1/2017 2:59:42 11/1/2017 2:59:42 An: 10/31/2017 7:31:0 10/31/2017 7:31:0	PM 347 alyst: NS PM 347 PM 347 alyst: NS 5 PM 347 5 PM 347	5 B 708 708 5 B 708 708 708 708

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

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

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits Page 1 of 6
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

Analytical	Report
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Date Reported: 11/7/2017

			•			•	
CLIENT: Project:	GHD A 14				Lab O	rder: 1710	F02
Lab ID:	1710F02-003			Collection D	ate: 10/	24/2017 1:55:00	PM
Client Sample II	D: S-11135250-08-102	2417-MG-TP-1	5-618	Mat	t rix: SO	IL	
Analyses		Result	PQL Qu	al Units	DF	Date Analyzed	Batch ID
EPA METHOD 3	300.0: ANIONS					An	alyst: MRA
Chloride		150	30	mg/Kg	20	11/3/2017 9:20:52	2 PM 34812
EPA METHOD 8	8015M/D: DIESEL RAN	GE ORGANICS	5			An	alyst: TOM
Diesel Range Or	rganics (DRO)	ND	9.5	mg/Kg	1	11/1/2017 1:30:51	PM 34712
Motor Oil Range	Organics (MRO)	ND	47	mg/Kg	1	11/1/2017 1:30:51	PM 34712
Surr: DNOP		79.0	70-130	%Rec	1	11/1/2017 1:30:51	PM 34712
EPA METHOD 8	8015D: GASOLINE RAM	NGE				An	alyst: NSB
Gasoline Range	Organics (GRO)	ND	4.6	mg/Kg	1	11/1/2017 7:16:21	PM 34708
Surr: BFB		83.7	15-316	%Rec	1	11/1/2017 7:16:21	PM 34708
EPA METHOD 8	8021B: VOLATILES					An	alyst: NSB
Benzene		ND	0.023	mg/Kg	1	10/31/2017 7:54:4	5 PM 34708
Toluene		ND	0.046	mg/Kg	1	10/31/2017 7:54:4	5 PM 34708
Ethylbenzene		ND	0.046	mg/Kg	1	10/31/2017 7:54:4	5 PM 34708
Xylenes, Total		ND	0.092	mg/Kg	1	10/31/2017 7:54:4	5 PM 34708
Surr: 4-Bromo	ofluorobenzene	109	80-120	%Rec	1	10/31/2017 7:54:4	5 PM 34708

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

Qualifiers:

*

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

Hall Environmental Analysis Laboratory, Inc.

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix S
- В Analyte detected in the associated Method Blank

- Е Value above quantitation range
- J Analyte detected below quantitation limits Page 2 of 6
- Р Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified W

GHD

Qual

Qual

Project: A 14				
Sample ID MB-34812	SampType: mblk	TestCode: EPA Method	300.0: Anions	
Client ID: PBS	Batch ID: 34812	RunNo: 46865		
Prep Date: 11/3/2017	Analysis Date: 11/3/2017	SeqNo: 1496174	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit
Chloride	ND 1.5			
Sample ID LCS-34812	SampType: Ics	TestCode: EPA Method	300.0: Anions	
Client ID: LCSS	Batch ID: 34812	RunNo: 46865		
Prep Date: 11/3/2017	Analysis Date: 11/3/2017	SeqNo: 1496175	Units: mg/Kg	
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RPD	RPDLimit

 Result
 PQL
 SPK value
 SPK Ref Val
 %REC
 LowLimit
 HighLimit

 15
 1.5
 15.00
 0
 99.7
 90
 110

Qualifiers:

Client:

Chloride

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 3 of 6

Client:GHDProject:A 14

Sample ID LCS-34712	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015M/D: Die	esel Rang	e Organics	
Client ID: LCSS	Batch	h ID: 34	712	F	RunNo: 4	6767				
Prep Date: 10/30/2017	Analysis D	Date: 10	0/31/2017	5	SeqNo: 14	491802	Units: mg/k	٢g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.0	73.2	114			
			F 000		05 4	70	400			
Surr: DNOP	4.3		5.000		85.4	70	130			
Sample ID MB-34712		ype: ME				-	8015M/D: Die	esel Range	e Organics	
	SampT	⊽ype: M E h ID: 34	BLK	Tes		PA Method		esel Rang	e Organics	
Sample ID MB-34712	SampT	h ID: 34	BLK	Tes	tCode: El	PA Method		U	e Organics	
Sample ID MB-34712 Client ID: PBS	SampT Batch	h ID: 34	BLK 712 0/31/2017	Tes	tCode: El	PA Method	8015M/D: Die	U	e Organics	Qual
Sample ID MB-34712 Client ID: PBS Prep Date: 10/30/2017 Analyte	SampT Batch Analysis D	n ID: 34 Date: 10	BLK 712 0/31/2017	Tes F S	tCode: EF RunNo: 40 SeqNo: 14	PA Method 6767 491803	8015M/D: Die Units: mg/K	(g	U	Qual
Sample ID MB-34712 Client ID: PBS Prep Date: 10/30/2017	SampT Batch Analysis D Result	h ID: 34 Date: 1 (PQL	BLK 712 0/31/2017	Tes F S	tCode: EF RunNo: 40 SeqNo: 14	PA Method 6767 491803	8015M/D: Die Units: mg/K	(g	U	Qual

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
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- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Page 4 of 6

Client:	GHD										
Project:	A 14										
Sample ID	MB-34708	SampTy	pe: ME	BLK	Tes	tCode: E	PA Method	8015D: Gasc	line Rang	е	
Client ID:	PBS	Batch	ID: 34	708	F	unNo: 4	6775				
Prep Date:	10/30/2017	Analysis Da	ate: 10)/31/2017	S	SeqNo: 1	491523	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	ND	5.0								
Surr: BFB		1100		1000		107	15	316			
Sample ID	LCS-34708	SampTy	pe: LC	S	Tes	tCode: E	PA Method	8015D: Gasc	line Rang	е	
Client ID:	LCSS	Batch	ID: 34	708	F	anNo: 4	6775				
Prep Date:	10/30/2017	Analysis Da	ate: 10)/31/2017	S	SeqNo: 1	491525	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	30	5.0	25.00	0	118	75.9	131			
Surr: BFB		1200		1000		119	15	316			
Sample ID	1710F02-002AMS	SampTy	pe: MS	3	Tes	tCode: E	PA Method	8015D: Gaso	line Rang	е	
Client ID:	S-11135250-08-10	24 Batch	ID: 34	708	F	unNo: 4	6775				
Prep Date:	10/30/2017	Analysis Da	ate: 10)/31/2017	S	SeqNo: 1	491529	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	30	4.6	22.96	0	129	77.8	128			S
Surr: BFB		1100		918.3		121	15	316			
Sample ID	1710F02-002AMS	D SampTy	pe: M\$	SD	Tes	tCode: E	PA Method	8015D: Gasc	line Rang	е	
Client ID:	S-11135250-08-10	Batch	ID: 34	708	F	RunNo: 4	6775				
Prep Date:	10/30/2017	Analysis Da	ate: 10)/31/2017	S	SeqNo: 1	491530	Units: mg/k	íg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Rang	je Organics (GRO)	28	4.6	23.08	0	123	77.8	128	3.83	20	
Surr: BFB		1100		923.4		121	15	316	0	0	

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
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- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified
- Doca
 - Page 5 of 6

	•		• •	•	-					WO#:	1710F0
Hall Er	nvironment	al Anal	ysis I	Laborat	ory, Inc.						07-Nov-1
	CLID										
Client:	GHD										
Project:	A 14										
Sample ID	MB-34708	Samp	Гуре: ME	BLK	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	PBS	Batc	h ID: 34	708	F	RunNo: 4	6775				
Prep Date:	10/30/2017	Analysis E	Date: 10)/31/2017	S	SeqNo: 1	491544	Units: mg/k	ζg		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		ND	0.025								
Toluene		ND	0.050								
Ethylbenzene		ND	0.050								
Xylenes, Total		ND	0.10								
-	nofluorobenzene	1.1		1.000		107	80	120			
Sample ID	LCS-34708	Samp	Гуре: LC	S	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	LCSS	Batc	h ID: 34	708	F	RunNo: 4	6775				
Prep Date:	10/30/2017	Analysis E	Date: 10)/31/2017	S	SeqNo: 1	491545	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.025	1.000	0	113	77.3	128			
Toluene		1.1	0.050	1.000	0	109	79.2	125			
Ethylbenzene		1.0	0.050	1.000	0	105	80.7	127			
Xylenes, Total		3.1	0.10	3.000	0	102	81.6	129			
	nofluorobenzene	1.1		1.000		110	80	120			
Sample ID	1710F02-001AMS	S Samp	Гуре: М	;	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	S-11135250-08-1	024 Batc	h ID: 34	708	F	RunNo: 4	6775				
Prep Date:	10/30/2017	Analysis E	Date: 10)/31/2017	S	SeqNo: 1	491547	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.024	0.9425	0	118	80.9	132			
Toluene		1.1	0.047	0.9425	0.01570	115	79.8	136			
Ethylbenzene		1.1	0.047	0.9425	0	113	79.4	140			
Xylenes, Total		3.1	0.094	2.828	0.02439	110	78.5	142			
Surr: 4-Bron	nofluorobenzene	1.0		0.9425		109	80	120			
Sample ID	1710F02-001AMS	SD Samp	Гуре: М	SD	Tes	tCode: El	PA Method	8021B: Vola	tiles		
Client ID:	S-11135250-08-1	024 Batc	h ID: 34	708	F	RunNo: 4	6775				
Prep Date:	10/30/2017	Analysis [Date: 10)/31/2017	5	SeqNo: 1	491548	Units: mg/k	íg		
Analyte		Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene		1.1	0.024	0.9560	0	113	80.9	132	2.27	20	
Toluene		1.1	0.048	0.9560	0.01570	113	79.8	136	0.619	20	
Ethylbenzene		1.1	0.048	0.9560	0	115	79.4	140	3.60	20	
Xylenes, Total		3.3	0.096	2.868	0.02439	113	78.5	142	3.84	20	
Surr: 4-Bron	nofluorobenzene	1.1		0.9560		110	80	120	0	0	

Qualifiers:

Value exceeds Maximum Contaminant Level. *

QC SUMMARY REPORT

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

WO#: 1710F02

Page 6 of 6

HALL ENVIRONMENTAL ANALYSIS LABORATORY		901 rque t. 51	Hawkias NL 5 NM 87109 5 345 4107	s	amp	le Log-In Ch	ieck List
Client Name: GHD	Work Order Number: 17	10F	02			ReptNo:	í
Received By: Richle Erlacho 10	/26/2017 10:00:00 AM			.ż.,	1		
	v27/2017 3:33:41 PM 127/17		2	and the second	5-yur -		
Chain of Custody							
1. Custody seals intact on sample bottles?	Y	es		No		Not Present	
2. Is Chain of Custody complete?	Y	es		No		Not Present	
3. How was the sample delivered?	<u>C</u>	ouri	er				
Log In							
4. Was an attempt made to cool the samples?	Y	es	V	No		NA	
5. Were all samples received at a temperature of	>0° C to 6.0°C Ye	\$	~	No			
6. Sample(s) in proper container(s)?	Y	es	V	No			
7 Sufficient sample volume for indicated test(s)?	Y	85	V	No			
8 Are samples (except VOA and ONG) properly p	reserved? Ye	85		No			
9. Was preservative added to bottles?	Ye	95		No		NA 🗔	
10.VOA vials have zero headspace?	Ye	25		No		No VOA Vials	
11, Were any sample containers received broken?	Ŷ	65		No		# of preserved bottles checked	
12.Does paperwork match bottle labels? (Note discrepancies on chain of custody)	-Ye	85		No	Ξ	for pH:	>12 unless noted)
13. Are matrices correctly identified on Chain of Cu	stody? Ye	s	~	No		Adjusted?	
14. Is it clear what analyses were requested?	Ye	35		No			
15. Were all holding times able to be met? (If no, notify customer for authorization.)	-97	95		No		Checked by:	
Special Handling (If applicable)							
16. Was client notified of all discrepancies with this	order? Ye	95		No		NA 🔽	
Person Notified	Date:	-					
By Whom:		Mai	Phone	e 🗆	Fax [In Person	
Regarding:						- and the second second	
Client Instructions:		-					
17. Additional remarks:							
18. Cooler Information					-		
Cooler No Temp C Condition Seal	ntact Seal No Seal	Da	te Sigi	ned B	y		

Page 1 of 1

A NUMBER OF TAXABLE	HALL ENVIRONMENTAL	ANALTSIS LABOKALORY								(N J	0 1) se	alddµ8 niA								-						
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								- Kinch	CUISCI	Gant	O No	+0-2=26		HEAL NO.	-001	200-	-003)							Date Time	125/17 08°	F	1000 1000
	C Rush				22	2-05	ger:	Level Railer	ALCI DO	Michael G		H-1:	-	Preservative Type	ICE											0/		1
	Standard	Project Name	A=14	Project #		20-0523011	Project Manager	d	Necu	Sampler: ///	On Ice:	1		Container Type and #	glez Sol Jar	1 1									Receiver A.	ANA.	Kappen a	1
and a second monoral	GHD Services. Inc.	*	Mailing Address: (12) I Indian School RI Spe 200		NALS WO	729	Brekischpandeom		Level 4 (Full Validation)					Sample Request ID	8/1-51-21-7 M-21 Accol 80-5555511-5	S'141-31-24-24-24-20-25-26-26-14-1/5	Sills on the state of the Kult								0	-	١	
25	B		The		-	5	A.P				ler				N.	S-u	S		-	-	-	-		-	hed b	V	the by	
5	Secure		AD1-		21	80	erner				D Other			Matrix	\$		-								Relinquished by	Win	R	S
	S OHe		Address		-	#.50S	Fax#:B	ackage:	lard	ation	A	(Type)		Time	1465	1400	1255								Time:	0	Time:	1400
>	Client: (Mailing	1/5	NC A	Phone #:	email or Fax#: Bernand	QA/QC Package:	Standard	Accreditation	T NELAP	D EDD (Type)		Dale	10124	15/aH	1.1					T			Date: 1	10/25 2		110



GHD | Ericson-A-14 Compressor | 11135250 (8)

NMCRIS No.: 139360

NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)

1. NMCRIS	2a. Lead Agency:	2b. Other Agency(ies):	3. Lead	Agency Report No.:
Activity No.: 139360	US Bureau of Land Management Carlsbad Field Office			
4. Title of Report:				5. Type of Report
A Class III Archaeolo County, New Mexico		anser A-14 Compressor Station Spill,	Lea	✓ Negative
				Positive
Author(s)				
Galassini, Stacy K.	and Joshua W. Broxson			
6. Investigation Typ	e			
Research Design	Archaeological Survey/Inventor	Architectural Survey/Inventory	Test Ex	cavation Excavation
Collections/Non-Fi	ield Study Compliance Decision	Based on Previous Inventory	verview/Lit	Review Monitoring
Ethnographic Stuc	ly Site/Property Specific Visit	Historic Structures Report	Other	

7. Description of Undertaking (what does the project entail?):

The Energy Transer A-14 Compressor Station Spill lies in Lea County, NM, on federal land in Section 6 of T24S R35E. The spill extends north from a compressor station and totals 11.85 Per a pre-field consultation with BLM/CFO archaeologist B. Boeke conducted on November 8, 2017, the spill area and a 100 ft. buffer surrounding the spill was conducted. The survey area totals 18.65 acres.

[] Continuation

8. Dates of Investigation:	from: 15-Nov-2017	to: 15-Nov-2017	9. Report Date:	16-Nov-2017
10. Performing Agency/Co	onsultant: Boone Archa	aeological Resource Cons	sultants, LLC.	
Principal Investigator: S	tacy K. Galassini			
Field Supervisor: Willi He	ermann			
Field Personnel Names:	Willi Hermann Katie Hill			
Historian / Other:				
11. Performing Agency/Co	onsultant Report No.:			
BARC 11-17-04				
12. Applicable Cultural Re	esource Permit No(s):			
BLM Permit No.: 190-2920-	-16-V			

NMCRIS No.: 139360

13. Client/Customer (project proponent): GHD Contact: Alan Brandon Address: Phone: 505 697 2025 14. Client/Customer Project No.:

15. Land Ownership Status (must be indicated on project map):

Land Owner (By Agency) A	cres Surveyed	Acres in APE
US Bureau of Land Management Carlsbad Field Office	18.65	18.65
TOTALS	18.65	18.65

16. Records Search(es):

	v: 08 Nov 2017 Name of Review	wer(s): S.K. Galassini	
Date(s) of Other Agency File Revie	ew: 08 Nov 2017 Name of Review	wer(s): S.K. Galassini	Agency: BLM/CFO
17. Survey Data:			1
. Source Graphics [] NAD		Note: NAD 83 is the	NMCRIS standard.
 ✓ USGS 7.5' (1:24,000) topo n ✓ GPS Unit Accuracy <1. Other Source Graphic(s): 		_>100m	Aerial Photo(s)
b. USGS 7.5' Topographic Map	Name		USGS Quad Code
Woodley Flat, NM			32103-B4
c. County(ies): LEA			
d. Nearest City or Town: Jal, N	Μ		
e. Legal Description: Township (N/S)	Range (E/W)	Section	
		6	
24S	35E	0	

Intensity:

NMCRIS No.:139360Configuration:✓ block survey unitsother survey units (specify):	s linear survey units (I x w):					
Scope: non-selective (all sites/properties recorded) selective/thematic (selected sites/properties recorded)						
Coverage Method: vsystematic pedestrian coverage						
Survey Interval (m): 15 Crew	v Size: 2 Fieldwork Dates: from: 15-Nov	r-2017 to: 15-Nov-2017				
Survey Person Hours: 2.00	Recording Person Hours: 0.00	Total Hours: 2.00				
Additional Narrative:						
The project was surveyed using 50 ft. parallel transects across an irregularly shaped block survey area. The survey area totals 18.65 acres. The project falls within ¼ mile of one previously recorded archaeological site: LA 132929.						

] Continuation

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19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.):

According to the Natural Resources Conservation Service' online database, the project area soils consist of Tonuco soils. These soils are associated with the Shallow Sandy ecological site (R042CX002NM) which typically supports black grama grasslands with a sparse distribution of prickly pear, four-wing saltbush, catclaw, mesquite, American tarbush, and cholla. The current vegetative community consists of mesquite, broom snakeweed, sunflower, barrel cactus, horse crippler, prickly pear, and desert grasses and forbs. The project lies on a relatively flat terrain approximately 3.9 miles south of San Simon Swale and 4.5 miles north of Antelope Draw. The elevation ranges from 3,460 ft. to 3,470 ft. above mean sea level.

1 Continuation

20.a. Percent Ground Visibility: 76% - 99% **b. Condition of Survey Area (grazed, bladed, undistributed, etc.):**

The survey area surrounds the spill and has also been disturbed by a buried pipeline, well pad, lease road, flowline, electric line, erosion and burrowing.

21. (CULTURAL RESOURCE FINDINGS	Yes, see next report section	Vo,	discuss why:
	cultural resources were updated or recorded irbance within the survey area.	during the survey. The lack of cultural materials	is likely due to th	ne high level of
			ſ] Continuation
22.	Attachments (check all appropriate boxes)):		
[x] USGS 7.5 Topographic Map with sites,	isolates, and survey area clearly drawn (requ	uired)	
[x] Copy of NMCRIS Map Check (required)			
[] LA Site Forms - new sites (with sketch	map & topographic map) if applicable		
[] LA Site Forms (update) - previously rec	corded & un-relocated sites (first 2 pages mir	nimum)	
[] Historic Cultural Property Inventory Fo	rms, if applicable		
[] List and Description of Isolates, if appli	icable		
[] List and Description of Collections, if a	pplicable		

23. Other Attachments:

[] Photographs and Log

NMCRIS No.: 139360

24. I certify the information provided above is corr	rect and accurat	e and meets all applicable agency standards.
Principal Investigator/Qualified Supervisor:	Printed Name:	Stacy K. Galassini

Signature:	Stacy K	Galassini	Date:	11/25/1	7 Title: Principal Investigator
25. Reviewing	Agency				26. SHPO
Reviewer's Na	me/Date:				Reviewer's Name/Date:
Accepted []	Rejected []		HPD Log #: Date sent to ARMS:
		CULTURAL	RESC	DURCE	FINDINGS
		IC:11 to a second second		()1	

[fill in appropriate section(s)]

SURVEY RESULTS:

Archaeological Sites discovered and registered: 0

Archaeological Sites discovered and NOT registered: 0

Previously recorded archaeological sites revisited (site update form required): 0

Previously recorded archaeological sites not relocated (site update form required): 0

TOTAL ARCHAEOLOGICAL SITES (visited & recorded): 0

Total isolates recorded: 0

HCPI properties discovered and registered: 0

HCPI properties discovered and NOT registered: 0

Previously recorded HCPI properties revisited: 0

Previously recorded HCPI properties not relocated: 0

TOTAL HCPI PROPERTIES (visited & recorded, including acequias): 0

MANAGEMENT SUMMARY:

No cultural resources were updated or recorded during the survey. The proposed spill remediation is recommended for approval. If cultural materials are encountered during the clean-up process, work should be halted and archaeologists with the BLM/CFO should be notified immediately.

] Continuation

[

Non-selective isolate recording?

IF REPORT IS NEGATIVE, YOU ARE DONE AT THIS POINT.

SURVEY LA/HCPI NUMBER LOG

Sites/Properties Discovered:

LA/HCPI No. Field/Agency No.

NMCRIS No.: 139360

Previously recorded revisited sites/HCPI properties:						
LA/HCPI No. Field/Agency No.		Eligible? (Y/N/U, applicable criteria)				
MONITORING	LA NUMBER LOG (site form required)					
Sites Discovered (site form required):		Previously recorded sites (site update form required):				
LA No.	Field/Agency No.	LA No.		Field/Agency No.		
Areas outside	known nearby site boundaries monitored?	ſ] Yes		[] No, Explain why:	
TESTING & EX	CAVATION LA NUMBER LOG (site form req	uired)				

Tested LA number(s)

Excavated LA number(s)

A Class III Archaeological Survey for the GHD Energy Transer A-14 Compressor Station Spill, Lea County, New Mexico



A Class III Archaeological Survey for the GHD Energy Transer A-14 Compressor Station Spill, Lea County, New Mexico



A Class III Archaeological Survey for the GHD Energy Transer A-14 Compressor Station Spill, Lea County, New Mexico



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FIELDWORK AUTHORIZATION REQUEST

To Conduct Specific Cultural Resource Work Under the Authority of a Cultural Resource Use Permit Issued by the Bureau of Land Management Pursuant to Sec. 302(b) of P.L. 94-579, October 21, 1976, 43 U.S.C. 1732 and Sec. 4 of P.L. 96-95, October 31, 1979, 16 U.S.C. 470cc

1. Name of Permittee and Company

Stacy K. Galassini - Boone Archaeological Resource Consultants, LLC

- 2. Date Permit Issued 07/26/2016
- 3. Contact Telephone Number 575-885-1352

 Project Name and Client Name BARC 1117004 GHD Brandon, Alan (505) 697-2025 Energy Transfer A-14 Compressor Station

5. Location of Work or Legal Description (Include map)

a. Description of Public Lands Involved T24S R35E S6

Agency: BLM

Secondary:

6. Nature of Cultural Resource Work (Survey, APE, etc.a. Identification of Previous Surveys and Sites (if applicable)

sunuht

7. Name of Individual(s) Responsible for Planning Supervising Field Work, Approving Reports, Evaluations, Recommendations

Stacy K. Galassini

8. Signature of Individual Conducting Pre-Field Consultation

Stacy Galassini

• The individual named in item 7 above shall be present during the conduct of field work authorized herein, or shall notify the authorized officer of the need for any extended absence, and shall make provision that the work will be carried out under supervision of equal quality, by an individual approved by the authorized officer.

Fieldwork Authorization Request approved by:

Thing Bork (Signature of BLM Authorized Officer)

9. Date

11/7/2017

 \cdot All terms and conditions of the permit continue to apply; any special conditions attached hereto have the same force and effect as conditions of the permit.

• Permittee shall immediately notify the authorized officer of any change in items 3 through 7 above.

Date:

11-8-17

www.ghd.com

